MONTEREY
REGIONAL AIRPORT

Appendix A

NOTICE OF PREPARATION/ INITIAL STUDY AND PUBLIC COMMENTS

NOTICE OF PREPARATION AND NOTICE OF SCOPING MEETING

DATE: December 28, 2015
SUBJECT: Notice of Preparation of an Environmental Impact Report and Notice of Scoping Meeting
PROJECT TITLE: Monterey Regional Airport – Airport Master Plan
APPLICANT: Monterey Peninsula Airport District
200 Fred Kane Drive
Monterey, California 93940

Notice is hereby given pursuant to Section 15082 of the State California Environmental Quality Act ("CEQA") Guidelines (Cal. Code Regs., tit. 14, § 15000 et seq.), that the Monterey Peninsula Airport District ("District"), acting in its capacity as the owner and operator of Monterey Regional Airport, has determined that an Environmental Impact Report ("EIR") is the appropriate environmental document for the Monterey Regional Airport Master Plan Project ("Project"). The District will be the Lead Agency for the Project and will be responsible for the EIR preparation pursuant to CEQA and the State CEQA Guidelines. The Project description, location, and an analysis of the probable environmental effects of the proposed project are contained in the attached materials.

As required by Section 15082 of the CEQA Guidelines, this Notice of Preparation ("NOP") has been prepared and distributed to solicit comments from potential Responsible and Trustee Agencies on Project-related concerns relevant to each agency's statutory responsibilities. Comments on the content and scope of the EIR also are solicited from any other interested parties (including other agencies and affected members of the public). The EIR will be the environmental document of reference for Responsible and Trustee Agencies when considering subsequent discretionary approvals.

The District requests that any potential Responsible or Trustee Agencies responding to this NOP reply in a manner consistent with Section 15082(b) of the State CEQA Guidelines, which allows for the submittal of any comments in response to this notice no later than 45 days after receipt of the NOP. The District will accept comments from these Agencies and others regarding this NOP through the close of business, February 16, 2016.

This NOP is available for viewing at www.montereyairport.com. In addition, a Scoping Meeting will be held from 2:00PM-4:00PM at the following location: 2nd Floor of the Airport Terminal Building 200 Fred Kane Drive, Suite 200, Monterey, CA 93940 on Wednesday, February 3, 2016.

Your agency and other interested parties are invited to attend and submit comments for consideration during preparation of the EIR. All comments and responses to this NOP must be submitted in writing to:

Shelley Glennon, Planning Manager – Environmental
200 Fred Kane Drive. Suite 200
Monterey, CA 93940
(831) 648-7000 Ext. 209
sglennon@montereyairport.com

Submitted by:

Mark Bautista, A.A.E
Deputy General Manager
Planning & Development Department
Monterey Peninsula Airport District

MONTEREY HERALD

Published by The Monterey Herald
P.O. Box 271 • Monterey, California 93942
(831) 726.4382

This space is reserved for the County Clerk's Filing Stamp

MONTEREY PENINSULA AIRPORT DISTRICT
Account No. 2141463
200 FRED KANE DR
STE 200
MONTEREY, CA 93940

Received
DEC 3 0 2015
Planning and Development
Monterey Peninsula Airport District

Legal No. 0005643470
Notice of preparation

Ordered by:

PROOF OF PUBLICATION

STATE OF CALIFORNIA
County of Monterey

I am a citizen of the United States and a resident of the County aforesaid. I am over the age of eighteen years, and not a party to or interested in the above-entitled matter. I am the principal clerk of the printer of The Monterey Herald, a newspaper of general circulation, printed and published daily and Sunday in the City of Monterey, County of Monterey, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Monterey, State of California; that the notice, of which the annexed is a printed copy (set in type not smaller than 6 point), has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

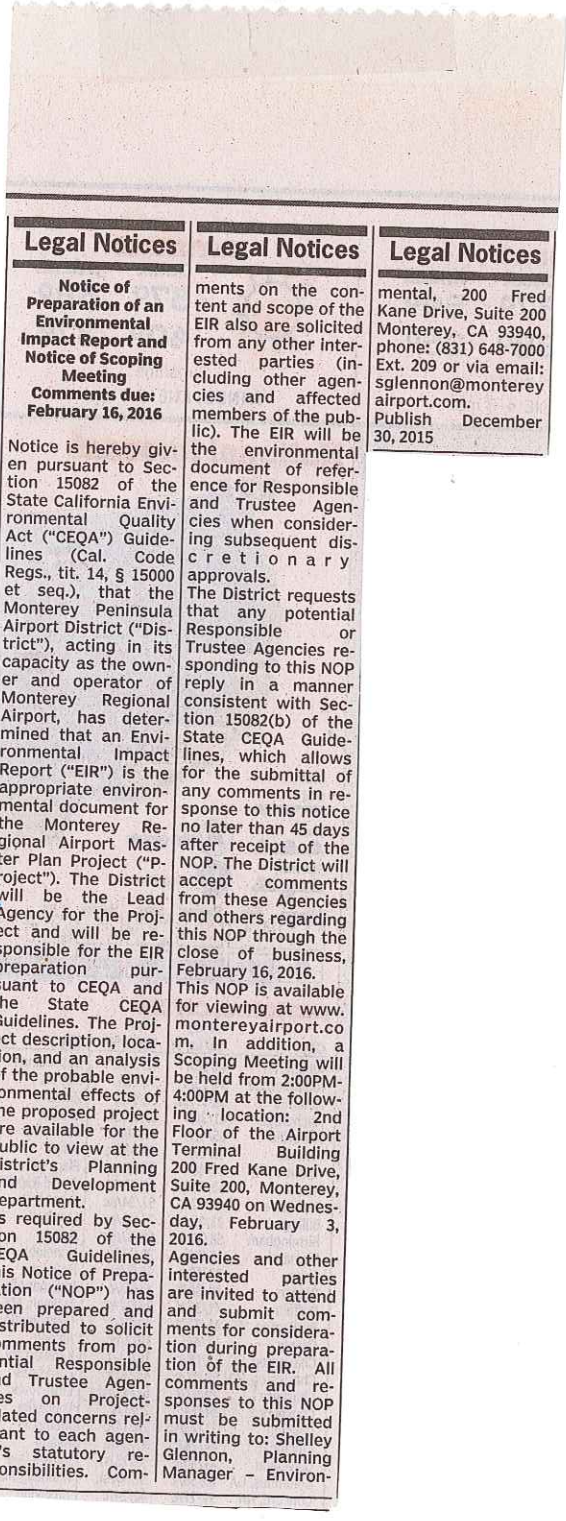
12/30/15

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Executed on 12/30/2015 at Monterey, California.

Danielle Landaker

Signature



Legal Notices

Notice of Preparation of an Environmental Impact Report and Notice of Scoping Meeting
Comments due: February 16, 2016

Notice is hereby given pursuant to Section 15082 of the State California Environmental Quality Act ("CEQA") Guidelines (Cal. Code Regs., tit. 14, § 15000 et seq.), that the Monterey Peninsula Airport District ("District"), acting in its capacity as the owner and operator of Monterey Regional Airport, has determined that an Environmental Impact Report ("EIR") is the appropriate environmental document for the Monterey Regional Airport Master Plan Project ("Project"). The District will be the Lead Agency for the Project and will be responsible for the EIR preparation pursuant to CEQA and the State CEQA Guidelines. The Project description, location, and an analysis of the probable environmental effects of the proposed project are available for the public to view at the District's Planning and Development Department.

As required by Section 15082 of the CEQA Guidelines, this Notice of Preparation ("NOP") has been prepared and distributed to solicit comments from potential Responsible and Trustee Agencies on Project-related concerns relevant to each agency's statutory responsibilities. Comments on the content and scope of the EIR also are solicited from any other interested parties (including other agencies and affected members of the public). The EIR will be the environmental document of reference for Responsible and Trustee Agencies when considering subsequent discretionary approvals.

The District requests that any potential Responsible or Trustee Agencies responding to this NOP reply in a manner consistent with Section 15082(b) of the State CEQA Guidelines, which allows for the submittal of any comments in response to this notice no later than 45 days after receipt of the NOP. The District will accept comments from these Agencies and others regarding this NOP through the close of business, February 16, 2016.

This NOP is available for viewing at www.montereyairport.com. In addition, a Scoping Meeting will be held from 2:00PM-4:00PM at the following location: 2nd Floor of the Airport Terminal Building 200 Fred Kane Drive, Suite 200, Monterey, CA 93940 on Wednesday, February 3, 2016.

Agencies and other interested parties are invited to attend and submit comments for consideration during preparation of the EIR. All comments and responses to this NOP must be submitted in writing to: Shelley Glennon, Planning Manager – Environmental, 200 Fred Kane Drive, Suite 200 Monterey, CA 93940, phone: (831) 648-7000 Ext. 209 or via email: sglennon@montereyairport.com.

Publish December 30, 2015

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

Notice of Preparation

Received
JAN 4 2016
Planning and Development
Monterey Peninsula Airport District

December 30, 2015

To: Reviewing Agencies

Re: Monterey Regional Master Plan
SCH# 2015121105

Attached for your review and comment is the Notice of Preparation (NOP) for the Monterey Regional Master Plan draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Mark Bautista
Monterey Peninsula Airport District
200 Fred Kane Drive, Suite 200
Monterey, CA 93940

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2015121105
Project Title Monterey Regional Master Plan
Lead Agency Monterey Peninsula Airport District

Type NOP Notice of Preparation

Description The proposed AMP is a facility-level planning study that sets forth a conceptual framework for possible future airport development within the AMP's 20-year planning horizon (2013-2033). Due to the process involved in evaluating the AMP under CEQA and obtaining funding for improvements proposed by the project, the actual first year of implementation is likely to be 2017. For purposes of CEQA, the baseline year for identifying the existing environmental conditions is 2015.

Lead Agency Contact

Name Mark Bautista
Agency Monterey Peninsula Airport District
Phone 831-648-7000 **Fax**
email
Address 200 Fred Kane Drive, Suite 200
City Monterey **State** CA **Zip** 93940

Project Location

County Monterey
City Monterey, Del Rey Oaks
Region
Cross Streets HWY 68 & Olmsted Rd; and Airport Rd
Lat / Long 36° 35' 13.2" N / 121° 50' 34.6" W
Parcel No. 013221020000
Township 1E **Range** 15S **Section** 34 **Base**

Proximity to:

Highways 68, 218, and 1
Airports Monterey Regional Airport
Railways
Waterways Monterey Bay
Schools Santa Catalina
Land Use Land Use: Special District (Airport). Zoning/GP: None except for four parcels.

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Coastal Zone; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Septic System; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Landuse; Growth Inducing; Cumulative Effects; Other Issues

Reviewing Agencies Resources Agency; Department of Boating and Waterways; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Wildlife, Region 4; Caltrans, Division of Aeronautics; Caltrans, District 5; California Highway Patrol; Native American Heritage Commission; Air Resources Board; State Water Resources Control Board; Department of Toxic Substances Control; Regional Water Quality Control Board, Region 3

Date Received 12/30/2015 **Start of Review** 12/30/2015 **End of Review** 02/16/2016

Note: Blanks in data fields result from insufficient information provided by lead agency.

NOP Distribution List

County: Monterey 11

SCH# 2015121105

DRAFT EIR

A-5

Resources Agency

- [x] **Resources Agency**
  Nadell Gayou
- [ ] **Dept. of Boating & Waterways**
  Denise Peterson
- [ ] **California Coastal Commission**
  Elizabeth A. Fuchs
- [ ] **Colorado River Board**
  Lisa Johansen
- [ ] **Dept. of Conservation**
  Elizabeth Carpenter
- [ ] **California Energy Commission**
  Eric Knight
- [ ] **Cal Fire**
  Dan Foster
- [ ] **Central Valley Flood Protection Board**
  James Herota
- [ ] **Office of Historic Preservation**
  Ron Parsons
- [x] **Dept of Parks & Recreation**
  Environmental Stewardship Section
- [ ] **California Department of Resources, Recycling & Recovery**
  Sue O'Leary
- [ ] **S.F. Bay Conservation & Dev't. Comm.**
  Steve McAdam
- [x] **Dept. of Water Resources**
  Resources Agency
  Nadell Gayou

Fish and Game

- [ ] **Depart. of Fish & Wildlife**
  Scott Flint
  Environmental Services Division
- [ ] **Fish & Wildlife Region 1**
  Curt Babcock
- [ ] **Fish & Wildlife Region 1E**
  Laurie Harnsberger
- [ ] **Fish & Wildlife Region 2**
  Jeff Drongesen
- [ ] **Fish & Wildlife Region 3**
  Charles Armor
- [x] **Fish & Wildlife Region 4**
  Julie Vance
- [ ] **Fish & Wildlife Region 5**
  Leslie Newton-Reed
  Habitat Conservation Program
- [ ] **Fish & Wildlife Region 6**
  Tiffany Ellis
  Habitat Conservation Program
- [ ] **Fish & Wildlife Region 6 I/M**
  Heidi Calvert
  Inyo/Mono, Habitat Conservation Program
- [ ] **Dept. of Fish & Wildlife M**
  George Isaac
  Marine Region

Other Departments

- [ ] **Food & Agriculture**
  Sandra Schubert
  Dept. of Food and Agriculture
- [ ] **Depart. of General Services**
  Public School Construction
- [ ] **Dept. of General Services**
  Anna Garbeff
  Environmental Services Section
- [ ] **Delta Stewardship Council**
  Kevan Samsam
- [ ] **Housing & Comm. Dev.**
  CEQA Coordinator
  Housing Policy Division

Independent Commissions,Boards

- [ ] **Delta Protection Commission**
  Michael Machado
- [ ] **OES (Office of Emergency Services)**
  Marcia Scully
- [x] **Native American Heritage Comm.**
  Debbie Treadway
- [ ] **Public Utilities Commission**
  Supervisor
- [ ] **Santa Monica Bay Restoration**
  Guangyu Wang
- [ ] **State Lands Commission**
  Jennifer Deleong
- [ ] **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Cal State Transportation Agency CalSTA

- [x] **Caltrans - Division of Aeronautics**
  Philip Crimmins
- [ ] **Caltrans – Planning HQ LD-IGR**
  Terri Pencovic
- [x] **California Highway Patrol**
  Suzann Ikeuchi
  Office of Special Projects

Dept. of Transportation

- [ ] **Caltrans, District 1**
  Rex Jackman
- [ ] **Caltrans, District 2**
  Marcelino Gonzalez
- [ ] **Caltrans, District 3**
  Eric Federicks – South
  Susan Zanchi - North
- [ ] **Caltrans, District 4**
  Patricia Maurice
- [x] **Caltrans, District 5**
  Larry Newland
- [ ] **Caltrans, District 6**
  Michael Navarro
- [ ] **Caltrans, District 7**
  Dianna Watson
- [ ] **Caltrans, District 8**
  Mark Roberts
- [ ] **Caltrans, District 9**
  Gayle Rosander
- [ ] **Caltrans, District 10**
  Tom Dumas
- [ ] **Caltrans, District 11**
  Jacob Armstrong
- [ ] **Caltrans, District 12**
  Maureen El Harake

Cal EPA

Air Resources Board

- [x] All Other Projects
  Cathi Slaminski
- [ ] Transportation Projects
  Nesamani Kalandiyur
- [ ] Industrial/Energy Projects
  Mike Tollstrup
- [ ] **State Water Resources Control Board**
  Regional Programs Unit
  Division of Financial Assistance
- [ ] **State Water Resources Control Board**
  Karen Larsen
  Division of Drinking Water
- [x] **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] **State Water Resouces Control Board**
  Phil Crader
  Division of Water Rights
- [x] **Dept. of Toxic Substances Control**
  CEQA Tracking Center
- [ ] **Department of Pesticide Regulation**
  CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

- [ ] **RWQCB 1**
  Cathleen Hudson
  North Coast Region (1)
- [ ] **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [x] **RWQCB 3**
  Central Coast Region (3)
- [ ] **RWQCB 4**
  Teresa Rodgers
  Los Angeles Region (4)
- [ ] **RWQCB 5S**
  Central Valley Region (5)
- [ ] **RWQCB 5F**
  Central Valley Region (5)
  Fresno Branch Office
- [ ] **RWQCB 5R**
  Central Valley Region (5)
  Redding Branch Office
- [ ] **RWQCB 6**
  Lahontan Region (6)
- [ ] **RWQCB 6V**
  Lahontan Region (6)
  Victorville Branch Office
- [ ] **RWQCB 7**
  Colorado River Basin Region (7)
- [ ] **RWQCB 8**
  Santa Ana Region (8)
- [ ] **RWQCB 9**
  San Diego Region (9)

- [ ] **Other** _____
- [ ] _____
- [ ] _____
- [ ] _____
  Conservancy

Last Updated 6/23/2015

MONTEREY REGIONAL AIRPORT
NOTICE OF PREPARATION/COORDINATION LIST
AIRPORT MASTER PLAN ENVIRONMENTAL IMPACT REPORT

Federal (3 Total)

Regulatory Division
U.S. Army Corps of Engineers
1455 Market Street, 16th Floor
San Francisco, California 94103-1398

Rick Farris
VFWO Section 7 Coordinator
U.S. Fish and Wildlife Service
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003

Doug Pomeroy, FAA Environmental Protection Specialist
SFO Airport District Office
Federal Aviation Administration
1000 Marina Boulevard
Suite 220
Brisbane, CA 94005

Local agencies and property owners (57 TOTAL)

Carl P. Holm, AICP, Director
Monterey County Resource Management Agency
168 W. Alisal Street, 2nd Floor
Salinas, Ca 93901

Richard Stedman, Air Pollution Control Officer
Monterey Bay Unified Air Pollution Control District
24580 Silver Cloud Court
Monterey, CA 93940

Grant Leonard, Sr. Trans. Planner
Transportation Agency for Monterey County
55-B Plaza Circle
Salinas, CA 93901

Lisa I. Rheinheimer
Director of Planning and Development
Monterey-Salinas Transit
1 Ryan Ranch Rd
Monterey, CA 93940

Daniel Dawson, City Manager
City of Del Rey Oaks City Hall
650 Canyon Del Rey Road
Del Rey Oaks, CA 93940

Diana Ingersoll, P.E.
Deputy City Manager – Resource Management Services
City of Seaside
440 Harcourt Avenue
Seaside, CA 93955

Kim Cole, Managing Principal Planner
City of Monterey
570 Pacific Street
Monterey, CA 93940

Maura F. Twomey, Executive Director
Association of Monterey Bay Area Governments
P.O. Box 809
Marina, California 93933

Anastazia Aziz, AICP, Senior Planner
Community Development Department

City of Pacific Grove
300 Forest Avenue
Pacific Grove, CA 93950

Marc Wiener, Senior Planner
City of Carmel by the Sea
P.O. Box CC
Carmel-by-the-Sea, CA 93921

Joe Sidor
Associate Planner/ALUC Secretary
County of Monterey & Monterey Airport Land Use Commission
168 W. Alisal Street
2nd Floor
Salinas, CA 93901

Capt. Kevin Bertelsen
Navy Support Activity Monterey
271 Stone Road
Monterey, CA 93943-5000

Norm Groot
Monterey County Farm Bureau
P.O. Box 1449
Salinas, CA 93902-1449

Nate Young, General Manager
Monterey Jet Center
300 Sky Park Drive
Monterey, CA 93940

Nate Young, General Manager
Del Monte Aviation
100 Sky Park Drive
Monterey, CA 93940

Keith Standiford
Monterey Navy Flying Club
1600 Airport Road
Monterey, CA 93940

Joel Weinstein
Sierra Club, Ventana Chapter
P.O. Box 5667
Carmel, CA 93921

Blake Matheson
Monterey Audubon Society
P.O Box 5656
Carmel, CA 93921

Richard Ruccello
CONA
P.O. Box 2304
Monterey, California 93942-2304

Oaks of Del Rey Homeowners Association
515 Canyon Del Rey Blvd
Del Rey Oaks, CA 93940

Calvary Chapel Church
3001 Salinas Hwy
Monterey, CA 93940

Nancy DeHaven
Controller
Fenton and Keller
Post Office Box 791
Monterey, CA 93942-0791

Megan Castillo
Executive Assistant
Robert Talbott, Inc.
2901 Monterey-Salinas HWY
Monterey, CA. 93940

Dole Fresh Vegetables, Company
2959 Salinas Hwy
Monterey, CA 93940

Comfort Inn Monterey Peninsula Airport
1200 Olmsted Rd,

Monterey, CA 93940

Property Owner of 2700 Garden Rd. Monterey
44 W. Garzas Rd.
Carmel Valley, CA 93924

Property Owner of 2611- 2711 Garden Rd. Monterey, CA
PO BOX 1279
Pebble Beach, CA 93953-1279

Property Owner of 2555 Garden Rd. Monterey, CA
PO BOX 3080
Monterey, CA 93942-3080

Property Owner
851 Munras Ave.
Monterey, CA 93940

Property owner of 2411 Garden Road Monterey, CA
33 Los Robles Rd.
Carmel Valley, CA 93924

Property Owner
2455 Henderson Way
Monterey, CA

Pacific Gas & Electric
Attn: Property Owner/Utility Provider
311 GARDEN RD
MONTEREY CA

Monterey Parks and Recreation
2211 Garden Rd
Monterey, CA 93940

California Department of Forestry & Fire Protection - San Benito-Monterey
Unit 2221 Garden Rd
Monterey, CA 93940

Fitness Evolution
2000 Garden Rd,
Monterey, CA 93940

Pediatric Group of Monterey
1900 Garden Rd #110,
Monterey, CA 93940

Property Owner
2100 GARDEN RD
BLDG A
MONTEREY 93940-5366

Property Owner of 950 Casanova Ave. Monterey, CA
215 12th St.
Pacific Grove, CA 93950

Loyal Order Moose
555 Canyon Del Rey Blvd
Del Rey Oaks, CA 93940

Property Owner of APN: 012601013000 (Canyon Del Rey Rd. Del Rey Oaks, CA)
PO BOX 25025
Glendale, CA 91221-5025

Property Owner of APN: 012601025000 (Canyon Del Rey Road Del Rey Oaks CA)
701 Western Ave.
Glendale, CA 91201

Property Owner
120 Del Rey Gardens Rd.
Del Rey Oaks 93940

Property Owners of Calle Del Rey Oaks, Del Rey Oaks, CA
549 Aguajito Rd.
Carmel, CA 93923

Property Owner
120 Calle Del Oaks

Del Rey Oaks, CA 93940-5711

Property Owner of Del Rey Gardens Dr. Del Rey Oaks, CA
1019 Rosita Road
Monterey, CA 93940-5619

Property Owner
121 Calle Del Oaks Pl.
Del Rey Oaks, CA 93940-5711

Property Owner of Canyon Del Rey Rd. Del Rey Oaks CA
909 Chestnut Street
ST LOUIS, MO 63101

Saf Keep Storage
181 Calle Del Oaks Pl.
Del Rey Oaks, CA 93940

Public Storage
180 Calle Del Oaks
Del Rey Oaks, CA 93940

Property Owners of 65 Canyon Del Rey Oaks CA
PO Box 2350
Monterey, CA 93940

Property Owners of 445 Canyon Del Rey Oaks Del Rey Oaks, CA
25850 Paseo De Los Robles
Salinas, CA 93908

Property Owners of APN 259091010000 (Monterey-Salinas Highway, Monterey, CA)
2690 W Lakeridge Shores
Reno, NV 89519

Property Owner of APN 259011027000 (Monterey-Salinas Highway, Monterey, CA)
PO Box 87
Monterey, CA 93942

Monterey Regional Waste Management District
Attn: Tim Flanagan, General Manager
14201 Del Monte Boulevard
Marina, CA 93933-1670

Monterey Regional Water Pollution Control Agency
Attn: Paul Sciuto, General Manager
5 Harris Court
Building D
Monterey, CA 93940

Monterey Peninsula Water Management District
Attn: David Stoldt, General Manager
5 Harris Court
Building G
Monterey, CA 93942-0085

California American Water (Monterey Region)
Attn: Catherine Stedman, Central California Manager
511 Forest Lodge Road
Suite 100
Pacific Grove, CA 93950

Tribal (10 Total)

Ohlone/Costanoan:

Jakki Kehl
720 N. 2nd Street
Patterson, CA 95363

Valentin Lopez, Chairperson
Amah Mutsun Tribal Band
P.O. Box 5272
Galt, CA 95632

Edward Ketchum
Amah Mutsun Tribal Band
Northern Valley Yokuts
35867 Yosemite Avenue
Davis, CA 95616

Irenne Zwierlein, Chairperson
Amah Mutsun Tribal Band of Mission San Juan Bautista
789 Canada Road
Woodside, CA 94062

Tony Cerda, Chairperson
Coastanoan Rumsen Carmel Tribe
240 E. 1st Street
Pomona, CA 91766

Ann Marie Sayers, Chairperson
Indian Canyon Mutsun Band of Costanoan
P.O. Box 28
Hollister, CA 95024

Ohlone/Costanoan-Esselen:

Louise Miranda-Ramirez, Chairperson
Ohlone/Coastanoan-Esselen Nation
P.O. Box 1301
Monterey, CA 93942

Christianne Arias, Vice Chairperson
Ohone/Coastanoan-Esselen Nation
519 Viejo Gabriel
Soledad, CA 93960

Pauline Martinez-Arias,
Tribal Council woman
Ohone/Coastanoan-Esselen Nation
1116 Merlot Way
Gonzales, CA 93926

Ohlone/Costanoan, Bay Miwok, Plains Miwok, Patwin:

Ramona Garibay, Representative
Trina Marine Ruano Family
30940 Watkins Street
Union City, CA 94587

Note: The MRY Airport Master Plan Planning Advisory Committee and other interested stakeholders, organizations and individuals also received the notification via email on Dec. 30, 2015. A link to the NOP and initial study was included in the email for their review.

Del Rey Oaks Neighborhood to the North (within 500 Feet from Airport Property):

1. Property Owner
   900 Rosita Road
   Del Rey Oaks, CA 93940

2. Property Owner
   908 Rosita Road
   Del Rey Oaks, CA 93940

3. Property Owner
   916 Rosita Road
   Del Rey Oaks, CA 93940

4. Property Owner
   924 Rosita Road
   Del Rey Oaks, CA 93940

5. Property Owner
   925 Rosita Road
   Del Rey Oaks, CA 93940

6. Property Owner
   931 Rosita Road
   Del Rey Oaks, CA 93940

7. Property Owner
   932 Rosita Road
   Del Rey Oaks, CA 93940

8. Property Owner
   937 Rosita Road
   Del Rey Oaks, CA 93940

9. Property Owner
   940 Rosita Road
   Del Rey Oaks, CA 93940

10. Property Owner
    943 Rosita Road
    Del Rey Oaks, CA 93940

11. Property Owner
    948 Rosita Road
    Del Rey Oaks, CA 93940

12. Property Owner
    949 Rosita Road
    Del Rey Oaks, CA 93940

13. Property Owner
    955 Rosita Road
    Del Rey Oaks, CA 93940

14. Property Owner
    956 Rosita Road
    Del Rey Oaks, CA 93940

15. Property Owner
    961 Rosita Road
    Del Rey Oaks, CA 93940

16. Property Owner
    964 Rosita Road
    Del Rey Oaks, CA 93940

17. Property Owner
    969 Rosita Road
    Del Rey Oaks, CA 93940

18. Property Owner
    972 Rosita Road
    Del Rey Oaks, CA 93940

19. Property Owner
    973 Rosita Road
    Del Rey Oaks, CA 93940

20. Property Owner
    979 Rosita Road
    Del Rey Oaks, CA 93940

21. Property Owner
    980 Rosita Road
    Del Rey Oaks, CA 93940

22. Property Owner
985 Rosita Road
Del Rey Oaks, CA 93940

23. Property Owner
988 Rosita Road
Del Rey Oaks, CA 93940

24. Property Owner
996 Rosita Road
Del Rey Oaks, CA 93940

25. Property Owner
999 Rosita Road
Del Rey Oaks, CA 93940

26. Property Owner
1000 Rosita Road
Del Rey Oaks, CA 93940

27. Property Owner
1001 Rosita Road
Del Rey Oaks, CA 93940

28. Property Owner
1006 Rosita Road
Del Rey Oaks, CA 93940

29. Property Owner
1007 Rosita Road
Del Rey Oaks, CA 93940

30. Property Owner
1012 Rosita Road
Del Rey Oaks, CA 93940

31. Property Owner
1013 Rosita Road
Del Rey Oaks, CA 93940

32. Property Owner
1018 Rosita Road
Del Rey Oaks, CA 93940

33. Property Owner
1019 Rosita Road
Del Rey Oaks, CA 93940

34. Property Owner
1024 Rosita Road
Del Rey Oaks, CA 93940

35. Property Owner
1025 Rosita Road
Del Rey Oaks, CA 93940

36. Property Owner
1030 Rosita Road
Del Rey Oaks, CA 93940

37. Property Owner
1036 Rosita Road
Del Rey Oaks, CA 93940

38. Property Owner
1037 Rosita Road
Del Rey Oaks, CA 93940

39. Property Owner
1042 Rosita Road
Del Rey Oaks, CA 93940

40. Property Owner
1043 Rosita Road
Del Rey Oaks, CA 93940

41. Property Owner
1048 Rosita Road
Del Rey Oaks, CA 93940

42. Property Owner
1049 Rosita Road
Del Rey Oaks, CA 93940

43. Property Owner
1054 Rosita Road
Del Rey Oaks, CA 93940

44. Property Owner
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Del Rey Oaks, CA 93940

45. Property Owner
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46. Property Owner
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57. Property Owner
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72. Property Owner
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73. Property Owner
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Del Rey Oaks, CA 93940

108. Property Owner
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Del Rey Oaks, CA 93940

109. Property Owner
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110. Property Owner
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111. Property Owner
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112. Property Owner
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133. Property Owner
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134. Property Owner
1095 Paloma Road
Del Rey Oaks, CA 93940

135. Property Owner
1099 Paloma Road
Del Rey Oaks, CA 93940

136. Property Owner
901 Via Verde
Del Rey Oaks, CA 93940

137. Property Owner
902 Via Verde
Del Rey Oaks, CA 93940

138. Property Owner
909 Via Verde
Del Rey Oaks, CA 93940

139. Property Owner
919 Via Verde
Del Rey Oaks, CA 93940

140. Property Owner
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Del Rey Oaks, CA 93940

141. Property Owner
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142. Property Owner
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143. Property Owner
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144. Property Owner
969 Via Verde
Del Rey Oaks, CA 93940

145. Property Owner
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Del Rey Oaks, CA 93940

146. Property Owner
989 Via Verde
Del Rey Oaks, CA 93940

147. Property Owner
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Del Rey Oaks, CA 93940

148. Property Owner
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Del Rey Oaks, CA 93940

149. Property Owner
1005 Via Verde
Del Rey Oaks, CA 93940

150. Property Owner
1013 Via Verde
Del Rey Oaks, CA 93940

151. Property Owner
1017 Via Verde
Del Rey Oaks, CA 93940

152. Property Owner
1021 Via Verde
Del Rey Oaks, CA 93940

153. Property Owner
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Del Rey Oaks, CA 93940

154. Property Owner
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Del Rey Oaks, CA 93940

155. Property Owner
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Del Rey Oaks, CA 93940

156. Property Owner
1037 Via Verde
Del Rey Oaks, CA 93940

157. Property Owner
1039 Via Verde
Del Rey Oaks, CA 93940

158. Property Owner
1043 Via Verde
Del Rey Oaks, CA 93940

159. Property Owner
4 Los Encinos Drive
Del Rey Oaks, CA 93940

160. Property Owner
6 Los Encinos Drive
Del Rey Oaks, CA 93940

161. Property Owner
10 Los Encinos Drive
Del Rey Oaks, CA 93940

162. Property Owner
14 Los Encinos Drive
Del Rey Oaks, CA 93940

163. Property Owner
38 Los Encinos Drive
Del Rey Oaks, CA 93940

164. Property Owner
42 Los Encinos Drive
Del Rey Oaks, CA 93940

165. Property Owner
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166. Property Owner
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172. Property Owner
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Del Rey Oaks, CA 93940

173. Property Owner
62 Los Encinos Drive
Del Rey Oaks, CA 93940

174. Property Owner
66 Los Encinos Drive
Del Rey Oaks, CA 93940

175. Property Owner
6 Alta Circle
Del Rey Oaks, CA 93940

176. Property Owner
9 Alta Circle
Del Rey Oaks, CA 93940

177. Property Owner
10 Alta Circle
Del Rey Oaks, CA 93940

178. Property Owner
13 Alta Circle
Del Rey Oaks, CA 93940

179. Property Owner
14 Alta Circle
Del Rey Oaks, CA 93940

180. Property Owner
18 Alta Circle
Del Rey Oaks, CA 93940

181. Property Owner
22 Alta Circle
Del Rey Oaks, CA 93940

Property Owners within 500 feet from airport property line near Garden Road and Highway 68

182. Property Owner of 2150 Garden Rd.
22785 Bravo Ct.
Salinas, CA 93908

183. Property Owner of 2200 Garden Rd.
10 Harris Ct. Ste B-1
Monterey, CA 93940

184. Property Owner of 1520 Monterey-Salinas Highway
3105 LAKE DR Marina, CA 93933

185. Property Owner of 1520 Monterey-Salinas Highway
154 Downey Street #2
San Francisco, CA 94117

186. Property Owner
1520 Monterey-Salinas Highway
Monterey, CA 93940

187. Property Owner
1523 Monterey-Salinas Highway
Monterey, CA 93940

188. Property Owner
1152 Monterey-Salinas Highway
Monterey, CA 93940

189. Property Owner of 2560 Garden Rd.
PO Box 2350
Monterey, CA 93940

190. Property Owner
2600 Garden Rd.
Ste. 127
Monterey, CA 93940

191. Property Owner
2500 Garden Rd
Monterey, CA 93940

192. Property Owner of 2480 Garden Rd.
30 Ryan Court
#240
Monterey, CA 93940

193. Property Owner of 46 Garden Ct.
1 Atchinson Stage Pl.
Clayton, CA 94517

194. Property Owner
2400 Garden Rd.
Suite B
Monterey, CA 93940

195. Property Owner
1533 Monterey-Salinas Highway
Monterey, CA 93940

196. Property Owner
1533 Monterey-Salinas Highway

Monterey, CA 93940

197. Property Owner of APN 259011064000
(Corner of Olmsted Rd. and Highway 68)
PO Box 87 Monterey, CA 93942

MONTEREY REGIONAL AIRPORT
Monterey County, California

INITIAL STUDY
FOR THE
MONTEREY REGIONAL AIRPORT MASTER PLAN

Prepared For:
Monterey Peninsula Airport District
200 Fred Kane Drive, Suite 200
Monterey, CA 93940

Prepared By:
Coffman Associates, Inc.
4835 E. Cactus Road, Suite 235
Scottsdale, AZ 85254

December 2015

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MONTEREY REGIONAL AIRPORT
Monterey County, California

INITIAL STUDY
For the Monterey Regional Airport Master Plan

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INTRODUCTION

This Initial Study evaluates the potential environmental effects of the proposed Airport Master Plan (AMP) for Monterey Regional Airport (Airport or MRY). The goals of the AMP are to address Federal Aviation Administration (FAA) airport design standards and satisfy projected aviation demand, while considering cost-effectiveness and potential safety, environmental, and socioeconomic issues. The AMP process is guided by the FAA in Advisory Circular (AC) 150/5070-6B, Change 2, *Airport Master Plans* (FAA 2015).

Some of the main components of the proposed AMP include:

- Recommending improvements that will enhance the Airport's safety capabilities to the maximum extent feasible;
- Projecting aeronautical facility needs through the year 2033;
- Establishing a schedule of development priorities and a program for the improvements proposed in the AMP, including a detailed financial plan; and
- Developing goals, objectives, and performance targets for a sustainability plan for the Airport.

This Initial Study has been prepared pursuant to the *California Environmental Quality Act* (CEQA; Public Resources Code, Section 21000 et seq.) for the Monterey Peninsula Airport District (MPAD)[1] because the proposed AMP is a "project" subject to CEQA (Cal. Code Regs., Title 14, Section 15378 [CEQA Guidelines]). MPAD is the "Lead Agency" for this project (CEQA Guidelines, Section 15367), and will determine the appropriate level of CEQA documentation required for the proposed AMP based on the information presented in this Initial Study.

ENVIRONMENTAL REVIEW PROCESS

This Initial Study contains an "Environmental Checklist" that assesses potential environmental impacts of the proposed AMP using the form included in Appendix G of the CEQA Guidelines. A brief explanation is provided for all responses contained in the Environmental Checklist, including supportive documentation for those responses identified as "No Impact" or "Less than Significant Impact."

Based on the research and analysis undertaken to complete the Environmental Checklist, implementation of the proposed AMP has the potential to result in significant environmental impacts; therefore, alternatives to the proposed project, as well as mitigation, must be further evaluated. Based on this determination, MPAD is proposing to prepare an Environmental Impact Report (EIR) for the proposed project. This Initial Study will be used to identify those impact categories that require further study within the EIR, as well as to inform and solicit input from the public and other agencies as to the scope and content of the recommended EIR.

A list of references and definitions of acronyms used in this document are presented at the end of this report.

[1] MPAD is a Special Airport District that was created by the California Legislature in 1941. It is a stand-alone public entity, governed by five publicly elected members to the Board of Directors. District voting boundaries were set by the enabling legislation and encompass the cities of Monterey, Pacific Grove, Carmel by the Sea, Seaside, Del Rey Oaks, and Sand City and unincorporated communities within the County of Monterey, including Pebble Beach, the west end of Carmel Valley, Hidden Hills, Laguna Seca and Monterey-Salinas Highway to the Laureles Grade.

PROJECT DESCRIPTION

1. Project Title:

Proposed Airport Master Plan (AMP) for Monterey Regional Airport

2. Lead Agency Name and Address:

Monterey Peninsula Airport District (MPAD)
200 Fred Kane Drive, Suite 200
Monterey, CA 93940

3. Project Location:

The Airport is centrally located between the cities in and around the Monterey Peninsula, in the northwest portion of Monterey County, California (**Exhibit 1**). The Airport encompasses approximately 498 acres of property and is bordered by the City of Monterey on the northwest, west, south and east, and the City of Del Rey Oaks to the northeast. The United States (U.S.) Navy also owns several parcels in the vicinity of the Airport, including most of the golf course located immediately to the west. Monterey Bay is slightly more than one mile to the west of the Airport. The Airport is not located within the California Coastal Zone.[2]

[2] City of Monterey Coastal Zone Boundary, http://monterey.org/Portals/1/peec/maps/coastalZone_11x17.pdf, accessed November 2015.

4. Project Sponsor's Name, Address, and Contact:

Monterey Peninsula Airport District
200 Fred Kane Drive, Suite 200
Monterey, CA 93940

Attn. Ms. Shelley Glennon, Planning Manager - Environmental
(831) 648-7000 Ext. 209

5. Description of Project:

The proposed AMP is a facility-level planning study that sets forth a conceptual framework for possible future airport development within the AMP's 20-year planning horizon (2013-2033). Due to the process involved in evaluating the AMP under CEQA and obtaining funding for improvements proposed by the project, the actual first year of implementation is likely to be 2017. For purposes of CEQA, the baseline year for identifying the existing environmental conditions is 2015.

The goal of the AMP is to satisfy projected aviation demand, while considering cost-effectiveness and potential safety, environmental, and socioeconomic issues. The AMP process is guided by the FAA in AC 150/5070-6B, Change 2, *Airport Master Plans* (FAA 2015). As part of the preliminary steps within the AMP process, the FAA reviewed and approved the proposed AMP's aviation forecasts (i.e., the projected growth of airport services) on September 24, 2014. The FAA will also be asked to conditionally approve the Airport Layout Plan (ALP) for airspace and design standards. Any FAA approval of an ALP indicates that existing facilities and proposed development depicted on the ALP conform to the FAA's airport design standards and that the FAA finds the proposed development to be safe and efficient. However, one precondition to the implementation of improvements depicted on a conditionally approved ALP is that compliance with the *National Environmental Policy Act* (NEPA) must be undertaken prior to the FAA's issuance of improvement-specific approvals.

Some of the main components of the proposed AMP include:

- Recommending improvements that will enhance the Airport's safety capabilities to the maximum extent feasible;

- Projecting aeronautical facility needs through the year 2033;

- Establishing a schedule of development priorities and a program for the improvements proposed in the AMP, including a detailed financial plan; and

- Developing goals, objectives, and performance targets for a sustainability plan for the Airport.

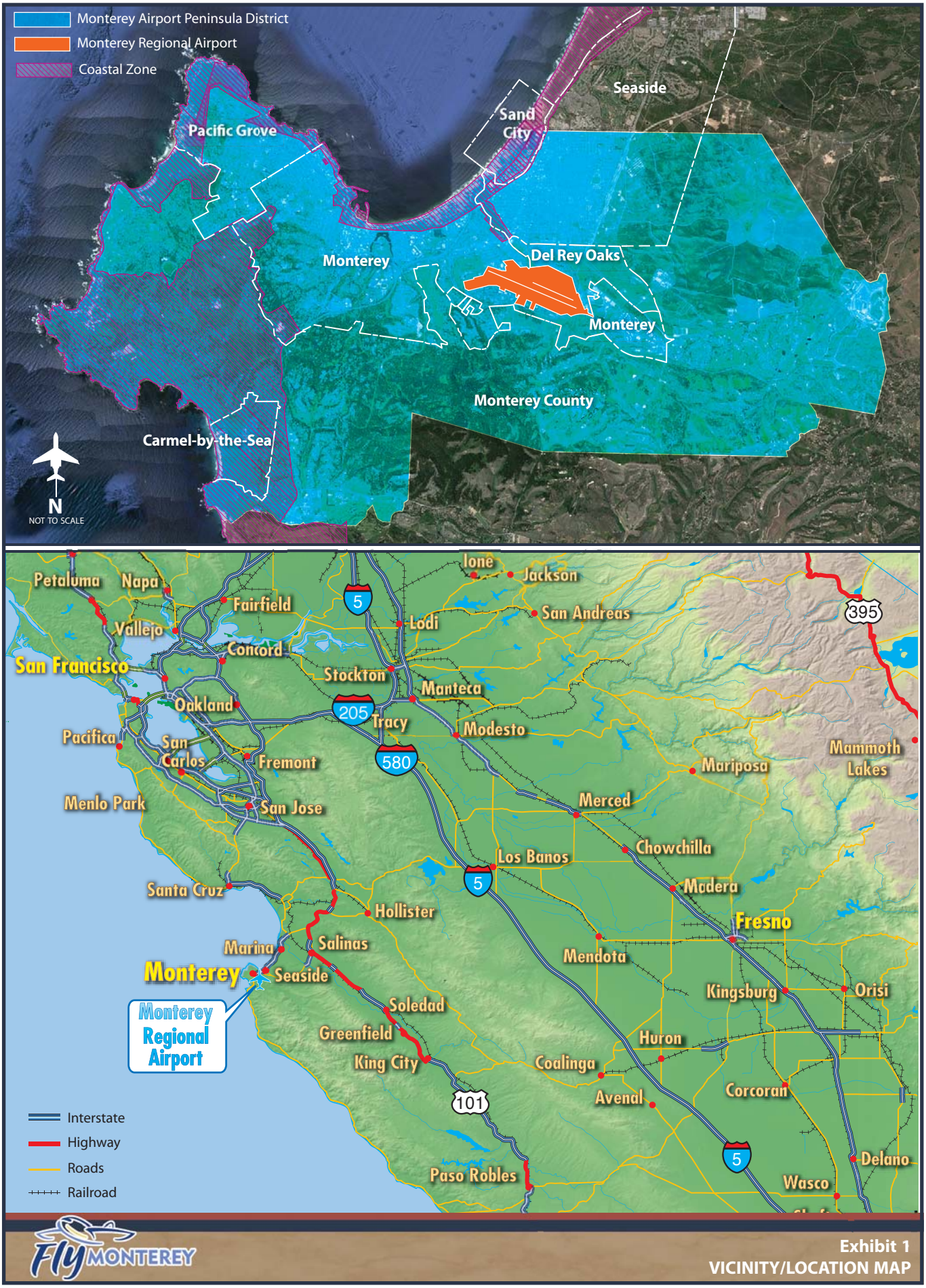

Exhibit 1
VICINITY/LOCATION MAP

The recommended development alternative is shown on **Exhibit 2** and will be discussed in detail in the subsections of this Project Description. Both project-specific and cumulative impacts of the recommended development alternative are discussed in this Initial Study.

Background Information

Existing Airport Facilities. The Airport is included in the 2015 – 2019 *National Plan of Integrated Airport Systems* (NPIAS) (FAA 2014), the *California Aviation System Plan* (CASP) (Caltrans 2013), and the *Monterey Bay Regional Airport System Plan* (AMBAG 2005). It is classified as a "nonhub primary commercial service" airport and maintains a Part 139 Airport Operating Certificate (also known as a Part 139 certification) under Title 14 of the Code of Federal Regulations (CFR) for serving air carrier aircraft as a Class I Airport.[3]

The Airport has two parallel runways. The primary runway, 10R-28L, is 7,175 feet long and 150 feet wide, with a 175-foot displaced threshold on each runway end to meet runway safety area (RSA) requirements for landing. Runway 10R-28L has engineered materials arresting systems (EMAS) on each runway end, also ensuring that the RSAs meet federal safety standards. The secondary runway, 10L-28R, is 3,504 feet long and 60 feet wide. **Table 1** shows the runway characteristics as well as the taxiways, lighting, and navigational aids associated with the airfield facilities. **Exhibit 3** shows the location of the runways, taxiways, and airfield visual approach aids.

Landside facilities at the Airport are those that support aircraft and pilot/passenger handling functions, as well as other non-aviation facilities that provide a revenue stream to the Airport. The primary landside facilities at the Airport are hangar, ramp, and tie-down areas located adjacent to the airfield, as well as fixed base operators (FBOs), the Airport's commercial passenger terminal (Terminal) and related support operations, and an airport rescue and firefighting (ARFF) building. The Airport also has three public self-storage facilities, a recreational vehicle (RV) storage lot, and several office buildings that provide non-aviation revenue support. **Exhibit 4** identifies the locations of these existing landside facilities.

[3] Class I airports are certified to serve scheduled operations of large air carrier aircraft (31 passenger seats or more), unscheduled passenger operations of large air carrier aircraft, and/or scheduled operations of small air carrier aircraft (10 to 20 passenger seats).

TABLE 1
Airside Facility Data
Monterey Regional Airport

Field Elevation: 257.1 above msl	Runway 10R	Runway 28L	Runway 10L	Runway 28R
Runway Length	7,175 feet		3,504 feet	
Runway Width	150 feet		60 feet	
Runway Surface Material (Condition)	Grooved Asphalt (Good)		Asphalt (Good)	
Runway Markings (Condition)	Precision (Good)		Basic (Good)	
Displaced Threshold	175 feet	175 feet	None	None
Runway Lighting	High Intensity		Medium Intensity	
Traffic Pattern	Left	Right	Left	Right
Runway Load Bearing Strength - Single Wheel - Double Wheel - Double Tandem Wheel	 100,000 pounds 160,000 pounds 300,000 pounds		 12,500 pounds Not Applicable Not Applicable	
Runway Gradient (west to east)	1.40 %		1.70%	
Taxiway Lighting	Medium Intensity			
Taxiway, Taxilanes & Apron Lighting	Centerline Markings, Tie-Down Area Markings, Reflectors			
Visual Approach Aids	PAPI-4L MALSR	VASI-4L REIL	Not Applicable	
Instrument Approach Aids	ILS RNAV (GPS)	RNAV (RNP) RNAV (GPS) LOC/DME	RNAV (GPS)	GPS
Weather and Navigational Aids	Automated Surface Observing System (ASOS) Lighted Wind Cone Airport Beacon Automatic Terminal Information Service Airport Traffic Control Tower (ATCT)			

msl – mean sea level
PAPI = precision approach path indicators
VASI = visual approach slope indicators
MALSR = medium intensity approach lighting system with runway alignment indicator lights
REIL = runway end identifier lights
ILS = instrument landing system
RNAV (RNP variant) = area navigation – required navigation performance
RNAV (GPS variant) = area navigation – global positioning system
LOC/DME = localizer/distance measuring equipment

Source: MPAD 2014 (MRY Airport Layout Plan)

Aircraft Aviation Forecasts. As previously mentioned, the FAA is responsible for reviewing and approving aviation forecasts developed in conjunction with airport planning studies. These forecasts are then used as a basis for airport planning and development. Thus, a key aspect of the proposed AMP is the use of demand-based planning milestones (based on FAA-approved forecasts).

Table 2 summarizes the key milestones for each of the AMP's three planning horizons: short-term (Years 1-5); intermediate-term (Years 6-10); and long-term (Years 11-20). The AMP's capi-

tal improvement plan (CIP) contains items of highest need and/or priority in its short-term planning horizon. These items should be considered for development based on actual demand levels within the first five years of AMP implementation (i.e., 2016-2020). As short-term horizon activity levels are reached, MPAD will then begin to program for the intermediate-term based upon the next activity milestones. Similarly, when the intermediate-term milestones are reached, it will be time to program for the long-term activity milestones. The specific CIP development components are discussed in a later section of this Project Description.

TABLE 2
Planning Horizon Annual Activity Levels
Monterey Regional Airport

	BASE YEAR	PLANNING HORIZONS		
	2013	Short-Term (Years 1-5)	Intermediate-Term (Years 6-10)	Long -Term (Years 11-20)
Enplaned Passengers	**200,651**	**223,000**	**245,000**	**275,000**
Commercial Operations				
Air Carrier Airline (>60 seats)	1,062	1,400	2,200	3,500
Air Carrier Commuter (>60 seats)	10,724	10,400	9,800	8,300
Air Cargo	568	600	700	800
Total Commercial Operations	12,354	12,400	12,700	12,600
GA Operations				
Itinerant	25,270	28,100	31,300	40,400
Local	10,876	11,800	12,800	15,900
Total GA Operations	36,146	39,900	44,100	56,300
Other Air Taxi Operations	3,610	4,300	6,300	10,200
Military Operations				
Itinerant	803	900	900	900
Local	914	600	600	600
Total Military Operations	1,717	1,500	1,500	1,500
Total Airport Operations	**53,827**	**58,100**	**64,600**	**80,600**
Based Aircraft	**152**	**160**	**175**	**200**

GA = general aviation
Source: MPAD 2014 (FAA-approved forecasts)

On-Airport Land Use Plan

The FAA requires that all federally-obligated airports utilize airport property for aviation purposes. However, if an airport has land that is unlikely to be utilized for aviation purposes because it exceeds that which is forecast to be needed or it is inaccessible by aircraft, then airport lands are allowed to be used for compatible non-aviation revenue support purposes.

Correspondingly, there are two primary purposes for an on-airport land use plan. The first is to secure those areas essential to the safe and efficient operation of the airport, taking into account applicable FAA design standards and appropriate planning guidelines. The second is to determine compatible land uses for the balance of the property which will be most advantageous to the airport (i.e., highest and best use). The following land uses are planned for Mon-

FLY MONTEREY

DRAFT

Exhibit 2
RECOMMENDED DEVELOPMENT ALTERNATIVE

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FLY MONTEREY

Exhibit 3
EXISTING AIRSIDE FACILITIES

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Exhibit 4
EXISTING LANDSIDE FACILITIES

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terey Regional Airport as shown in **Exhibit 5**. Specific recommended development components of the proposed AMP are discussed in this Project Description in a later section.

Aircraft Operations. The Aircraft Operations Area (AOA) is a restricted and secure area on the airport property designed to protect all aspects related to aircraft operations. It is the portion of airport property that encompasses the major airside elements, such as the runways, taxiways, runway safety area, runway object free area, runway obstacle free zone, runway protection zone (where located on airport property), taxiway safety area, taxiway object free area, navigational aid critical areas, and the runway visibility zone (where applicable).

The AOA is intended for the safe and efficient movement of aircraft to and from the airfield. This land use designation includes the various object clearing areas and, as such, only elements necessary for aircraft navigation can be located here. Many of the safety improvements proposed in the AMP's recommended development alternative are located within the AOA.

Aviation Development. Aviation Development land uses include those areas that should be reserved for development that requires access to the AOA. This might include aircraft hangars, transportation terminals, and air cargo facilities. Any aviation business needing access to the runway and taxiway system could be located in these areas. This land use category has been further subdivided as follows in order to provide additional definition to certain locations on the airfield:

- *General Aviation (small aircraft)*: This subarea encompasses the northwest and north sides of the Airport, which are generally considered to be reserved for general aviation (GA) activities and are intended to accommodate smaller piston-powered GA aircraft activity. This subarea also allows for supporting services, such as those provided by an FBO.

  The proposed On-Airport Land Use Plan (refer to **Exhibit 5**) includes two subareas of this type of GA land use:

  - The first is approximately 26 acres located northwest of the AOA. This area is the site of the former Monterey Naval Auxiliary Station area known as the Old Northside area. The On-Airport Land Use Plan identifies the removal of several existing buildings and the construction of three new buildings.

  - The second is an approximately 25-acre area north of the AOA in the vicinity of the existing Navy Flying Club. The On-Airport Land Use Plan shows additional hangar and taxilane development in this area.

  Both of these potential future development subareas are located within secured areas of the Airport (refer to **Exhibit 5**).

- *General Aviation (large aircraft):* Because the Airport experiences a significant level of activity by operators of business turboprops and jets, the southwest portion of the Air-

port currently supports two FBOs, both of which cater to business aviation operators. No changes are proposed to this subarea of the Airport as part of the AMP.

- *Commercial Aviation*: This subarea includes the proposed Terminal complex and extends from the aircraft parking positions on the airside interface to the airport southern property line west of Olmsted Road and the proposed Terminal loop road east of Olmsted Road. This subarea is reserved for current and future needs in the Terminal area and identifies enough land area to accommodate long-term Terminal growth potential.

Non-Aviation. This land use category allows development that is compatible with airport activities but is unlikely to require access to the runway and taxiway system. Typically, it is preferable that activities in these areas complement airport activities to some degree, but it is not necessarily required. Examples of potential uses include research facilities, offices, laboratories, manufacturing and processing facilities, warehouses, and other facilities compatible with an airport environment. The Airport has several areas already developed with compatible non-aviation uses. For example, part of the Navy golf course is located on airport property in the southwestern corner of the Airport. The Airport also contains an RV storage lot on the north side of the AOA and a public storage lot located on the southeastern side of the AOA.

One new area designated as non-aviation on the On-Airport Land Use Plan (approximately 12.3 acres) would be located along the proposed frontage road to Highway 68 in the vicinity of the new Terminal Complex. Two small areas (approximately 3.2 acres and 3.6 acres) will provide opportunities to locate revenue support businesses. In addition, 5.5 acres located off airport property is proposed to be acquired along Highway 68. This area is also designated as non-aviation on the On-Airport Land Use Plan in keeping with the existing land uses on the property, i.e., the area is currently developed with two office buildings. As discussed later in this Initial Study under South Side Frontage Road within Short-Term Improvements, this area will also be used to locate a frontage road to Highway 68.

The On-Airport Land Use Plan also identifies two areas north of the AOA for future non-aviation development. One is an approximate 9-acre area in the far western corner of the Airport. Formerly part of the Old Northside area, this site currently contains existing buildings and non-aviation land uses. The proposed AMP calls for the future redevelopment of this area.

Other areas on the north side of the airfield not identified for aviation development also are reserved for future "revenue support" functions. Specifically, the Airport has approximately 92.4 acres of undeveloped land that may be used eventually for low intensity, non-aviation development.

Environmental Mitigation Areas/Open Space. There are several areas on the Airport that are known to have sensitive vegetation. Many of these areas have been designated as environmental mitigation areas. Other portions of the property are more simply identified as Open Space because no other land use designation is anticipated at this time. Further, a 100-foot buffer along the northern airport property line is designated as Open Space to provide separation from neighboring residential areas.

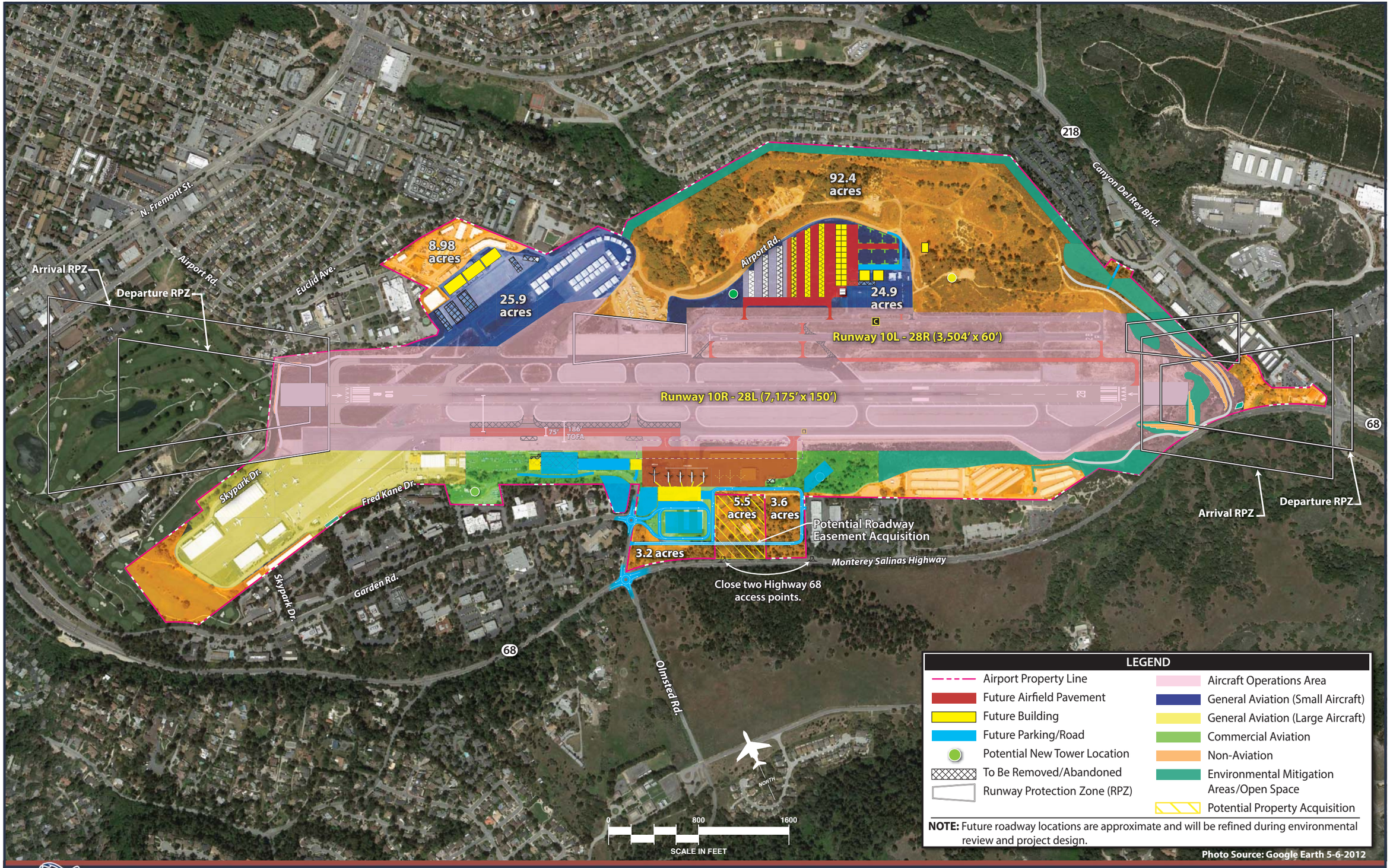

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Exhibit 5
ON-AIRPORT LAND USE PLAN

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Phasing/Capital Improvement Plan

Exhibit 6 depicts the proposed phasing of the recommended development alternative. To accomplish the proposed development, a CIP was developed to provide a program for funding the development components. All recommended development components for the short-, intermediate-, and long-term are listed in **Table 3** and are prioritized based on the needs of the Airport. Each component may require multiple steps, such as environmental evaluation, design, and engineering prior to construction; those elements have been identified separately for funding purposes within the overall CIP. However, for purposes of this Initial Study, the various stages of each component are addressed singularly; that is, the environmental documentation, design and engineering required, while treated separately in the CIP, are part of each overall development component in terms of environmental evaluation.[4]

TABLE 3
Airport Master Plan Capital Improvement Plan
Monterey Regional Airport

Short-Term Program (1-5 Years)	
2017	Property Acquisition (5.5 acres)
2018	Perimeter Fence Improvements
2019	South Side Frontage Road
2020	North Side GA Improvements – Phase 1 (Southeast Hangar Relocation)
2020	Runway 10L-28R Overlay and Improvements (PAPI, Taxiways K and L)
Intermediate-Term Program (6-10 Years)	
Terminal Complex (parking structure, aprons, taxiways, Terminal building, roads, and surface parking)	
ARFF Building	
Demolish Old Terminal Building	
Taxiway A Shift to 327.5 feet from Runway 10R-28L (centerline to centerline); Taxiway "island" Improvements	
North Side Access Road	
Long-Term Program (11-20 Years)	
North Side GA Development – Phase 2	
Maintenance Building	
Runway Protection Zone Land Acquisition (20 acres) & Avigation Easement (14 acres)	
Extend Taxiway B to Runway 28L Threshold	

GA = general aviation
PAPI = precision approach path indicators
ARFF = aircraft rescue and firefighting

Short-Term Improvements

The short-term development components are those anticipated to be needed in years 1 through 5 of the 20-year CIP and are included in the Airport's Five-Year Capital Improvement Program recently submitted to FAA and the California Department of Transportation (Caltrans). These components are discussed in more detail below.

[4] The recommended development alternative also shows four potential sites for relocation of the FAA-owned and operated airport traffic control tower (ATCT). That improvement is not part of the proposed AMP or under the control of MPAD, and, therefore, is not evaluated in this environmental review.

Property Acquisition (5.5 Acres) (2017). A 5.5-acre area off airport property is proposed to be acquired approximately 800 feet east of the Highway 68/Olmsted Road intersection (**Exhibit 6,** Item 2). The area is already surrounded by the Airport on three sides and would be designated as non-aviation on the On-Airport Land Use Plan in keeping with the existing land uses on the property, i.e., the area is currently developed with two office buildings. As discussed below under South Side Frontage Road, this area will also be used to locate a frontage road to Highway 68. No other changes to the area are anticipated as part of the proposed AMP.

Perimeter Fence Improvements (2018). The Airport's *Wildlife Hazard Management Plan* (MPAD 2013) includes an implementation measure entitled, "Pursue the Implementation of Perimeter Fence Modification and Improvements." The purpose of this AMP recommendation is to improve the Airport's control over coyotes, black-tailed deer, and other animals from encroaching upon the Airport.

The proposed perimeter fence includes increasing certain portions of the existing six-foot high fencing to a 12-foot fence with three-strand barbed wire outriggers to prevent deer from jumping the fence and entering the AOA. Furthermore, a four-foot skirt of chain-link fence material, attached to the bottom of the fence and buried at a 45-degree angle on the outside of the fence, is planned in order to prevent coyotes and other animals from digging under the fence, and to prevent washout from rain events. Approximately 10,800 linear feet of fence is proposed to be improved around the southeastern, eastern and central eastern portions of the airport property (**Exhibit 6**, Item 3).

South Side Frontage Road (2019). A "frontage road" that would parallel Highway 68 east from Olmsted Road for approximately 1,500 feet before turning north, west, and then south to reconnect (forming a loop) is proposed (**Exhibit 6**, Item 5). This frontage road would provide access to airport property for the development of non-aviation uses and would allow for the potential closure of two access drives off Highway 68 that serve private property located at 2801 and 2901 Salinas Highway (Highway 68). As shown on **Exhibit 6**, construction and use of the frontage road would require the acquisition of a roadway easement across private property, or the acquisition of the property itself (approximately 5.5 acres) (**Exhibit 6,** Item 2).

The proposed roadway improvements shown on **Exhibit 6** identify conceptual locations only. Future roadway locations will be refined during environmental review and project design.

North Side GA Improvements – Phase 1 (Southeast Hangar Relocation) (2020). The proposed AMP includes improvements to the north side GA area in order to relocate tenants on the southeast side of the Airport to the north side before the planned Terminal relocation begins (**Exhibit 6**, Item 7). The north side GA area currently contains six Port-a-Port T-hangars and the Monterey Navy Flying Club Hangar (as well as an above ground fuel tank for Avgas) and provides a total of approximately 9,600 square feet (sf) of aircraft storage space, 2,600 sf of maintenance/office space, and an approximate 181,000-sf GA aircraft apron (AMP, Exhibit 1M and Table 1M; MPAD 2014 [ALP]). The southeast GA uses to be relocated to the north side includes 60,700 sf of aircraft storage space and 18,000 sf of maintenance/office space (AMP, Exhibit 1M and Table 1M).

Construction in the north side GA area will consist of site preparation, apron and taxilane pavement, utilities, fencing, and interior access roads. One new taxiway connector to Taxiway

SHORT-TERM PROGRAM (0-5 YEARS)

2016
1. NEPA/CEQA Environmental Documentation - NP

2017
2. Property Acquisition (5.5 Acres)

2018
3. Airport Perimeter Fence

2019
4. North Side GA - Design - NP
5. South Side Frontage Road

2020
6. Terminal Complex - Design (Aprons & Taxiways) - *NP*
7. North Side GA - Construction (Phase 1 - Pavement/Site Prep)
8. Runway 10L-28R Overlay and Improvements (PAPI, Twy K, L)
9. ARFF Building - Design - *NP*

INTERMEDIATE-TERM PROJECTS (Years 6-10)

10. Terminal Complex - Design (Parking Structure) - *NP*
11. Terminal Complex - Construction (Parking Structure)
12. ARFF Building - Construction
13. Terminal Complex - Construction (Aprons & Taxiways)
14. Terminal Complex - Design (Terminal Building) - *NP*
15. Terminal Complex - Construction (Terminal Building)
16. Terminal Complex - Design (Roads & Surface Parking) - *NP*
17. Demolish Old Terminal Building
18. Terminal Complex - Construction (Roads & Surface Parking)
19. Taxiway A Shift to 327.5 - Env. Design, Construction
20. North Side Access Road - Env., Design, Construction

LONG-TERM PROJECTS (Years 11-20)

21. North Side GA - Construction (Phase 2)
22. Maintenance Building
23. RPZ Land Acquisition (Rwy 28L - 20 Acres) and Avigation Easements - 14 Acres
24. Extend Taxiway B to Rwy 28L Threshold

NP - Not Pictured
White - Private development or beyond planning period

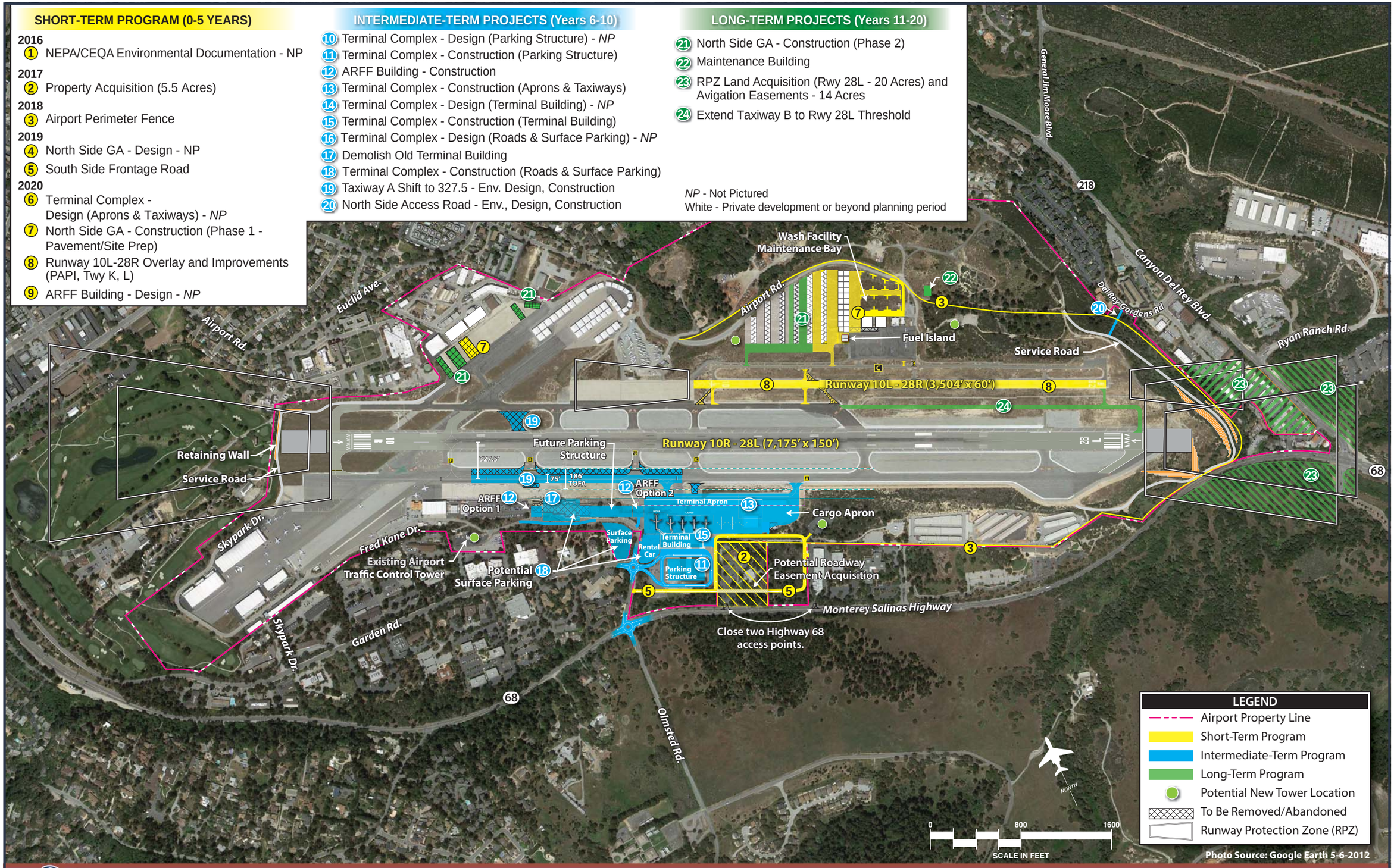

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Exhibit 6
PROJECT PHASING

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C is also planned. Hangars currently located at the Airport's existing southeast GA area may be purchased (at fair market value) and relocated as a part of this development component. Although additional future improvements such as the construction of hangars or a new fuel farm are not included in the proposed AMP's CIP, space is provided for approximately 31 T-hangars, 22 box hangars, two conventional hangars, and a fuel island within the improved GA area. As such, this level of development has been used as the basis for the environmental analysis provided in the Initial Study. Investors, such as FBO operators, or other means of financing revenue-producing facilities may be necessary to construct these facilities.

Runway 10L-28R Overlay and Improvements (PAPI, Taxiways K and L) (2020). Parallel Runway 10L-28R is the sole remaining AOA that has not received a recent pavement treatment. The pavement condition has reached the point of needing an overlay to extend/maintain its useful life. Therefore, the AMP proposes to apply an asphalt overlay to the entire parallel runway length (**Exhibit 6**, Item 8). Concurrent with the runway overlay, connecting Taxiways K and L between the runway and Taxiway B will be reconstructed to the FAA's standard 90-degree angle. Their current 45-degree position make them appear to be high-speed exits and can cause confusion for pilots. The AMP also proposes to install precision approach path indicator (PAPI-2L) lights on both ends of Runway 10L-28R to enhance pilot landing operations.

Intermediate-Term Improvements

The intermediate-term development components are those that are anticipated to be necessary in years 6 through 10 of the 20-year CIP. These components are not tied to specific years for implementation; instead, they have been prioritized so that Airport management has the flexibility to determine when they need to be pursued based on then-current conditions. It is not unusual for certain components to be delayed or advanced based on changing conditions, such as funding availability or changes in the aviation industry.

Commercial Passenger Terminal Relocation. The forecasts of aviation demand for the Airport and the Terminal building capacity analysis indicate that the current Terminal is at approximately 92 percent capacity (AMP, Exhibit 3D). Within the next six to ten years, if forecast demand is realized, the existing building will be undersized. In addition, several functional areas of the existing facility, (i.e., Transportation Security Administration [TSA] baggage screening, the baggage claim lobby, concourse circulation, concessions, rental car queue areas, and administrative space) are already undersized and/or inefficiently situated.

Portions of the existing Terminal building are over 60 years old and additions to the original structure have created inefficiency, especially on the secure side of the building. Also, the existing Terminal building penetrates the Federal Aviation Regulations (FAR) Part 77 transitional surface for the Airport, which is an imaginary airspace surface emanating from the edge of the primary surface at a 7:1 ratio.[5]

[5] The primary surface at an airport is typically 1,000 feet wide (centered on the runway); thus, the transitional surface begins at 500 feet from the runway centerline. Since the existing Terminal building is located 500 feet from the Runway 10R-28L centerline, the Terminal penetrates the transitional surface from its base up and there is currently obstruction lighting in place.

The AMP proposes to construct a new Commercial Passenger Terminal complex and then demolish the existing Terminal building (**Exhibit 6**, Items 11, 13, 15, 17 and 18). The recommended Terminal building location and layout is shown in **Exhibit 7**. The proposed layout incorporates a two-story, linear building with three surface parking lots and two parking structures. The Terminal building itself will contain 100,000 sf of physical space; an estimated 600 parking spaces will be provided in a four-level parking structure within a Terminal loop road, with an additional 90 spaces in a rental car lot positioned adjacent to the Terminal building. Two additional surface parking lots and one three-level parking structure are shown along Fred Kane Drive to provide another 833 parking spaces. The total number of parking spaces proposed (1,523) exceeds the long-term forecast demand for airport parking (1,209) and will be constructed, as necessary, in conjunction with the anticipated demand.

The Terminal development component will also include the construction of a new commercial apron in front of the Terminal building and two connector taxilanes between the apron and Taxiway A. One of the goals of the Terminal Relocation component is to provide additional depth to the Terminal's aircraft apron. The existing commercial apron is long and narrow, which necessitates parallel aircraft parking for the larger aircraft using the Airport (i.e., the MD-80 series, design aircraft[6]) as well as operating restrictions on Taxiway A. The approximate dimensions of the new commercial apron are 350 feet wide by 1,350 feet long, with the exception of the southeastern corner where a steep slope is a topographical constraint. As shown on **Exhibit 7**, the proposed apron will accommodate several large aircraft, including ones from the MD-80 series, without either Taxiway A restrictions or the need to park parallel to the Terminal building, as is sometimes currently necessary. Based on the analysis contained in the AMP, space should be available on the commercial apron for five aircraft boarding gates, with at least one that can accommodate the critical design aircraft.

Roadway Improvements. The new Terminal complex will continue to use the existing Terminal's access off Highway 68 via Olmsted Road as its primary access point. However, to reduce impacts to the highway from future airport development, a roundabout is proposed to facilitate traffic flow. A second roundabout is proposed at the intersection of Garden Road and Olmsted Road, which will connect to the Terminal loop road.

The proposed roadway improvements shown on **Exhibit 7** identify conceptual locations only. Future roadway locations will be refined during environmental review and project design.

Aircraft Rescue and Firefighting Building Relocation. Part 139 airports, such as Monterey Regional Airport, are required to provide ARFF services during commercial air carrier operations. The Airport's ARFF facility is outdated and does not meet modern design standards. Similar to the existing Terminal building, it is located only 550 feet from the centerline of Runway 10R-28L, making it an obstruction to the FAR Part 77 transitional surface. Therefore, the new Terminal complex includes two options for a replacement ARFF building to the west of the new commercial apron (**Exhibit 6**, Item 12). Either of these locations will: 1) keep the ARFF building

[6] An airport's critical design aircraft is used to define the design parameters for an airport and is based on the most demanding category of aircraft, or family of aircraft, which conducts at least 500 itinerant operations per year at an airport or the most demanding aircraft in regularly scheduled commercial service. Both the existing and future (2033) design aircraft at the Monterey Regional Airport is represented by the Boeing MD88 aircraft.

in proximity to the Terminal building; 2) allow for response times to the airfield that meet FAA requirements; and 3) meet FAA safety standards (i.e., a maximum height of 28 feet will allow the building to remain outside of the FAR Part 77 transitional surface).

Taxiway A Relocation and Associated Improvements. Once the Terminal building has been relocated, it is feasible to complete a long-term solution to the Taxiway A separation issue. Therefore, the AMP proposes to shift the remaining portions of Taxiway A to 327.5 feet of separation (centerline to centerline) from Runway 10R-28L, thus making a uniform separation for the entire Taxiway A (**Exhibit 6**, Item 19 and **Exhibit 8**). The taxiway separation between Taxiway A and Runway 10R-28L currently varies from 275 feet to 327.5 feet with the 275-foot separation occurring along the existing commercial apron and passenger Terminal; the FAA standard for parallel taxiway-runway separation (centerline to centerline) is 400 feet for airports with design aircraft and visibility minimums[7] similar to Monterey Regional Airport. The Airport has been operating under a conditional waiver of this standard from FAA, which stipulates that a large aircraft (B-737 or higher) may not use Taxiway A when another large aircraft is operating on the runway. Since the recommended long-term solution for the Taxiway A/Runway 10L-28R separation still does not meet FAA standards, a Modification to Design Standard will be necessary.[8] Initial discussions with the FAA on this request have been conducted.

Other taxiway improvements associated with the Taxiway A shift include apron "islands," which will prevent direct access from the apron areas to the runway at Taxiways G and J. On the north side of Runway 10R-28L, Taxiway G between Taxiway B and the runway will be closed to prevent direct access.

North Side Access Road. The north side of the Airport is relatively undeveloped. The existing facilities that are present on the north side, however, are accessed via Airport Road from the west, which is a circuitous route through a residential neighborhood. If additional development occurs which increases vehicular traffic to the Airport's north side, a different, more direct, access route should be provided. Therefore, the AMP includes an additional proposed north side access road that would connect Highway 218 with the on-airport eastern vehicle service road via Del Rey Gardens Road (**Exhibit 6**, Item 20). Steep terrain and use of the northern portion of the eastern vehicle service road will require a significant level of design and engineering. Further environmental study based on preliminary design will be required prior to development of any north side access road.

[7] A visibility minimum is the distance that a pilot needs to be able to see the runway environment on approach to landing.

[8] If the Airport were to try to provide the entire 400-foot separation by moving Taxiway A, the standard distance from Runway 10R-28L, it would leave approximately seven feet between the existing Terminal building and the near edge of the taxiway, effectively eliminating any commercial apron in front of the Terminal building. In addition, the taxiway would also impact several hangar and FBO aprons. Further, even if the Terminal is relocated, a 400-foot separation would still render much of the south side apron unusable due to the elimination of existing hangar apron frontage. Also, some of the hillside that runs parallel to Taxiway A on the east end of the runway would penetrate the taxiway object free area by approximately 150 feet.

Long-Term Improvements

Long-term development components are those that are anticipated to be needed in years 11-20 of the 20-year CIP. Like the intermediate-term components, these components are not tied to specific years for implementation; instead, they have been prioritized so that Airport management has the flexibility to determine when they need to be pursued based on then-current conditions. It is not unusual for certain components to be delayed or advanced based on changing conditions, such as funding availability or changes in the aviation industry.

North Side GA Development. Future construction of an expanded GA area on the northeast side is also considered to accommodate continued growth in based aircraft at the Airport (**Exhibit 6**, Item 21). Thus, the AMP proposes pavement, utilities, fencing, interior access roads and site preparation for additional hangar development. Overall, the recommended development alternative shows space for an additional 106 nested T-hangars and a second taxiway connector to Taxiway C. As such, this level of development has been used as the basis for the environmental analysis in this Initial Study. Investors, such as FBO operators, or other means of financing revenue-producing facilities may be necessary to construct these facilities.

Airport Maintenance Building and Yard. A consolidated airport maintenance building and yard is proposed on the northeast side of the Airport (**Exhibit 6**, Item 22).

Property Rights Acquisition for Runway 28 Runway Protection Zones. The AMP proposes to acquire controlling rights of lands that fall within the Runway 28 runway protection zones (RPZs) (**Exhibit 6**, Item 23). The FAA recommends that airports own or control their RPZ areas and, if possible, maintain them clear of incompatibilities such as roads, structures, and places of gathering. The Airport does not currently own or control all of the Runway 28 RPZ lands. Approximately 20 acres is currently undeveloped and is identified for fee simple acquisition as part of the proposed AMP. Approximately 14 acres is developed land that is identified for avigation easements. In this case, the Airport will need to work with the surrounding municipalities (cities of Del Rey Oaks and Monterey) to ensure appropriate zoning is in place. In lieu of fee-simple acquisition, a combination of avigation easements and zoning can also have the desired result of protecting the Airport from encroachment.

Taxiway B Extension. The AMP proposes to extend Taxiway B to the Runway 28 thresholds (**Exhibit 6**, Item 24). This improvement will reduce the number of runway crossings by aircraft on the north side of the runway desiring to depart Runway 28L.

Non-Aviation Development

Redevelopment of Old Industrial Area (Short-Term). The AMP designates an area as non-aviation development to allow for the redevelopment of approximately nine acres of an old industrial area of the Old Northside military complex (**Exhibit 5**). This redevelopment is anticipated to occur in the short-term planning horizon of the Master Plan (i.e., 1-5 years). The area is located between the existing off-airport naval research and meteorological center and an on-airport hangar area and contains twelve permanent buildings of varying size and age as well as four temporary buildings.

Runway 10R - 28L 7,175' X 150'
G
J
K
A
75'
186' TOFA
152'
162' TOFA
300'
ARFF Building
Option 1
2 Story ARFF Building
Option 2
Potential
Surface Parking
76,000 s.f.
190 spaces
Parking Structure
69,000 s.f.
172 spaces per level
(3 levels)
Terminal Apron
MD88
CRJ900
Surface Parking
51,000 s.f.
127 spaces
Terminal Building
100,000 s.f.
Service
Drive
Rental Car
Ready/Return
35,800 s.f.
90 spaces
Parking Structure
60,200 s.f.
150 spaces
per level
(4 levels)
Potential Roadway
Easement Acquisition
Garden Rd.
Olmsted Rd.
Monterey Salinas Highway
68
Close two Highway 68 access points.
LEGEND
Airport Property Line
Taxiway Object Free Area (TOFA)
Taxilane Object Free Area
To Be Removed/Abandoned
Future Airfield Pavement
Future Building
Future Parking/Roads
Non-Aviation Development
Potential Property Acquisition
Potential New Tower Location
NOTE: Future roadway locations are approximate and will be refined during environmental review and project design
0
200
400
SCALE IN FEET
NORTH
Photo Source: Google Earth 8-25-2013
FLY MONTEREY
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Exhibit 7
TERMINAL AREA DETAIL

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Exhibit 8
TAXIWAY A - LONG-TERM SOLUTION

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To facilitate the redevelopment, approximately 65,000 sf of permanent building space (**Table 4**) and approximately 4,400 sf of modular building space (Building Nos. 1102, 1106, 1110, and 1114) will be removed; one newer building with an approximate 20,500-sf building footprint (No. 1118) will remain. It is assumed, for purposes of this environmental analysis, that in evaluating replacement buildings consideration will be made for replacement buildings that are similar in nature to what currently exists (i.e., generally single-story office, light industrial, and storage facilities with building coverage over roughly 25 percent of the redevelopment area). Based on this assumption, approximately 98,010 sf of building space could occur in the area, resulting in approximately 77,360 sf of new building space and a net increase of approximately 8,160 sf.[9] Approximately 6.75 acres of the area will be used for parking, circulation, and landscaping.

TABLE 4
Existing Permanent Buildings to be Removed by Non-Aviation Redevelopment
Monterey Regional Airport

Building No.	Description of Building	Year Built	Year Modified	Building Size (Square Feet)
117/105A	Tenant Building	1949	1968	4,020
505	Tenant Building	Pre-1961	N/I	7,000[1]
1101	Tenant Building	Circa 1985	N/A	3,200
1105	Tenant Building	1943	1050	7,754
1109	Tenant Building	1943	1991	480
113, 105, 109	Two tenant buildings (Quonset huts) with connector	1944	2001	8,600
102	Tenant Building	1970	1980	6,900
104	Tenant Building	1970	1980	7,350
106	Tenant Building	1970	N/A	3,000[1]
517/1174[2]	Tenant Building	After 1998	N/I	16,500[1]
TOTAL:				**64,804**

N/I = no information available; N/A = not applicable
[1] Estimated building footprint using Google Earth.
[2] Two building numbers denote separate floors of the same building.

Source: SWCA 2014. *Historic Resources Assessment and Survey Report, Monterey Regional Airport, Monterey, California.*

South Non-Aviation Development Areas (Short-Term). This non-aviation development will be approximately 12.3 acres located along the proposed frontage road to Highway 68 (**Exhibit 5**). These areas are anticipated to be developed within the short-term planning horizon for the proposed AMP, provided the necessary infrastructure is available.

For purposes of this Initial Study, it is assumed that approximately 25 percent of the site will be developed with building space, and 75 percent will be developed with parking, driveways, roadways and landscaping, allowing for approximately 75,000 sf of building footprint and five

[9] 9 acres x 0.25 building coverage = 2.25 acres of total building space (98,010 sf). 98,010 sf – 20,650 sf (existing building to remain) – 64,804 sf (permanent buildings to be removed) – 4,400 sf (modular buildings to be removed) = 8,156 sf of net building space.

acres of parking and landscaping. However, setbacks from Highway 68 may further reduce the feasible building square footage. Other properties along the highway, for example, at 2901 and 2959 Salinas Highway, have building coverage of less than 20 percent, while the building coverage at 2801 and 2901 Salinas Highway is less than 10 percent.

Non-Aviation North Side Reserve (Intermediate-/Long-Term). As previously discussed under the On-Airport Land Use Plan section, other areas on the north side of the airfield not identified for aviation development are reserved for future "revenue support" functions. The Airport has approximately 92.4 acres of undeveloped land in this area that may be eventually used for non-aviation development. This acreage could possibly accommodate low intensity light industrial, commercial or office development uses, or land uses that do not generate significant traffic, such as solar arrays or environmental mitigation banks.

The existing terrain within this acreage is varied and does not lend itself to large flat development complexes. Rather, both buildings and parking will need to be designed with sensitivity to the topographical constraints of this area of the Airport. Similarly, there are numerous sensitive biological features to be considered. It is likely that at least half of the area will remain in undeveloped open space. Thus, any development in this area will be characterized as low intensity development, rather than medium or high intensity land use.

As listed in **Table 3** and discussed previously under *Phasing/Capital Improvement Plan*, a north side access road is necessary to provide additional access in the event that any future non-aviation development generates significant traffic volumes. In order to determine whether and when such additional access is necessary, an appropriate triggering threshold for roadway construction will be developed based – in part –on an analysis of existing traffic conditions, particularly in the Casanova - Oak Knolls neighborhood. Any development generating significant traffic volumes in the North Side Reserve is assumed to occur in the intermediate- or long-term planning horizon of the proposed AMP, in conjunction with additional north side access.

For purposes of evaluating the possible environmental impacts of future low intensity light industrial, commercial, or other non-aviation activity north of the airfield, it is assumed that there will be an approximate 25 percent overall building coverage and 25 percent overall site coverage (i.e., pavement, parking structures, and landscaping), clustered in the less environmentally sensitive areas. As indicated above, the balance of the site coverage (i.e., 50 percent) is assumed to remain undeveloped open space, due to biological and topographical constraints. This development coverage assumption is higher than what is occurring along Highway 68 in proximity to the Airport and is considered a worst-case analysis. Using a 25/25 percent site coverage assumption, approximately 1,000,000 sf of light industrial, commercial, or other non-aviation building space and approximately 23 acres of pavement, parking, and landscaping might occur.[10]

[10] It should be noted that a previous feasibility study of the area found that costs for site development, infrastructure, and environmental mitigation would be appreciable and may preclude many types of non-aviation development (MPAD 2011).

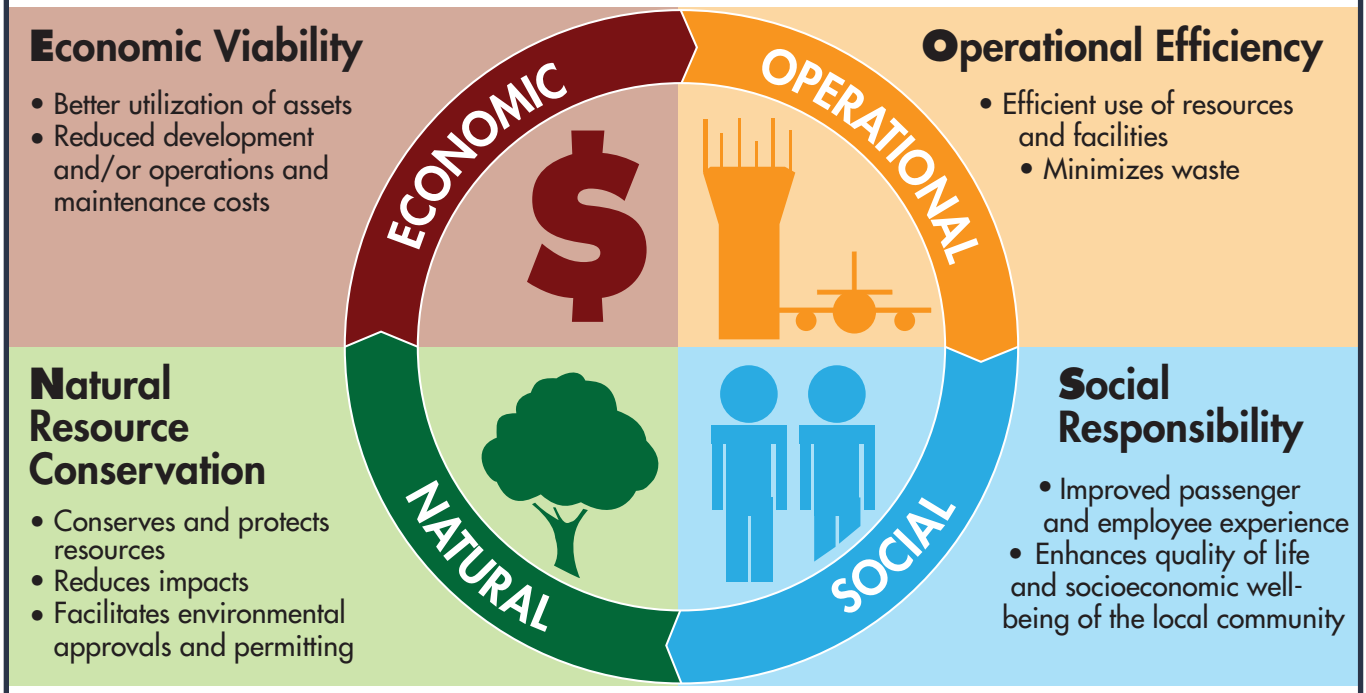
Sustainability Action Plan

The proposed AMP also includes a Sustainability Action Plan (AMP, Appendix D). An applicable definition of sustainability specific to airports has been established by the Airports Council International-North America (ACI-NA): "a holistic approach to managing an airport so as to ensure the integrity of the **E**conomic viability, **O**perational efficiency, **N**atural resource conservation, and **S**ocial responsibility [EONS] of the airport" (see **Exhibit 9**).

MPAD has already implemented sustainability principles into its decision-making process and has incorporated several successful sustainability initiatives. For proposed future development components, such as the construction of new Terminal and ARFF buildings, MPAD plans to seek Leadership in Energy and Environmental Design (LEED) certifications, which require a number of sustainable prerequisites and credits. Other successful MPAD-adopted sustainability initiatives at the Airport include several energy-saving lighting projects, the installation of several electric vehicle (EV) charging stations, the purchase of electric vehicles, a Terminal recycling program, the installation of low-water use Terminal fixtures, and use of an energy-efficient film on the windows and doors along the airfield side of the Terminal.

As MPAD begins working towards its sustainability goals and objectives, it is important to identify performance targets so that there is a clear understanding of what the program aims to accomplish. Setting targets makes it easier to communicate the program goals internally (within MPAD organization) and externally (local/regional governments, community organizations, local residents). Targets should be realistic and reasonable to ensure the validity of the program. The following Sustainability Action Plan (**Table 5**) prioritizes various initiatives identified in the AMP as well as provides key performance indicators (KPIs) to evaluate the effectiveness of the plan.

Airports Council International-North America (ACI-NA)
EONS Approach to Sustainability



Economic Viability - Refers to maintaining high and stable levels of economic growth and including the continued business viability of an airport enterprise, the tangible assets created by capital investments at the airport, and the direct and indirect economic impact on the region. This impact includes the value added to public and private sectors through investments in partnerships, tax payments, and other contributions.

Operational Efficiency - An airport's management structure and ability to leverage operations and maintenance monies to promote efficient use of resources and minimize waste.

Natural Resource Conservation - Refers to protecting the environment with a focus on the natural resources that are used or affected as a result of airport operations and the ecosystem in which these resources are located.

Social Responsibility - Refers to a broad set of actions that ensure organizational goals are achieved in a way that is consistent with the needs and values of the local community.

FLY MONTEREY

Exhibit 9
ACI-NA EONS APPROACH TO SUSTAINABILITY

TABLE 5
Sustainable Action Plan & Key Performance Indicators (KPIs)
Monterey Regional Airport

Initiatives Prioritization	KPI (Metric/Frequency)
1. Distribute press releases and provide website updates (on the MRY Sustainability webpage) regarding specific airport projects and sustainability accomplishments.	Press releases/website updates (semi-annual)
2. Use social media to promote the Airport's sustainability accomplishments.	Social media site metrics (i.e., likes, followers, etc.)
3. Develop and provide free, internet accessible (on MRY Sustainability webpage) learning material and tutorials for public schools on the topics of aviation and environment/sustainability.	Students reached through program (#/year)
4. Expand metering to facilitate accurate measurement of water use.	Buildings and irrigated areas equipped with sub-meters (#)
5. Develop and implement sustainable landscaping guidelines/ specifications that require plantings to be low-maintenance, drought resistant, and native species that are non-wildlife attracting for MRY and tenants.	Water usage (gallons/month)
6. Support efforts of the airport industry – including those of the FAA, commercial air carriers, and aircraft manufacturers – to develop air quality and GHG emission benchmarking databases that improve the understanding of the relative efficiencies of aviation operations.	GHG emissions inventory (biennially)
7. Provide incentives, such as rebates and/or preferred parking, for staff vanpools/carpools and alternatively fueled vehicles.	Employee survey results (#/year)
8. Provide subsidized bus passes to employees and construction workers.	Employee survey results (#/year)
9. Post no-idling signs in the terminal area and incorporate anti-idling policies into lease agreements.	Terminal traffic observations
10. Support single/reduced engine taxiing procedures authorized by the FAA and encourage the use of quiet technology when feasible.	Pilot survey results
11. Pursue LEED Certification or equivalent for future MPAD facilities including a future terminal building: • Consider light colored "cool" roofs and cool pavements; • Install window awnings, sunshades, or window tinting in appropriate areas and maximize the use of natural lighting; • Optimize the energy efficiency and control of the conveyor motors in the baggage handling system; • Install a solar photovoltaic system to generate on-site renewable energy; • As technologically available, install energy efficient elevators and escalators; • Recycle used non-potable water for landscaping, machine washing, urinal and toilet flushing, custodial uses, etc. to the extent allowed by the *Safe Drinking Water Act of 1974;* • Install metered irrigation systems that automatically shut off when it is raining; • Promote Monterey Peninsula eco-tourism by installing carbon-offset kiosks where passengers can purchase offsets for their flight and discover the environmental impact of their flight; and/or • Support bicycle use by airport employees and the air traveling public by providing convenient, secure bicycle facilities for use on airport premises.	MPAD policy • Electrical usage (kilowatt hours/month) • Water usage (gallons/month) • Kiosk usage and revenue (#/$/month) • Employee and traveler survey results (#/year)
12. Use Envision™ rating system to assess the sustainability performance of airport infrastructure projects and development programs.	MPAD policy

TABLE 5 (Continued)
Sustainable Action Plan & Key Performance Indicators (KPIs)
Monterey Regional Airport

Initiatives Prioritization	KPI (Metric/Frequency)
13. Perform a baseline energy audit and conduct and implement recommendations periodically.	Electrical and natural gas usage (kilowatt hours/therms/month)
14. Integrate sustainability language and requirements into future airport lease agreements, amendments and/or renewals.	% tenant contracts with sustainable language
15. Start a Green Procurement Program.	MPAD Procurement policy
16. Develop and implement a Green Concessions Policy.	MPAD Concessions policy
17. Provide food waste collection bins to separate food waste from normal waste to enhance composting opportunities.	Food waste collected (pounds/month)
18. Conduct a waste composition study (waste audit) tracking waste use/composition no less than every 24 months.	Waste audit report
19. Develop and implement an Integrated Solid Waste Management Plan.	Recycled materials diverted from landfill (tons recycled per enplanement/month)
20. Install cisterns to capture rainwater.	Water usage (gallons/month)
21. Continue the transition to all LED or equivalent lighting on the airfield, within terminal buildings, and in connection with surface and parking lot security lighting.	Electrical usage (kilowatt hours/month)
22. Transition to alternatively-fueled ground support equipment (GSE), generators, shuttle buses, and taxis to the extent reasonable and feasible.	Fuel usage (gallons/month)
23. Install an on-site alternative fuel (CNG, biofuel, EV, hydrogen) vehicle refueling station.	Fuel flowage (gallons/ kilowatt hours/month)
24. Collaborate with local transit operators to expand public transit opportunities to the Airport.	Employee and traveler survey results (#/year)

NOTE: Refer to the List of Acronyms at the end of this report for definitions of abbreviations used in this table.

6. **General Plan Designation:** Since the Airport is located within a Special District (i.e., MPAD), there are no General Plan designations applicable to airport property with four exceptions. Airport property located on the northwest corner of the intersection of Highways 68 and 218 is within the City of Del Rey Oaks. This area is designated as Neighborhood Commercial on the City of Del Rey Oaks General Plan land use map (City of Del Rey Oaks 1997) and would not be changed by the proposed AMP.

   Airport property that is located on the northwest corner of Garden Road and Olmsted Road on Assessor Parcel Number (APN) No. 013321009000; airport property located directly east of Olmstead Road and abutting Highway 68 to the north; and airport property abutting Highway 68 within APN No. 013221015000 is within the City of Monterey and designated as Industrial by the City (City of Monterey 2015).

   The proposed AMP, once adopted, will provide the blueprint for land use planning overall at the Airport for the next 20 years.

7. **Zoning:** See discussion above under General Plan Designation. There are no local zoning ordinances over airport property with four exceptions. Airport property located on the

northwest corner of the intersection of Highways 68 and 218 is zoned as Neighborhood Commercial (C-1) or Neighborhood Commercial with a Visitor Overlay District (C-1-V) on the City of Del Rey Oaks zoning map (City of Del Rey Oaks 2015).

Airport property that is located on the northwest corner of Garden Road and Olmsted Road on APN No. 013321009000 is within the City of Monterey and is zoned I-R-130-RA (Industrial, Administration, Research District – 130,000 sf minimum – Religious Assembly District). Airport property that is located directly east of Olmstead Road and abutting Highway 68 to the north is within City of Monterey and zoned I-R-130-D2 (Industrial, Administration, Research District – 130,000 sf minimum – Development Control Overlay District). Airport property abutting Highway 68 within APN No. 013221015000 is also within the City of Monterey and zoned I-R-130-D2 (City of Monterey 2015).

The Airport is located outside of the Coastal Zone.

8. **Surrounding Land Uses and Setting:** The Airport is located in the Monterey Bay area approximately two miles southeast of downtown Monterey and just over one mile from the Monterey Bay and the Pacific Ocean. The Airport is bordered by the City of Del Rey Oaks to the north and east, and the City of Monterey to the south and west (refer to **Exhibit 1**). Land uses in proximity to the Airport include the U.S. Navy golf course, a government research complex (includes the Fleet Numerical Meteorology and Oceanography Center, Naval Research Laboratory, and National Weather Service), residential neighborhoods, agriculture, and commercial and light industrial development along Highways 68 and 218. To the south of Highway 68 is open space located within Monterey County.

   Topography on the Airport is nearly flat in areas directly adjacent to the runway, but slopes steeply at the western and eastern ends creating a plateau. On the north side of the airfield, topography is more varied with several hills and drainages. Elevation at the Airport ranges from approximately 125 feet above mean sea level (msl) to 300 feet above msl.

   The airport property supports several plant communities, including sensitive communities such as maritime chaparral, coast live oak woodland, and Monterey pine forest. Numerous types of sensitive plants have also been documented on the property as well as in the general area.

   Within the Monterey area, Highways 1 and 68 are designated as scenic highways and provide scenic views of the ocean and wooded hills along their respective corridors.

9. **Other Agencies Whose Approval is Required (e.g., permits, financing approval, or participation agreement)**

   Approval of the AMP is primarily a discretionary action by the MPAD Board, and is dependent upon Board certification of an appropriate CEQA document prior to taking action on the

AMP. The FAA is involved in the AMP approval process as well through its acceptance of the AMP forecasts and an updated ALP.

Individual components of the AMP may involve design approval by FAA and/or Caltrans, depending on the type of improvements and funding. Environmental compliance review under NEPA is also conducted by FAA for those individual components of the AMP that require a federal discretionary action, including funding or revisions to the ALP.

Other permits or approvals that may be required for individual components of the proposed AMP are listed below:

- Caltrans Right-of-Way Encroachment Permits for improvements to Highway 68 and/or Highway 218.
- City of Monterey approval for improvements to Olmsted Road.
- City of Del Rey Oaks approval for improvements to Del Rey Garden Road.
- U.S. Fish and Wildlife Service (USFWS) Incidental Take Permits under Section 7 or Section 10 of the *Endangered Species Act* or the *Migratory Bird Treaty Act* (MBTA).
- California Department of Fish and Wildlife (CDFW) 2081 Incidental Take Permits.
- CDFW Streambed Alteration Agreement under Section 1602 of the California Fish and Game Code (CFGC) if changes are proposed to any onsite detention basins or ponds that support riparian vegetation.
- Approval from the California Regional Water Quality Control Board (RWQCB) for modifications to the Airport's stormwater pollution prevention plan (SWPPP).
- Approval from the State Historic Preservation Officer (SHPO) regarding the presence and/or treatment of cultural resources.
- Completion of Form AD-1066 by the U.S. Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS) related to the conversion of farmland of statewide importance.
- Construction permit from the RWQCB related to applicable National Pollutant Discharge Elimination System (NPDES) General Construction permitting requirements.
- Construction Traffic Phasing Plan approval from Caltrans for haul routes with direct access to Highways 68 and/or 218.
- Review of the proposed AMP, its noise contours, and its safety zones by the Monterey County Airport Land Use Commission (ALUC).

10. Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or a "Less Than Significant with Mitigation Incorporated" impact as indicated by the checklist on the following pages.

☒	Aesthetics	☒	Agriculture and Forestry Resources	☒	Air Quality
☒	Biological Resources	☒	Cultural Resources	☒	Geology /Soils
☒	Greenhouse Gas Emissions	☒	Hazards & Hazardous Materials	☒	Hydrology / Water Quality
☒	Land Use / Planning	☐	Mineral Resources	☒	Noise
☒	Population / Housing	☒	Public Services	☒	Recreation
☒	Transportation/Traffic	☒	Utilities / Service Systems	☒	Mandatory Findings of Significance

11. Determination:

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find the proposed project MAY have a significant effect(s) on the environment, but at least one effect: 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards; and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets, if the effect is a "potentially significant impact" or "potentially significant unless mitigated." An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because all potentially significant effects: (a) have been analyzed adequately in an earlier EIR pursuant to applicable

standards; and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project.

Shelley Glennon — 12/1/15

Signature — Date

Shelley Glennon, Planning Manager – Environmental
Monterey Peninsula Airport District

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than

significant level (mitigation measures from "Earlier Analyses," as described in (5) below may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (CEQA Guidelines, Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of, and adequately analyzed in, an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources. A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

   b) the mitigation measure identified, if any, to reduce the impact to less than significance

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
I. AESTHETICS				
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	X	☐	☐	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state-designated scenic highway?	X	☐	☐	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	X	☐	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	X	☐	☐	☐

Impact Analysis

I a-d) Potentially Significant Impact. The proposed AMP includes development along Highway 68, a State and County-designated scenic highway. Residential and recreational land uses are also located in proximity to the Airport. Implementation of the AMP would involve both changes in lighting sources on the Airport and, potentially, glare from solar panels proposed as

part of a sustainability plan, as well as the new buildings and parking structures. Potential impacts to scenic viewsheds and resources, visual character and quality, as well as new sources of light and glare will need to be further evaluated in an EIR.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.				
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	X	☐	☐	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code, Section 12220(g)), timberland (as defined by Public Resources Code, Section 4526), or timberland zoned Timberland Production (as defined by Government Code, Section 51104(g))?	☐	☐	☐	X
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	X

Impact Analysis

II a) Potentially Significant Impact. Although much of the Airport is already developed with structures or pavement, there is an undeveloped area on the north side of the Airport that is

considered Farmland of Statewide Importance by the USDA-NRCS and the California Department of Conservation (USDA-NRCS 2015; CDC 2011). The AMP identifies this area as Future Non-Aviation Reserve and General Aviation (small aircraft) for the future development of non-aviation land uses and GA hangars. Therefore, potential impacts to designated farmland resources will need to be further evaluated in an EIR.

II b) No Impact. The Airport is not zoned for agriculture uses nor is it part of a Williamson Act contract. Further evaluation of this issue in an EIR is not required, and no mitigation is necessary.

II c-e) No Impact. There is no forest land or timberland (as defined in the Pub. Resources Code or Government Code) located at, or in proximity to, the Airport. Further evaluation of these issues in an EIR is not required, and no mitigation is necessary.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
III. AIR QUALITY Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	X	☐	☐	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	X	☐	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the air basin is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	X	☐	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	X	☐	☐	☐
e) Create objectionable odors affecting a substantial number of people?	X	☐	☐	☐

Impact Analysis

III a-e) Potentially Significant Impact. Monterey County is a designated "nonattainment" area for purposes of the ozone and PM_{10} (coarse dust particles 2.5 to 10 micrometers in diameter) California Ambient Air Quality Standards (CARB 2013). Implementation of the AMP would generate additional criteria air pollutant and toxic air contaminant emissions as a result of con-

struction and operational activities from a variety of emission sources. Thus, the project will need to be evaluated in relation to federal, state and regional air quality standards and plans in an EIR.

In addition, residential areas are located adjacent to the Airport in several areas and could be adversely affected by pollutant concentrations or odors related to individual AMP components. An EIR will include an air quality study to evaluate potential emissions from construction and operational activities, including ground transportation, as well as an evaluation of the proposed AMP's consistency with adopted air quality plans and policies.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
IV. BIOLOGICAL RESOURCES Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	X	☐	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	X	☐	☐	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the *Clean Water Act* (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	X	☐	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	X	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	X	☐	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	X	☐

Impact Analysis

IV a-b) Potentially Significant Impact. Two federally-listed species (Monterey spineflower and Yadon's piperia) are located on the airport property; additionally, potential habitat for one federally-listed species (California red-legged frog) also is located on the property. The airport property also contains plant communities that are considered Communities of Concern by the CDFW, as well as other special-status species protected by the MBTA, the CFGC, and potentially the California *Endangered Species Act*. Riparian habitat may also present on the Airport at man-made ponds located on the north side of the Airport. Therefore, potential impacts to these resources will need to be further evaluated in an EIR.

IV c) Potentially Significant Impact. Man-made ponds located on the north side of the Airport are identified as wetlands by the USFWS National Wetland Inventory (2015). Two are identified as Freshwater Emergent Wetlands and one is identified as Freshwater Forested/Shrub Wetland. Therefore, potential impacts to these resources will need to be further evaluated in an EIR.

IV d) Less than Significant Impact. The Airport implements a Wildlife Hazard Management Plan (2013) to reduce potential hazards to aircraft and human safety associated with wildlife movements on and within the area encompassing 10,000 feet off the north and south sides of the Airport and five miles along the runway approaches per FAA AC 150/5200-33B, *Hazardous Wildlife Attractants On or Near Airports*. The proposed AMP will remain consistent with this Plan and will not create significant changes to the movement of wildlife across the Airport. Further evaluation of this issue in an EIR is not required, and no mitigation is necessary.

IV e) Potentially Significant Impact. Monterey County implements an Oak Protection Ordinance (Section 21.64.260); components of the AMP could conflict with this ordinance, if mitigation is not provided, since future development may require the removal of protected oaks. Therefore, potential impacts to these protected resources will need to be further evaluated in an EIR.

IV f) Less than Significant Impact. There are no adopted Habitat Conservation Plans (HCPs) or other types of resource management plans addressing sensitive biological resources at the Airport. The closest plan of this type is the administrative draft Fort Ord HCP, which addresses the conservation and enhancement of habitat for several special-status plants and animals known to occur on the former Fort Ord. At this time, MPAD is not a Cooperative Party to the agreement and the HCP has not been adopted. The plan will need to be approved by both the USFWS and CDFW prior to going into effect. Potential impacts to the HCP from implementation of the proposed AMP are less than significant. Further evaluation of this issue in an EIR is not required, and no mitigation is necessary.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
V. CULTURAL RESOURCES Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in State CEQA Guidelines, Section 15064.5?	X	☐	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines, Section 15064.5?	X	☐	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	X	☐	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	X	☐	☐	☐
e) Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code, Section 21074?	X	☐	☐	☐

Impact Analysis

V a-e) Potentially Significant Impact. Cultural resources have been identified in the past on the airport property; and, additional historic, archaeological, or paleontological resources could be located on the property. In addition, there is the potential for human remains. Therefore, implementation of the proposed AMP could result in potential impacts to cultural resources that will need to be further evaluated in an EIR.

Tribal cultural resources include sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are listed on State or local historic registers or are otherwise significant per Public Resources Code, Section 21074. The potential for the proposed AMP to cause a substantial adverse change in the significance of tribal cultural resources will need to be further evaluated in an EIR.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
VI. GEOLOGY AND SOILS Would the project:				
a) Exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	X	☐	☐	☐
ii) Strong seismic ground shaking?	X	☐	☐	☐
iii) Seismic-related ground failure, including liquefaction?	X	☐	☐	☐
iv) Landslides?	X	☐	☐	☐
b) Result in substantial soil erosion or the loss of topsoil?	X	☐	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	X	☐	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	X	☐	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	X	☐	☐	☐

Impact Analysis

VI a-d) Potentially Significant Impact. The Airport is not within a State-designated Alquist Priolo Earthquake Fault Zone nor is it within an area covered by the current State mapping for Liquefaction Hazard Zones (Cornerstone Earth Group 2009). However, although soil surveys and published geologic hazards maps provide some information about soils and geology in an area, these types of maps identify only generalized locations.

A preliminary geotechnical investigation at the Airport was performed for the recent Runway Safety Area Improvements Project. On a preliminary basis, it appears that fault rupture hazard and liquefaction has a low potential at the Airport. However, the geotechnical investigation identified a high potential for erosion, as well as a potential for static and seismic slope instability and landslides where loose soils occur. Expansive soils were not identified in the report (Cornerstone Earth Group 2009).

Onsite geologic and soil conditions at the Airport should be investigated further in an EIR.

VI e) Potentially Significant Impact. No septic tanks or alternative waste water disposal systems are proposed by the AMP other than the separation and reuse of grey water as a water conservation measure. However, since the details of this potential sustainability measure have not yet been evaluated, discussion of this issue in an EIR is required.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
VII. GREENHOUSE GAS EMISSIONS Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	X	☐	☐	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	X	☐	☐	☐

Impact Analysis

VII a-b) Potentially Significant Impact. Implementation of the AMP would generate additional greenhouse gas (GHG) emissions as a result of construction and operational activities. Thus, an EIR will include a GHG emissions study to evaluate the existing and future potential emissions from both construction and operational activities, including ground transportation. The EIR will also include an evaluation of the Project's consistency with applicable plans and policies for reducing GHG emissions.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
VIII. HAZARDS AND HAZARDOUS MATERIALS Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	X	☐	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	X	☐	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	X	☐	☐	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code, Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	X	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	X	☐	☐	☐
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	X	☐	☐	☐
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	X	☐

Impact Analysis

VIII a-b) Potentially Significant Impact. Implementation of the AMP would continue the aircraft operations and support services at the Airport. Activities involving the use of hazardous

materials at the Airport are associated with fueling, maintenance, and repair of aircraft and airport-related vehicles. The Airport also has a fuel farm and an ARFF facility, both of which also store and require the transport of hazardous materials. Some of the proposed AMP components involve the relocation or expansion of these facilities. Future development of non-aviation development may also potentially involve the use of hazardous substances. An EIR will address the potential risk to the public and the environment associated with the relocation, expansion, construction, and operation of facilities handling hazardous materials and appropriate mitigation for hazardous conditions will be recommended.

VIII c) Potentially Significant Impact. There is one preschool currently located within ¼ mile of the Airport within the City of Del Rey Oaks. Therefore, further evaluation of this issue in an EIR is required.

VIII d) Less than Significant Impact. There are no Superfund or Brownfield sites in proximity to the Airport; the closest such site is at Fort Ord (U.S. EPA 2015). In addition, the State's Cortese List indicates that there are no sites at the Airport on the State cleanup list (DTSC 2015). The Airport was a former military base and there are five remediated former USACE wells (2002) located on the northwestern area of the Airport. These wells are no longer contaminated and are being investigated by the Airport as a viable source of non-potable water to serve the Airport and other users (Allterra 2015). Further evaluation of this issue in an EIR is not required, and no mitigation is necessary.

VIII e) Potentially Significant Impact. The State of California requires that each airport and Airport Influence Area (AIA) be part of an Airport Land Use Compatibility Plan (ALUCP) (Caltrans 2011). MPAD currently has an approved (1987) *Comprehensive Land Use Plan for Monterey Peninsula Airport* (CLUP). Monterey County, as the ALUC, is in the process of updating that plan (i.e., an ALUCP). To the extent that safety-based compatibility zones change as a result of the AMP, the CLUP/ALUCP would need to be updated to reflect the new compatibility zones. The updated plan will provide guidance for future land uses within the AIA to ensure that public safety and airport compatibility is maintained.

In addition, the AMP would allow non-aviation land uses on the Airport, which would increase the number of people working in proximity to the Airport. Further evaluation of this issue in an EIR is required.

VIII f) No Impact. The Airport is a commercial airport and there are no private airstrips within ten nautical miles (AirNav.com 2015). Further evaluation of this issue in an EIR is not required, and no mitigation is necessary.

VIII g) Potentially Significant Impact. The Airport has an approved emergency response and evacuation plan (per 14 CFR Section 139.325) that addresses emergency procedures for all parts of the facility. This plan may need to be revised to incorporate the development components of the proposed AMP to ensure that they would not impair or interfere with implementa-

tion of the emergency evacuation plan related to the Airport. Further evaluation of this issue in an EIR is required.

VIII h) Less than Significant Impact. The Airport is not located within a fire hazard severity zone (FHSZ), as mapped by CAL FIRE (2008) and no change to the Airport's risk to wildland fires would occur as a result of the proposed AMP. Further evaluation of this issue in an EIR is not required, and no mitigation is necessary.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
IX. HYDROLOGY AND WATER QUALITY Would the project:				
a) Violate any water quality standards or waste discharge requirements?	X	☐	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	X	☐	☐	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	X	☐	☐	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	X	☐	☐	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	X	☐	☐	☐
f) Otherwise substantially degrade water quality?	X	☐	☐	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	X

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	X
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	X
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	X

Impact Analysis

IX a, c-f) Potentially Significant Impact. The proposed AMP would relocate certain existing airport operations and would increase the amount of the Airport's impervious surfaces. This will change drainage patterns at the Airport as well as the Airport's potential to violate water quality standards or discharge requirements. Overall, aviation activity is expected to grow over the next 20 years, which could also increase water quality pollutants and runoff at the Airport despite continued regulatory compliance mechanisms. Although it is anticipated that continued application of the current water quality programs at the Airport would minimize potential pollutants (since the nature of the additional pollutants would be consistent with current operations), modifications to the Airport's stormwater drainage systems are likely to be necessary. An EIR will provide an evaluation of the anticipated changes in onsite drainage patterns and the types of pollutants occurring at the Airport, and will identify mitigation measures, as necessary.

IX b) Potentially Significant Impact. Water sources within central California have been impacted by the drought conditions experienced over the past several years. An EIR will be required to evaluate the potential change in water demand due to implementation of the AMP, to identify the sources of water, including groundwater, available to meet this demand, and to identify appropriate mitigation, as necessary.

IX g-j) No Impact. The only area of the Airport that is located within a mapped 100-year floodplain (Zone AO, Special Flood Hazard Areas Subject to Inundation by the 1% Annual Chance Flood) is the extreme southeastern corner of the Airport at the junction of Highways 68 and 218; other parts of the corner and along the Airport's eastern boundary with Del Rey Oaks could be inundated by a 100-year flood, but with average depths of less than one foot (Zone X, Other Flood Areas) (FEMA 2009). No changes to this area of the Airport, including the construction of housing or structures that could impede the flow of floodwaters, would occur as a result of the proposed AMP; the area is already developed primarily with commercial or light industrial land uses. The remainder of the Airport is located outside the mapped 500-year floodplain (Zone X, Other Areas) and is not subject to inundation due to seiches, tsunamis, or mudflows due to its location atop a plateau. Further evaluation of these issues in an EIR is not required, and no mitigation is necessary.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
X. LAND USE AND PLANNING Would the project:				
a) Physically divide an established community?	☐	☐	X	☐
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	X	☐	☐	☐
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	X	☐

Impact Analysis

X a) Less than Significant Impact. Most components of the proposed AMP are located within the airport property boundaries. Potential property acquisition and/or avigation easements are proposed, however, for the Runway 28L and Runway 28R end RPZs. Avigation easements are recommended over existing light industrial and commercial development within the City of Del Rey Oaks along the west side of Highway 218, while property acquisition is recommended over undeveloped areas of the City of Monterey south of Highway 68 and northeast of Highway 218. FAA standards require that RPZs remain clear of development and, thus, no physical intrusion into the surrounding areas would occur.

Approximately 800 feet east of the Highway 68/Olmsted Road intersection is a 5.5-acre area of land that is also identified as potential property acquisition in the proposed AMP. The area is already surrounded by the Airport on three sides. Therefore, future development in this area would not physically divide an established community. Further evaluation of these issues in an EIR is not required, and no mitigation is necessary.

X b) Potentially Significant Impact. The Airport is subject to regional policies such as the Central Coast Region Basin Plan (Central Coast RWQCB 2011). An EIR will contain a summary of applicable regional plans and evaluate the proposed AMP's consistency with applicable policies. The proposed AMP also recommends a north side access road that would require a connection with Del Rey Garden Road in the City of Del Rey Oaks. Therefore, an EIR will address potential inconsistencies with City of Del Rey Oaks General Plan policies.

In addition, although the Airport is located within a Special District (i.e., MPAD) and is not generally subject to the policies and land use plans of the surrounding or adjacent local jurisdic-

tions (i.e., the City of Del Rey Oaks, the City of Monterey, or Monterey County), in the interest of being a "good neighbor" and to aid in properly mitigating potential environmental or land use compatibility impacts related to the Airport, certain policies of these jurisdictions are considered during the planning and evaluating of development projects at the Airport. (For example, the Monterey County Oak Protection Ordinance is typically used by MPAD to identify mitigation for oak tree removal at the Airport. Another example would be Level of Service thresholds for local and regional roadways.) Therefore, to the extent that local policies provide appropriate thresholds or mitigation for environmental impacts or land use conflicts with adjacent jurisdictions, an EIR will address the proposed AMP's consistency with these policies as well.

X c) Less than Significant Impact. There are no adopted HCPs or other types of resource management plans addressing sensitive biological resources at the Airport. The closest plan of this type is the administrative draft Fort Ord HCP, which addresses the conservation and enhancement of habitat for several special-status plants and animals known to occur on the former Fort Ord. At this time, MPAD is not a Cooperative Party to the agreement and the HCP has not been adopted. The plan will need to be approved by both the USFWS and the CDFW prior to going into effect. Potential impacts to the HCP from implementation of the proposed AMP are less than significant. Further evaluation of this issue in an EIR is not required, and no mitigation is necessary.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XI. MINERAL RESOURCES Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	X

Impact Analysis

XI a-b) No Impact. No mineral extraction occurs on the airport property nor is the Airport identified as an area of "Identified Mineral Resource Significance" within the Monterey County General Plan (Monterey County 2008). Therefore, further evaluation of this issue in an EIR is not required, and no mitigation is necessary.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XII. NOISE Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	X	☐	☐	☐
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?	X	☐	☐	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	X	☐	☐	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	X	☐	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	X	☐	X	☐
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	X

Impact Analysis

XII a-d) Potentially Significant Impact. According to 14 CFR 150, residential land uses and schools are not considered compatible with a 65 Day-Night Average Sound Level (DNL) (or Community Noise Equivalent Level [CNEL]) contour or higher.[11] Religious facilities, hospitals, or nursing homes located within a 65 DNL (or CNEL) contour are generally compatible if an interior noise level reduction of 25 decibel (dB) is incorporated into the design and construction of the structure.

The Airport's existing (2013) CNEL noise contours were modeled as part of the AMP process. Based on this information, the Airport's 65 CNEL noise contour extends off the Airport at both

[11] In California, CNEL is used in place of DNL. DNL accounts for the increased sensitivity to noise at night (10:00 p.m. to 7:00 a.m.) and is the metric preferred by FAA, U.S. Environmental Protection Agency (EPA), and U.S. Department of Housing and Urban Development (HUD) as an appropriate measure of cumulative noise exposure. In California, however, these agencies accept the use of CNEL which, in addition to nighttime sensitivities, also accounts for increased sensitivities during the evening hours (7:00 p.m. to 10:00 p.m.).

the west and east ends of the runway; the 70 CNEL noise contour is slightly off airport property to the southeast of Runway 28L end and northwest at the Runway 10R end. On the east end, the 65 CNEL contour is located over vegetated open space to the southeast and over an industrial/office complex to the northeast. None of the sensitive noise-receptors discussed above are present on the east end.

To the west, the 65 CNEL contour extends over several residential properties. Most of these homes have received sound insulation measures such as the installation of central air conditioning, improved insulation, and/or double-glazed windows from a previous sound insulation program. Those residences that did not receive sound insulation were eligible, but did not participate in the program. No sensitive noise receptors are affected by the existing 70 CNEL.

Based on future (2033) CNEL contours that would occur due to the proposed AMP implementation, future noise impacts to sensitive noise-receptors may change slightly. In addition, during the construction of various AMP components, noise and/or vibration due to construction activities and traffic may occur. Therefore, an EIR will address these issues further and identify mitigation, as appropriate.

XII e) Potentially Significant Impact. The State of California requires that each airport and AIA be part of an ALUCP (Caltrans 2011). MPAD currently has an approved 1987 *Comprehensive Land Use Plan for Monterey Peninsula Airport* (CLUP). The ALUC is in the process of updating that plan (i.e., an ALUCP). To the extent that noise-based compatibility zones change as a result of the AMP, the CLUP/ALUCP would need to be updated to reflect the new compatibility zones. The updated plan will provide guidance for future land uses within the AIA to ensure that public is not exposed to excessive noise.

In addition, the AMP would allow additional non-aviation land uses on the Airport, which would increase the number of people working in proximity to potentially excessive noise levels. Further evaluation of this issue in an EIR is required.

XII f) No Impact. The Airport is a commercial airport and there are no private airstrips within ten nautical miles (AirNav.com 2015). Further evaluation of this issue in an EIR is not required, and no mitigation is necessary.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XIII. POPULATION AND HOUSING Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	X	☐	☐	☐
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	X

Impact Analysis

XIII a) Potentially Significant Impact. The FAA-approved forecasts for the Airport over the AMP's 20-year planning horizon anticipate an annual average growth rate in enplanements of 1.59 percent and an annual average growth rate in total operations of 2.04 percent. One additional access road to the north side of the Airport also is recommended in the intermediate-term planning scenario if additional development that would generate substantial new traffic is constructed. Increasing accessibility to the region, through additional enplanements and roadway improvements, may indirectly affect population growth in the region. Therefore, further evaluation of this issue in an EIR is required.

Relatedly, an EIR also is required to address the potential growth inducement effects of a project.

XIII b, c) No Impact. Implementation of the proposed AMP would not displace existing housing or people. Further evaluation of this issue in an EIR is not required, and no mitigation is necessary.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XIV. PUBLIC SERVICES Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services**:**				
a) Fire protection?	X	☐	☐	☐
b) Police protection?	X	☐	☐	☐
c) Schools?	☐	☐	☐	X
d) Parks?	☐	☐	☐	X
e) Other public facilities?	☐	☐	☐	X

Impact Analysis

XIV a) Potentially Significant Impact. The anticipated increase in total airport operations and the development of additional aviation and non-aviation land uses over the next 20 years would result in an incremental increase in demand for fire protection. The Airport has its own ARFF building that handles fire protection on the facility as well as providing structural response units for off-airport needs; the ARFF is staffed by City of Monterey employees. One of the components in the proposed AMP is to relocate the existing ARFF building and to upgrade it to modern design standards. Two options are being considered, both of which would be located within an area of the Airport that is already developed. Further evaluation of this issue in an EIR is required.

XIV b) Potentially Significant Impact. The anticipated increase in total airport operations and the development of aviation and non-aviation land uses over the next 20 years would result in an incremental increase in demand for police protection. Police protection at the Airport is provided by MPAD and is based at the Airport. Further evaluation of this issue in an EIR is required.

XIV c-e) No Impact. The proposed AMP would not result in the development of any residential units or generate additional residents or students, nor would it create an increased demand on schools, parks, or other public facilities. Further evaluation of these issues in an EIR is not required, and no mitigation is necessary.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XV. RECREATION				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	X	☐	☐	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	X	☐	☐	☐

Impact Analysis

XV a-b) Potentially Significant Impact. Increased aviation activity at the Airport could create an increased demand on parks or other recreational facilities by increasing tourism activity in the region. Further evaluation of these issues in an EIR is required.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XVI. TRANSPORTATION/TRAFFIC Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	X	☐	☐	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	X	☐	☐	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	X	☐	☐	☐

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	X	☐	☐	☐
e) Result in inadequate emergency access?	X	☐	☐	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	X	☐	☐	☐

Impact Analysis

XVI a, b, f) Potentially Significant Impact. Implementation of the proposed AMP would result in additional airport-related traffic as well as physical improvements and other changes to the existing circulation system. All aspects of the proposed AMP will be addressed in a project-specific traffic impact analysis. Consistency with transportation policies of adopted regional transportation plans will also be considered. Therefore, an EIR will incorporate the findings of the traffic impact and policy analyses and identify mitigation, as appropriate.

XVI c) Potentially Significant Impact. Air traffic patterns around the Airport are established by the FAA and are not under the control of MPAD. Thus, implementation of the proposed AMP would have no effect on the location of current or future air traffic patterns in the region.

Takeoff or approach flight tracks are also dictated by considerations of operational safety and air traffic control procedures. The FAA sets minimum requirements for departure procedures; these procedures cannot be implemented or modified without concurrence of the FAA, taking into account operational, safety, and airspace considerations.

With respect to the air traffic levels at the Airport, the number of aircraft operations which can be accommodated at a given airport in any hour or day is controlled primarily by such factors as weather conditions, airline schedules, and market conditions. Other, more attenuated and less direct factors, can include such matters as the size of the airline and airport support facilities, and the physical configuration of the airfield.

Airline scheduling is the principal factor affecting how many times planes land and take off during a given hour. At Monterey, as with most airports, there are a number of peak periods each day. Airline scheduling usually seeks to accommodate the needs and travelling preferences of the air travelling public. The number of commercial flights which occur at the Airport is determined primarily by market demand. These marketing factors would be unaffected by the proposed AMP.

Particularly since adoption of the *Airline Deregulation Act of 1978*, market conditions and scheduling efficiencies have been the principal considerations for airlines contemplating increased or decreased service at any airport, including Monterey. The proposed AMP, there-

fore, would not be a factor of significance to the possible decision of any airline to increase or decrease service at the Airport. Therefore, implementation of the proposed AMP would result from expected growth in demand for air service at the Airport which is unrelated to, and not influenced by, implementation of the proposed AMP.

Also, at an airport there are a number of considerations which determine the airport's hourly capacity. For obvious safety reasons, the FAA requires air traffic controllers to space aircraft appropriately to avoid conflicts on a runway. Similarly, a plane cannot cross a given runway when another plane is landing or taking off on that same runway. Because the proposed AMP is not proposing major changes to the airfield configuration, hourly capacity at the Airport will not change as a result of the proposed project.

That said, and to some degree, the size of support facilities can influence the number of planes an airport can accommodate at any one time. Therefore, arguably, the proposed AMP could possibly accommodate an increase in air traffic levels at any one time through the provision of additional aeronautical and non-aeronautical facilities and amenities at the Airport. Therefore, an evaluation of whether any possible increase in air traffic levels would result in substantial safety risks is required in an EIR.

XVI d, e) Potentially Significant Impact. Public roadway and access improvements are included as components of the proposed AMP. These features would be designed to meet applicable local and State standards for roadway improvements and would require approval from the appropriate City, County, or State traffic engineer. Items such as site distance, emergency access, and grade standards would be enforced by the approving agency. An EIR will evaluate the preliminary design of the roadway improvements and include mitigation measures, as necessary.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XVII. UTILITIES AND SERVICE SYSTEMS Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	X	☐	☐	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	X	☐	☐	☐
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	X	☐	☐	☐

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	X	☐	☐	☐
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	X	☐	☐	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	X	☐	☐	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	X	☐	☐	☐

Impact Analysis

XVII a-e) Potentially Significant Impact. Implementation of the proposed AMP would involve additional buildings that would require both water and sanitary sewer service. Additional landscaping would also require additional water. As previously discussed under Section IX b, water sources within central California have been impacted by the drought conditions experienced over the past several years. Therefore, any changes in water demand, sewer service and stormwater drainage facilities would need to be evaluated (see also Section IX a, c-f).

California American Water Company (CalAm) provides water service to most of the Airport, although a few tenants including the Airport own their own wells. Monterey Peninsula Water Management District (MPWMD) is charged with allocating water within the Monterey peninsula region and permitting the use of water credits for each jurisdiction/district, including the Airport. Sanitary sewer service is provided by the City of Monterey, which participates in a regional wastewater treatment plant. An EIR will be required to evaluate the potential change in water, water allocation, and sewer service, as well as water, sewer, and drainage infrastructure due to implementation of the AMP and to identify mitigation, as appropriate.

XVII f-g) Potentially Significant Impact. Solid waste disposal for the Monterey area is managed by the Monterey Regional Waste Management District (MRWMD) and disposed of at the Monterey Peninsula Landfill. The Solid Waste Facility Permit for the District operation states that the peak tonnage of incoming waste shall not exceed 3,500 tons per day. The landfill currently receives less than 1,000 tons per day of municipal solid waste for disposal. The remaining landfill waste capacity is approximately 71 million cubic yards (cy) and is projected to reach its full capacity in the year 2161 (MRWMD 2015). Construction of a new 23-acre lined landfill module was completed in June 2013 on the 70–acre MRWMD site. This lined landfill module has a waste capacity of approximately 5,000,000 tons and a service life of approximately 17 years (MRWMD 2015). The California Integrated Waste Management Act of 1989 (Assembly Bill [AB] 939) required all counties to prepare a County Integrated Waste Management Plan. In Monte-

rey County, the Monterey Regional Waste Management District coordinates the County's reuse and recycling efforts.

Implementation of the Airport would result in potentially more solid waste that currently occurs. The Airport implements a trash recycling program; in addition, the proposed AMP includes a Sustainability Action Plan (refer to **Table 5**). One of these measures (No. 19) is to develop and implement an Integrated Solid Waste Management Plan. Both the existing airport recycling program and the future Integrated Solid Waste Management Plan would reduce impacts of the Airport on regional solid waste disposal. An EIR will address the Project's solid waste generation and identify mitigation measures, as necessary.

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XVIII. MANDATORY FINDING OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	X	☐	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	X	☐	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	X	☐	☐	☐

Impact Analysis

XVIII a) Potentially Significant Impact. As discussed in this Initial Study, components of the proposed AMP might have potentially significant impacts on agriculture (Farmland of Statewide Importance) and biological, cultural, visual and water resources located at the Airport. Therefore, potential impacts to these resources will be further evaluated in an EIR.

XVIII b) Potentially Significant Impact. Potentially considerable cumulative impacts on the environment may occur to various environmental resource categories. Because the AMP's contribution to cumulative impacts is not completely known at this time, incremental impacts based on the AMP will be further evaluated in an EIR.

XVIII c) Potentially Significant Impact. As discussed in this Initial Study, potentially substantial adverse effects on humans (direct or indirect) could occur as a result of the AMP in the following categories: aesthetics, air quality, geology and soils, greenhouse gases, hazards and hazardous materials, hydrology/water quality, land use and planning, noise, public services, recreation, transportation/traffic, and utilities and service systems. Therefore, potential impacts related to these categories will be further evaluated in an EIR.

LIST OF PREPARERS:

Project Sponsor

Monterey Peninsula Airport District
200 Fred Kane Drive, Suite 200
Monterey, CA 93940

Project Manager: Shelley Glennon

Environmental Consultant

Coffman Associates
237 NW Blue Parkway, Suite 100
Lee's Summit, MO 64063

Project Manager: James Harris
Environmental Planner: Judi Krauss
Noise/Land Use Compatibility: David Fitz

LIST OF REFERENCES:

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LIST OF ACRONYMS:

AC – advisory circular
ACI-NA - Airports Council International-North America
AIA – Airport Influence Area
ALP – Airport Layout Plan
ALUC – airport land use commission
ALUCP – airport land use compatibility plan
AMBAG – Association of Monterey Bay Area Governments
AMP – Airport Master Plan
AOA – Aircraft Operations Area
ARFF – aircraft rescue and firefighting
ASOS – automated surface observing system
ATCT – airport traffic control tower

CalAm – California American Water Company
Caltrans – California Department of Transportation
CARB – California Air Resources Board
CASP – *California Aviation Systems Plan*
CDC - California Department of Conservation
CDFW – California Department of Fish and Wildlife
CEQA – *California Environmental Quality Act*
CFGC – California Fish and Game Code
CFR – Code of Federal Regulations
CIP –capital improvement program
CLUP – Comprehensive Land Use Plan
CNEL Community Noise Equivalent Level
CNG – compressed natural gas
cy – cubic yards

d(B) - decibel
DNL (also known as L_{dn}) – Day-Night Average Sound Level
DTSC – California Department of Toxic Substances Control

EIR – Environmental Impact Report
EMAS – engineered materials arresting system
EONS - **E**conomic viability, **O**perational efficiency, **N**atural resource conservation, and **S**ocial responsibility
EPA –Environmental Protection Agency
EV – electric vehicle

FAA – Federal Aviation Administration
FAR – Federal Aviation Regulations
FBO – fixed base operator
FEMA – Federal Emergency Management Agency
FHSZ – Fire Hazard Severity Zone

GA – general aviation
GHG(s) – greenhouse gas (or gases)
GIS – geographic information system
GSE – ground service equipment

HCP – Habitat Conservation Plan
HUD – U.S. Department of Housing and Urban Development

ILS – instrument landing system

KPI – key performance indicator

LED – light-emitting diode
LEED – Leadership in Environmental Engineering and Design
LOC/DME - localizer/distance measuring equipment

MALSR - medium intensity approach lighting system with runway alignment indicator lights
MBTA – *Migratory Bird Treaty Act of 1918*
MCUAPCD – Monterey County Unified Air Pollution Control District
MPAD – Monterey Peninsula Airport District
MPWMD – Monterey Peninsula Water Management District
MRWMD – Monterey Regional Waste Management District
MRY – Monterey Regional Airport
msl –mean sea level

NEPA – *National Environmental Policy Act*
NPDES – National Pollutant Discharge Elimination System
NPIAS – *National Plan of Integrated Airport Systems*

PAPI = precision approach path indicators
PM_{10} – particulate matter measuring 10 micrometers or less in diameter

REIL = runway end identifier lights
RNAV (RNP variant) = area navigation – required navigation performance
RNAV (GPS variant) = area navigation – global positioning system
RPZ – runway protection zone
RSA – runway safety area
RV – recreational vehicle
RWQCB – Regional Water Quality Control Board

sf – square feet
SHPO – State Historic Preservation Office
SWPPP – storm water pollution prevention plan
sy – square yards

TOFA – taxiway object free area
TSA – Transportation Security Administration

VASI = visual approach slope indicators

U.S. – United States
USACE – United States Army Corps of Engineers
USDA–NRCS – United States Department of Agriculture, Natural Resources Conservation Service
USFWS – United States Fish and Wildlife Service

Zone AO (Special Flood Hazard Areas Subject to Inundation by the 1% Annual Chance Flood) – FEMA flood zone definition indicating flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
Zone X (Other Flood Areas) – FEMA flood zone definition indicating areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
Zone X (Other Areas) – FEMA flood zone definition indicating areas determined to be outside the 0.2% annual chance floodplain.

COMMENTS AND RESPONSES TO THE

INITIAL STUDY FOR THE MONTEREY REGIONAL AIRPORT MASTER PLAN

1. Stephen Bachman, California State Parks, received January 4, 2016
2. Ohlone/Costanoan-Esselen Nation, received January 11, 2016
3. Mike Weaver, Highway 68 Coalition, received January 19, 2016 (with attachment)
4. Department of the Army, received January 26, 2016
5. Casanova Oak Knoll Neighborhood Association, received February 3, 2016
6. Elizabeth Stacey, received February 15, 2016
7. Native American Heritage Commission, received February 16, 2016
8. Monterey Bay Unified Air Pollution Control District, received February 16, 2016
9. Monterey Peninsula Water Management District, received February 25, 2016
10. Bob Corliss, Robert Talbott, Inc., phone call on March 08, 2018
11. Monterey-Salinas Transit, received March 14, 2016
12. City of Monterey, received March 21, 2016

Judi Krauss

From: Shelley Glennon <sglennon@montereyairport.com>
Sent: Monday, January 04, 2016 5:18 PM
To: Jim Harris; Judi Krauss
Cc: Mark Bautista
Subject: FW: NOP EIR IS Airport Master Plan

Hello,

Please see the NOP Comment below.

Thanks,
Shelley

From: Bachman, Stephen@Parks [mailto:Stephen.Bachman@parks.ca.gov]
Sent: Monday, January 04, 2016 3:17 PM
To: Shelley Glennon <sglennon@montereyairport.com>
Cc: Bachman, Stephen@Parks <Stephen.Bachman@parks.ca.gov>
Subject: NOP EIR IS Airport Master Plan

Hello,

Could the Master Plan address the issue of jet fumes being conveyed up to the 2211 Garden Road building. The jet engine maintenance people and or jet parking areas result if exhaust fumes entering our building and the fumes are so overwhelming and smell so bad that we almost have to evacuate the building. If jets can park in a manner that blows the exhaust fumes away from the 2211 Garden Road business complex that would be preferred. Some staff get major headaches and have to leave the office for the day when this occurs.

If a jet engine maintenance/mechanic business is in close proximity to our row of business buildings can they be notified that the exhaust is an issue and to please not rev the engines for so long as they come into our building.

Thank you.

Stephen Bachman
Senior Park & Recreation Specialist
Senior Environmental Scientist
2211 Garden Road
Monterey, CA 93940
Phone (831) 649-2862
Cell (831) 647- 6239
Cell (831) 277-3037

Stephen.bachman@parks.ca.gov

State Parks Mission Statement

The mission of California State Parks is to provide for the health, inspiration, and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation.

This communication (including any attachments) may contain privileged or confidential information intended for a specific individual and purpose, and is protected by law. If you are not the intended recipient, you should delete this communication and/or shred the materials and any attachments and are hereby notified that any disclosure, copying, or distribution of this communication, or the taking of any action based on it, is strictly prohibited.

Ohlone/Costanoan-Esselen Nation

Previously acknowledged as
The San Carlos Band of
Mission Indians
The Monterey Band
And also known as
O.C.E.N. or Esselen Nation
P.O. Box 1301
Monterey, CA 93942

www.ohlonecostanoanesselennation.org.

January 11, 2016

Shelley Glennon
Planning Manager - Environmental
200 Fred Kane Drive, Suite 200
Monterey, CA 93940

Re: CA-MNT-728 - Notice of Preparation for an Environmental Impact Report and Notice of Scoping Meeting, and Initial Study for the proposed Monterey Regional Airport - Airport Master Plan Project -

Saleki Atsa,

Ohlone/Costanoan-Esselen Nation is an historically documented previously recognized tribe. OCEN is the legal tribal government representative for over 600 enrolled members of Esselen, Carmeleno, Monterey Band, Rumsen, Chalon, Soledad Mission, San Carlos Mission and/or Costanoan Mission Indian descent. Though other indigenous people may have lived in the area, the area is the indigenous homeland of our people. Included with this letter please find a territorial map by Taylor 1856; Levy 1973; and Milliken 1990, indentifying Tribal areas.

Ohlone/Costanoan-Esselen Nation objects to all excavation in known cultural lands, even when they are described as previously disturbed, and of no significant archaeological value. Please be advised that it is our first priority that our ancestor's remains be protected and undisturbed. We desire that all cultural and sacred burial items be left with our ancestors on site or where they are discovered. We ask for the respect that is afforded all of our current day deceased, by no other word these burial sites are cemeteries, respect for our ancestors as you would expect respect for your deceased family members in today's cemeteries. **Our definition of respect is no disturbance.**

I was assigned as the Most Likely Descendant for CA-MNT-728, by the Native American Heritage Commission, we continue to wait for follow through to rebury the remains of our Ancestors found on site. There has been no contact as to the return of artifacts found on CA-MNT-728 as agreed by the airport management. I have noticed with this report that there is a change in management and would like to establish a meeting to discuss these items as well as current *Potentially Significant Impact as reported in the "INITIAL STUDY FOR THE MONTEREY REGIONAL AIRPORT MASTER PLAN"* prepared by Coffman Associates, Inc. 4835 E. Cactus Road, suite 235 Scottsdale, AZ 85254 page 32, Cultural Resources.

OCEN's Tribal leadership desires to be provided with reports, surveys, including subsurface testing, and presence/absence testing. OCEN request to be included in mitigation and recovery programs, reburial of any of our ancestral remains, placement of all cultural items, and that a Native American Monitor of Ohlone/Costanoan-Esselen Nation, approved by the OCEN Tribal Council be used within our aboriginal territory.

We request consultation on projects affecting our aboriginal homelands. We look forward to hearing more information about this project; please feel free to contact me at (408) 629-5189. Nimasianexelpasaleki. Thank you for your attention to this matter.

Sincerely and Respectfully Yours,

Louise J. Miranda Ramirez, Chairperson
Ohlone/Costanoan-Esselen Nation
(408) 629-5189

Cc: OCEN Tribal Council
Katy Sanchez, Native American Heritage Commission

Distribution of Ohlone/Costanoan-Esselen Nation Tribal Rancherias, Districts, Landgrants and Historic Landmarks

OCEN DIRECT LINEAL DESCENT

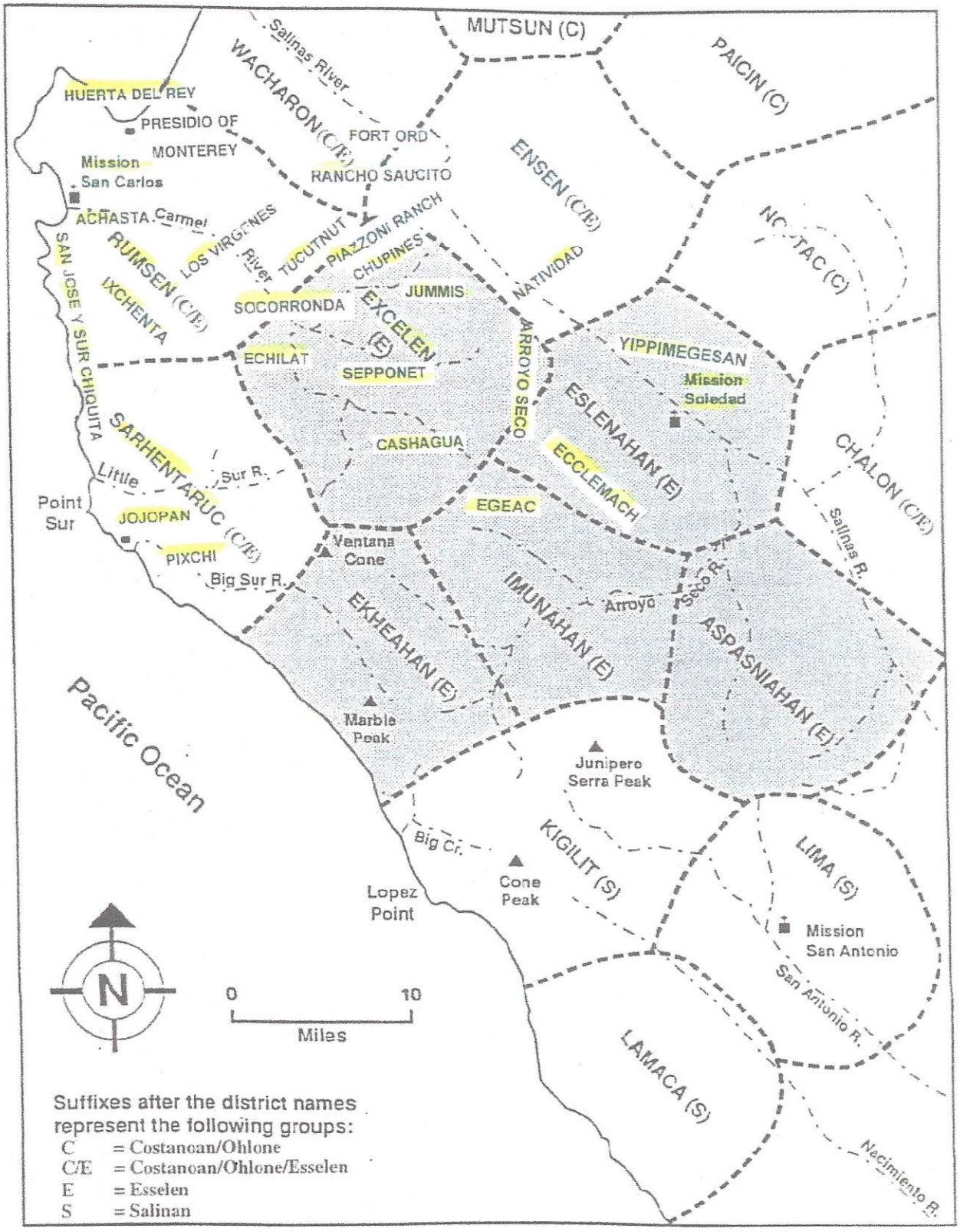


Figure 2:

Map after Taylor 1856; Levy 1973; Hester 1978; Milliken 1990

MONTEREY REGIONAL AIRPORT
Monterey County, California

INITIAL STUDY
FOR THE
MONTEREY REGIONAL AIRPORT MASTER PLAN

Prepared For:
Monterey Peninsula Airport District
200 Fred Kane Drive, Suite 200
Monterey, CA 93940

Prepared By:
Coffman Associates, Inc.
4835 E. Cactus Road, Suite 235
Scottsdale, AZ 85254

December 2015

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES				
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in State CEQA Guidelines, Section 15064.5?	X	☐	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines, Section 15064.5?	X	☐	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	X	☐	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	X	☐	☐	☐
e) Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code, Section 21074?	X	☐	☐	☐

Impact Analysis

V a-e) Potentially Significant Impact. Cultural resources have been identified in the past on the airport property; and, additional historic, archaeological, or paleontological resources could be located on the property. In addition, there is the potential for human remains. Therefore, implementation of the proposed AMP could result in potential impacts to cultural resources that will need to be further evaluated in an EIR.

Tribal cultural resources include sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are listed on State or local historic registers or are otherwise significant per Public Resources Code, Section 21074. The potential for the proposed AMP to cause a substantial adverse change in the significance of tribal cultural resources will need to be further evaluated in an EIR.

Fly MONTEREY
Monterey Regional Airport

BOARD OF DIRECTORS
William Sabo | Chairman
Mary Ann Leffel
Carl Miller
Matthew Nelson
Richard Searle

December 28, 2015

Louise J. Miranda Ramirez, Chairperson
Ohlone/Costanoan-Esselen Nation
P.O. Box 1301
Monterey, California 93942

RE: Notice of Preparation of an Environmental Impact Report & Notice of Scoping Meeting; Initial Study; Proposed Monterey Regional Airport – Airport Master Plan at Monterey Regional Airport in Monterey, California

Dear Ms. Ramirez:

Please review the enclosed ***Notice of Preparation for an Environmental Impact Report & Notice of Scoping Meeting,*** and ***Initial Study*** for the proposed ***Monterey Regional Airport – Airport Master Plan Project ("Project").***

Pursuant to Section 15082 of the State California Environmental Quality Act ("CEQA") Guidelines (Cal. Code Regs., tit. 14, § 15000 et seq.), the Monterey Peninsula Airport District ("District"), acting in its capacity as the owner and operator of Monterey Regional Airport, has determined that an Environmental Impact Report ("EIR") is the appropriate environmental document for the Project. The District will be the Lead Agency for the Project and will be responsible for the EIR preparation pursuant to CEQA and the State CEQA Guidelines.

Coordination with all responsible agencies will be provided in accordance with the Notice of Preparation statutes. Additionally, the Scoping Meeting will be held from 2:00PM-4:00PM at the 2nd Floor of the Airport Terminal Building- 200 Fred Kane Drive, Suite 200, Monterey, CA 93940 on Wednesday, February 3, 2016.

Please send any written comments or concerns regarding potential environmental impacts of the proposed Project addressed to me at: 200 Fred Kane Drive Suite 200, Monterey, CA 93940 or via email at sglennon@montereyairport.com by **Tuesday, February 16, 2015**. If you have any questions or need additional information, please feel free to contact me at (831) 648-7000 Ext. 209. Thank you for your consideration and timely response.

Sincerely,

Shelley Glennon
Planning Manager - Environmental

Enclosure

EXECUTIVE STAFF **Michael La Pier, AAE** | Executive Director **Scott Huber** | District Counsel
200 Fred Kane Drive, Suite 200 | Monterey, CA 93940 Phone | 831 648 7000 Fax | 831 373 2625 www.montereyairport.com

NOTICE OF PREPARATION AND NOTICE OF SCOPING MEETING

DATE: December 28, 2015
SUBJECT: Notice of Preparation of an Environmental Impact Report and Notice of Scoping Meeting
PROJECT TITLE: Monterey Regional Airport – Airport Master Plan
APPLICANT: Monterey Peninsula Airport District
200 Fred Kane Drive
Monterey, California 93940

Notice is hereby given pursuant to Section 15082 of the State California Environmental Quality Act ("CEQA") Guidelines (Cal. Code Regs., tit. 14, § 15000 et seq.), that the Monterey Peninsula Airport District ("District"), acting in its capacity as the owner and operator of Monterey Regional Airport, has determined that an Environmental Impact Report ("EIR") is the appropriate environmental document for the Monterey Regional Airport Master Plan Project ("Project"). The District will be the Lead Agency for the Project and will be responsible for the EIR preparation pursuant to CEQA and the State CEQA Guidelines. The Project description, location, and an analysis of the probable environmental effects of the proposed project are contained in the attached materials.

As required by Section 15082 of the CEQA Guidelines, this Notice of Preparation ("NOP") has been prepared and distributed to solicit comments from potential Responsible and Trustee Agencies on Project-related concerns relevant to each agency's statutory responsibilities. Comments on the content and scope of the EIR also are solicited from any other interested parties (including other agencies and affected members of the public). The EIR will be the environmental document of reference for Responsible and Trustee Agencies when considering subsequent discretionary approvals.

The District requests that any potential Responsible or Trustee Agencies responding to this NOP reply in a manner consistent with Section 15082(b) of the State CEQA Guidelines, which allows for the submittal of any comments in response to this notice no later than 45 days after receipt of the NOP. The District will accept comments from these Agencies and others regarding this NOP through the close of business, February 16, 2016.

This NOP is available for viewing at www.montereyairport.com. In addition, a Scoping Meeting will be held from 2:00PM-4:00PM at the following location: 2nd Floor of the Airport Terminal Building 200 Fred Kane Drive, Suite 200, Monterey, CA 93940 on Wednesday, February 3, 2016.

Your agency and other interested parties are invited to attend and submit comments for consideration during preparation of the EIR. All comments and responses to this NOP must be submitted in writing to:

Shelley Glennon, Planning Manager – Environmental
200 Fred Kane Drive. Suite 200
Monterey, CA 93940
(831) 648-7000 Ext. 209
sglennon@montereyairport.com

Submitted by:

Mark Bautista, A.A.E
Deputy General Manager
Planning & Development Department
Monterey Peninsula Airport District

Judi Krauss

From: Shelley Glennon <sglennon@montereyairport.com>
Sent: Wednesday, January 20, 2016 10:23 AM
To: Jim Harris; Judi Krauss
Cc: Mark Bautista
Subject: FW: NOP Airport Master Plan
Attachments: MRA-PAC-Commments9-29-15.doc; ATT00001.txt; ATT00002

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Jim and Judi,

Please see Mr. Weaver's comments below.

Thank you,
Shelley

From: Michael Weaver []
Sent: Tuesday, January 19, 2016 5:12 PM
To: Shelley Glennon <sglennon@montereyairport.com>
Cc: Mark Bautista <>
Subject: re: NOP Airport Master Plan

Dear Ms. Glennon,

Attached below please find a letter previously sent to MRA consultant Jim Harris of Coffman Associates.

Portions of this letter are pertinent to a proposed new Airport Master Plan. Please include this letter as part of your scoping.

On behalf of the Highway 68 Coalition I ask that these be issues be included:

Because the new Draft Final Monterey Regional Airport Master Plan is currently proposing/estimating a 2% yearly growth rate of air traffic over the next twenty years, the issues of noise, pollution including greenhouse gases, neighborhood safety, flight paths, and possible continuing newer flight paths, need to be carefully analyzed for their cumulative impacts. There is a direct nexus between these issues and a new Airport Master Plan and new Airport Layout Plan.

1) On behalf of The Highway 68 Coalition, I ask that the above does become part of the necessary environmental analysis in the NEPA and CEQA documents to be prepared.

Page 2

2) I request to be put on the notification list, advising me of all Monterey Regional Airport hearing dates and comment and filing deadlines regarding a new Airport Master Plan and Airport Layout Plan(s) environmental analysis documents. Please include dates and times of any and all Scoping Hearings. If you are not the point of

contact, please advise me of who will be.

3) I request that a late night airline curfew or a voluntary curfew be implemented as part of the new Master Plan process. This does not mean emergencies. These are for regular scheduled flights. At one time the curfew was 9 p.m. at the Monterey Airport. This issue came up at a previous PAC meeting.
.....

Also, please do include CalTrans, District 5 staff, in analysis of the Mater Plans effects on the designated Scenic Highway as well as cumulative traffic impacts to Highways 68 and 218 as well as surrounding roadways.

Thank you for your consideration,

Mike Weaver
Chair, The Highway 68 Coalition

Attachment:

Monterey Regional Airport District
C/o Jim Harris, Coffman Associates, Airport Master Plan consultants
4835 E. Cactus Road, Suite 235
Scottsdale, AZ 85254
Via email:

Re: Monterey Regional Airport, Proposed 2015 Airport Master Plan and Airport Layout Plan.
PAC member Mike Weaver's comments following the additional Monterey Regional Airport's Planning Advisory Committee meeting of September, 29, 2015, 2:00 p.m.
Monterey Regional Airport Boardroom

October 1, 2015

Dear Mr. Harris,

The issues of new Monterey Regional Airport flight paths, noise, and safety, came up at yesterday's PAC meeting. These are issues that not only affect neighbors of the Monterey Airport. In a copy of a letter I received from a neighbor, sent by U.S. Congressman Sam Farr's office, I learned the following:

* The FAA has created a NextGen air traffic control modernization program.

* Much air traffic is being rerouted to new flight paths, crossing neighborhoods previously not experiencing significant commercial over-flights.

* The FAA's SERFR ONE is impacting neighboring Santa Cruz County's quality of life and property values. The new flight paths in and out of Monterey Regional Airport are similarly affecting neighbors here.

* These issues are currently being looked into by some of the highest levels of the FAA and elected representatives in our Federal Government, with hopes to be able to resolve them.

Because the new Draft Final Monterey Regional Airport Master Plan is currently proposing/estimating a 2% yearly growth rate of air traffic over the next twenty years, the issues of noise, pollution including greenhouse gases, neighborhood safety, flight paths, and possible continuing newer flight paths, need to be carefully analyzed for their cumulative impacts. There is a direct nexus between these issues and a new Airport Master Plan and new Airport Layout Plan.

1) On behalf of The Highway 68 Coalition, I ask that the above does become part of the necessary environmental analysis in the NEPA and CEQA documents to be prepared.

2) I request to be put on the notification list, advising me of all Monterey Regional Airport hearing dates and comment and filing deadlines regarding a new Airport Master Plan and Airport Layout Plan(s) environmental analysis documents. Please include dates and times of any and all Scoping Hearings. If you are not the point of contact, please advise me of who will be.

3) I request that a late night airline curfew or a voluntary curfew be implemented as part of the new Master Plan process. This does not mean emergencies. These are for regular scheduled flights. At one time the curfew was 9 p.m. at the Monterey Airport. This issue came up at a previous PAC meeting.

4) May I please have the courtesy of responses to questions the Highway 68 Coalition asked in the letter sent to you dated July 20, 2015?

On another note, the Districts eliminating consideration of new automobile/truck traffic access points on California State Route 68 is much appreciated. The highway operational integrity, safety, and aesthetics all benefit from this decision.

Finally, thank you very much for being the facilitator at the Monterey Regional Airport's PAC meetings.

Sincerely,

Mike Weaver
Chair, The Highway 68 Coalition

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
1455 MARKET STREET
SAN FRANCISCO, CALIFORNIA 94103-1398

JAN 26 2016

Regulatory Division

SUBJECT: File Number 2016-00023S

Ms. Shelley Glennon
Planning & Development Department
Monterey Peninsula Airport District
200 Fred Kane Drive, Suite 200
Monterey, CA 93940

Dear Ms. Glennon:

This letter is written in response to a request for comments on the "Notice of Preparation for an Environmental Impact Report & Notice of Scoping Meeting" and "Initial Study" concerning the proposed "Monterey Regional Airport – Airport Master Plan Project" as described in the notice from the Monterey Peninsula Airport District dated December 28, 2015. Your project is located near freshwater wetlands at Monterey Regional Airport in the City of Monterey, Monterey County, California. Since this activity may involve the discharge of fill into wetlands and, therefore, impact a water of the U.S., the Corps of Engineers will need to review those portions of your project.

All proposed work and/or structures extending bayward or seaward of the line on shore reached by mean high water (MHW) in tidal waters, or ordinary high water in non-tidal waters designated as navigable waters of the United States, must be authorized by the Corps of Engineers pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. Section 403). Additionally, all work and structures proposed in unfilled portions of the interior of diked areas below former MHW must be authorized under Section 10 of the same statute.

All proposed discharges of dredged or fill material into waters of the United States must be authorized by the Corps of Engineers pursuant to Section 404 of the Clean Water Act (CWA) (33 U.S.C. Section 1344). Waters of the United States generally include tidal waters, lakes, ponds, rivers, streams (including intermittent streams), and wetlands.

Your proposed work appears to be within our jurisdiction and a permit may be required for your project. Application for Corps authorization should be made to this office using the application form in the enclosed pamphlet. To avoid delays it is essential that you enter the File Number at the top of this letter into Item No. 1 of the application. The application must include plans showing the location, extent and character of the proposed activity, prepared in accordance with the requirements contained in this pamphlet. You should note, in planning your project,

that upon receipt of a properly completed application and plans, it may be necessary to advertise the proposed work by issuing a Public Notice for a period of 30 days.

If an Individual Permit may be required, it will be necessary for you to demonstrate to the Corps that your proposed fill is necessary because there are no practicable alternatives, as outlined in the U.S. Environmental Protection Agency's Section 404(b)(1) Guidelines. A copy is enclosed to aid you in preparation of this alternative analysis. You are advised to refrain from starting your proposed activity until we complete our review of your application and issue you the required authorization.

Commencement of work before you receive our notification will be interpreted as a violation of our regulations.

The Corps regulatory program supports the national goal of "no overall net loss" of wetlands. For permitted activities that result in unavoidable losses, the Corps requires replacement wetlands to offset those losses. The U.S. Army Corps of Engineers and U.S. Environmental Protection Agency released a new Compensatory Mitigation Rule on April 10, 2008, to clarify how to provide compensatory mitigation for unavoidable impacts to the nation's wetlands and streams. A copy of this rule can be found on our Headquarters website: http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/mitig_info.aspx The new rule changes where and how mitigation is to be completed, but maintains existing requirements on when mitigation is required. The rule also preserves the requirement for applicants to avoid or minimize impacts to aquatic resources before proposing compensatory mitigation projects to offset permitted impacts. Regulatory Guidance Letter 08-03 in the enclosed pamphlet provides guidance on minimum monitoring requirements for compensatory mitigation projects, including the required minimum content for monitoring reports.

The Corps of Engineers receives thousands of requests each year to perform wetland delineations for potential applicants for permits under Section 404 of the Clean Water Act. Due to limited staff and resources, response time can be several months or longer. To expedite this process, the San Francisco District encourages applicants to use consultants to conduct wetland delineations, especially for large and/or complex areas. The San Francisco District is not authorized to recommend any private consulting services and advises applicants to check references and referrals of prospective consultants before contracting services.

You may refer any questions on this matter to Naomi Schowalter of my Regulatory staff by telephone at 415-503-6763 or by e-mail at naomi.a.schowalter@usace.army.mil. All correspondence should be addressed to the Regulatory Division, South Branch, referencing the file number at the head of this letter.

Sincerely,

Katerina Galacatos
for Tori White
Acting Chief, Regulatory Division

Enclosures

U.S. ARMY CORPS OF ENGINEERS **APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT** 33 CFR 325. The proponent agency is CECW-CO-R.	***Form Approved -*** ***OMB No. 0710-0003*** ***Expires: 30-SEPTEMBER-2015***

Public reporting for this collection of information is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters, Executive Services and Communications Directorate, Information Management Division and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required)
First - Middle - Last -	First - Middle - Last -
Company -	Company -
E-mail Address -	E-mail Address -
6. APPLICANT'S ADDRESS:	9. AGENT'S ADDRESS:
Address-	Address-
City - State - Zip - Country -	City - State - Zip - Country -
7. APPLICANT'S PHONE NOs. w/AREA CODE	10. AGENTS PHONE NOs. w/AREA CODE
a. Residence b. Business c. Fax	a. Residence b. Business c. Fax

STATEMENT OF AUTHORIZATION

11. I hereby authorize, _____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

_____ _____
SIGNATURE OF APPLICANT DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)	
13. NAME OF WATERBODY, IF KNOWN (if applicable)	14. PROJECT STREET ADDRESS (if applicable) Address
15. LOCATION OF PROJECT Latitude: ◦N Longitude: ◦W	City - State- Zip-
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions) State Tax Parcel ID Municipality Section - Township - Range -	

24. Is Any Portion of the Work Already Complete? ☐ Yes ☐ No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address-

City - State - Zip -

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

Instructions for Preparing a
Department of the Army Permit Application

Blocks 1 through 4. To be completed by Corps of Engineers.

Block 5. Applicant's Name. Enter the name and the E-mail address of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the name of the organization and responsible officer and title. If more than one party is associated with the application, please attach a sheet with the necessary information marked Block 5.

Block 6. Address of Applicant. Please provide the full address of the party or parties responsible for the application. If more space is needed, attach an extra sheet of paper marked Block 6.

Block 7. Applicant Telephone Number(s). Please provide the number where you can usually be reached during normal business hours.

Blocks 8 through 11. To be completed, if you choose to have an agent.

Block 8. Authorized Agent's Name and Title. Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer, or any other person or organization. Note: An agent is not required.

Blocks 9 and 10. Agent's Address and Telephone Number. Please provide the complete mailing address of the agent, along with the telephone number where he / she can be reached during normal business hours.

Block 11. Statement of Authorization. To be completed by applicant, if an agent is to be employed.

Block 12. Proposed Project Name or Title. Please provide name identifying the proposed project, e.g., Landmark Plaza, Burned Hills Subdivision, or Edsall Commercial Center.

Block 13. Name of Waterbody. Please provide the name of any stream, lake, marsh, or other waterway to be directly impacted by the activity. If it is a minor (no name) stream, identify the waterbody the minor stream enters.

Block 14. Proposed Project Street Address. If the proposed project is located at a site having a street address (not a box number), please enter it here.

Block 15. Location of Proposed Project. Enter the latitude and longitude of where the proposed project is located. If more space is required, please attach a sheet with the necessary information marked Block 15.

Block 16. Other Location Descriptions. If available, provide the Tax Parcel Identification number of the site, Section, Township, and Range of the site (if known), and / or local Municipality that the site is located in.

Block 17. Directions to the Site. Provide directions to the site from a known location or landmark. Include highway and street numbers as well as names. Also provide distances from known locations and any other information that would assist in locating the site. You may also provide description of the proposed project location, such as lot numbers, tract numbers, or you may choose to locate the proposed project site from a known point (such as the right descending bank of Smith Creek, one mile downstream from the Highway 14 bridge). If a large river or stream, include the river mile of the proposed project site if known

Block 18. Nature of Activity. Describe the overall activity or project. Give appropriate dimensions of structures such as wing walls, dikes (identify the materials to be used in construction, as well as the methods by which the work is to be done), or excavations (length, width, and height). Indicate whether discharge of dredged or fill material is involved. Also, identify any structure to be constructed on a fill, piles, or float-supported platforms.

The written descriptions and illustrations are an important part of the application. Please describe, in detail, what you wish to do. If more space is needed, attach an extra sheet of paper marked Block 18.

Block 19. Proposed Project Purpose. Describe the purpose and need for the proposed project. What will it be used for and why? Also include a brief description of any related activities to be developed as the result of the proposed project. Give the approximate dates you plan to both begin and complete all work.

CFR 40 Part 230 Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material

Subpart B--Compliance With the Guidelines

Sec. 230.10 Restrictions on discharge.

Note: Because other laws may apply to particular discharges and because the Corps of Engineers or State 404 agency may have additional procedural and substantive requirements, a discharge complying with the requirement of these Guidelines will not automatically receive a permit.

Although all requirements in Sec. 230.10 must be met, the compliance evaluation procedures will vary to reflect the seriousness of the potential for adverse impacts on the aquatic ecosystems posed by specific dredged or fill material discharge activities.

(a) Except as provided under section 404(b)(2), no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.

(1) For the purpose of this requirement, practicable alternatives include, but are not limited to:

(i) Activities which do not involve a discharge of dredged or fill material into the waters of the United States or ocean waters;

(ii) Discharges of dredged or fill material at other locations in waters of the United States or ocean waters;

(2) An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. If it is otherwise a practicable alternative, an area not presently owned by the applicant, which could reasonably be obtained, utilized, expanded or managed in order to fulfill the basic purpose of the proposed activity may be considered.

(3) Where the activity associated with a discharge which is proposed for a special aquatic site (as defined in subpart E) does not require access or proximity to or sighting within the special aquatic site in question to fulfill its basic purpose (i.e., is not "water dependent"), practicable alternatives that do not involve special aquatic sites are presumed to be available, unless clearly demonstrated otherwise. In addition, where a discharge is proposed for a special aquatic site, all practicable alternatives to the proposed discharge, which do not involve a discharge into a special aquatic site are presumed to have less adverse impact on the aquatic ecosystem, unless clearly demonstrated otherwise.

(4) For actions subject to NEPA, where the Corps of Engineers is the permitting agency, the analysis of alternatives required for NEPA environmental documents, including supplemental Corps NEPA documents, will in most cases provide the information for the evaluation of alternatives under these Guidelines. On occasion, these

(4) Significantly adverse effects of discharge of pollutants on recreational, aesthetic, and economic values.

(d) Except as provided under section 404(b)(2), no discharge of dredged or fill material shall be permitted unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem. Subpart H identifies such possible steps.

Sec. 230.11 Factual Determinations.

The permitting authority shall determine in writing the potential short-term or long-term effects of a proposed discharge of dredged or fill material on the physical, chemical, and biological components of the aquatic environment in light of subparts C through F. Such factual determinations shall be used in Sec. 230.12 in making findings of compliance or non-compliance with the restrictions on discharge in Sec. 230.10. The evaluation and testing procedures described in Sec. 230.60 and Sec. 230.61 of subpart G shall be used as necessary to make, and shall be described in, such determination. The determinations of effects of each proposed discharge shall include the following:

(a) Physical substrate determinations. Determine the nature and degree of effect that the proposed discharge will have, individually and cumulatively, on the characteristics of the substrate at the proposed disposal site. Consideration shall be given to the similarity in particle size, shape, and degree of compaction of the material proposed for discharge and the material constituting the substrate at the disposal site, and any potential changes in substrate elevation and bottom contours, including changes outside of the disposal site which may occur as a result of erosion, slumpage, or other movement of the discharged material. The duration and physical extent of substrate changes shall also be considered. The possible loss of environmental values (Sec. 230.20) and actions to minimize impact (subpart H) shall also be considered in making these determinations. Potential changes in substrate elevation and bottom contours shall be predicted on the basis of the proposed method, volume, location, and rate of discharge, as well as on the individual and combined effects of current patterns, water circulation, wind and wave action, and other physical factors that may affect the movement of the discharged material.

(b) Water circulation, fluctuation, and salinity determinations. Determine the nature and degree of effect that the proposed discharge will have individually and cumulatively on water, current patterns, circulation including downstream flows, and normal water fluctuation. Consideration shall be given to water chemistry, salinity, clarity, color, odor, taste, dissolved gas levels, temperature, nutrients, and eutrophication plus other appropriate characteristics. Consideration shall also be given to the potential diversion or obstruction of flow, alterations of bottom contours, or other significant changes in the hydrologic regime. Additional consideration of the possible loss of environmental values (Secs. 230.23 through 230.25) and actions to minimize impacts (subpart H), shall be used in making these determinations. Potential significant effects on the current patterns, water circulation, normal water fluctuation and salinity shall be evaluated on the basis of the proposed method, volume, location, and rate of discharge.

(v) Discharge vessel speed and direction, if appropriate;
(vi) Rate of discharge;
(vii) Ambient concentration of constituents of interest;
(viii) Dredged material characteristics, particularly concentrations of constituents, amount of material, type of material (sand, silt, clay, etc.) and settling velocities;
(ix) Number of discharge actions per unit of time;
(x) Other factors of the disposal site that affect the rates and patterns of mixing.

(g) Determination of cumulative effects on the aquatic ecosystem.
(1) Cumulative impacts are the changes in an aquatic ecosystem that are attributable to the collective effect of a number of individual discharges of dredged or fill material. Although the impact of a particular discharge may constitute a minor change, in itself, the cumulative effect of numerous such piecemeal changes can result in a major impairment of the water resources and interfere with the productivity and water quality of existing aquatic ecosystems.
(2) Cumulative effects attributable to the discharge of dredged or fill material in waters of the United States should be predicted to the extent reasonable and practical. The permitting authority shall collect information and solicit information from other sources about the cumulative impacts on the aquatic ecosystem. This information shall be documented and considered during the decision-making process concerning the evaluation of individual permit applications, the issuance of a General permit, and monitoring and enforcement of existing permits.

(h) Determination of secondary effects on the aquatic ecosystem.
(1) Secondary effects are effects on an aquatic ecosystem that are associated with a discharge of dredged or fill materials, but do not result from the actual placement of the dredged or fill material. Information about secondary effects on aquatic ecosystems shall be considered prior to the time final section 404 action is taken by permitting authorities.
(2) Some examples of secondary effects on an aquatic ecosystem are fluctuating water levels in an impoundment and downstream associated with the operation of a dam, septic tank leaching and surface runoff from residential or commercial developments on fill, and leachate and runoff from a sanitary landfill located in waters of the U.S. Activities to be conducted on fast land created by the discharge of dredged or fill material in waters of the United States may have secondary impacts within those waters which should be considered in evaluating the impact of creating those fast lands.

Sec. 230.12 Findings of compliance or non-compliance with the restrictions on discharge.

(a) On the basis of these Guidelines (subparts C through G) the proposed disposal sites for the discharge of dredged or fill material must be:
(1) Specified as complying with the requirements of these Guidelines; or
(2) Specified as complying with the requirements of these Guidelines with the inclusion of appropriate and practicable discharge conditions (see subpart H) to minimize pollution or adverse effects to the affected aquatic ecosystems; or
(3) Specified as failing to comply with the requirements of these Guidelines where:

(a) Suspended particulates in the aquatic ecosystem consist of fine-grained mineral particles, usually smaller than silt, and organic particles. Suspended particulates may enter water bodies as a result of land runoff, flooding, vegetative and planktonic breakdown, resuspension of bottom sediments, and man's activities including dredging and filling. Particulates may remain suspended in the water column for variable periods of time as a result of such factors as agitation of the water mass, particulate specific gravity, particle shape, and physical and chemical properties of particle surfaces.

(b) Possible loss of environmental characteristics and values: The discharge of dredged or fill material can result in greatly elevated levels of suspended particulates in the water column for varying lengths of time. These new levels may reduce light penetration and lower the rate of photosynthesis and the primary productivity of an aquatic area if they last long enough. Sight-dependent species may suffer reduced feeding ability leading to limited growth and lowered resistance to disease if high levels of suspended particulates persist. The biological and the chemical content of the suspended material may react with the dissolved oxygen in the water, which can result in oxygen depletion. Toxic metals and organics, pathogens, and viruses absorbed or adsorbed to fine-grained particulates in the material may become biologically available to organisms either in the water column or on the substrate. Significant increases in suspended particulate levels create turbid plumes which are highly visible and aesthetically displeasing. The extent and persistence of these adverse impacts caused by discharges depend upon the relative increase in suspended particulates above the amount occurring naturally, the duration of the higher levels, the current patterns, water level, and fluctuations present when such discharges occur, the volume, rate, and duration of the discharge, particulate deposition, and the seasonal timing of the discharge.

Sec. 230.22 Water.

(a) Water is the part of the aquatic ecosystem in which organic and inorganic constituents are dissolved and suspended. It constitutes part of the liquid phase and is contained by the substrate. Water forms part of a dynamic aquatic life-supporting system. Water clarity, nutrients and chemical content, physical and biological content, dissolved gas levels, pH, and temperature contribute to its life-sustaining capabilities.

(b) Possible loss of environmental characteristics and values: The discharge of dredged or fill material can change the chemistry and the physical characteristics of the receiving water at a disposal site through the introduction of chemical constituents in suspended or dissolved form. Changes in the clarity, color, odor, and taste of water and the addition of contaminants can reduce or eliminate the suitability of water bodies for populations of aquatic organisms, and for human consumption, recreation, and aesthetics. The introduction of nutrients or organic material to the water column as a result of the discharge can lead to a high biochemical oxygen demand (BOD), which in turn can lead to reduced dissolved oxygen, thereby potentially affecting the survival of many aquatic organisms. Increases in nutrients can favor one group of organisms such as algae to the detriment of other more desirable types such as submerged aquatic vegetation, potentially causing adverse health effects, objectionable tastes and odors, and other problems.

upstream regions can have equally adverse impacts. A significant reduction in the volume of fresh water moving into an estuary below that which is considered normal can affect the location and type of mixing thereby changing the characteristic salinity patterns. The resulting changed circulation pattern can cause the upstream migration of the salinity gradient displacing the maximum sedimentation zone. This migration may affect those organisms that are adapted to freshwater environments. It may also affect municipal water supplies.

Note: Possible actions to minimize adverse impacts regarding site characteristics can be found in subpart H.

Subpart D--Potential Impacts on Biological Characteristics of the Aquatic Ecosystem

Note: The impacts described in this subpart should be considered in making the factual determinations and the findings of compliance or non-compliance in subpart B.

Sec. 230.30 Threatened and endangered species.

(a) An endangered species is a plant or animal in danger of extinction throughout all or a significant portion of its range. A threatened species is one in danger of becoming an endangered species in the foreseeable future throughout all or a significant portion of its range. Listings of threatened and endangered species as well as critical habitats are maintained by some individual States and by the U.S. Fish and Wildlife Service of the Department of the Interior (codified annually at 50 CFR 17.11). The Department of Commerce has authority over some threatened and endangered marine mammals, fish and reptiles.

(b) Possible loss of values: The major potential impacts on threatened or endangered species from the discharge of dredged or fill material include:

(1) Covering or otherwise directly killing species;

(2) The impairment or destruction of habitat to which these species are limited. Elements of the aquatic habitat which are particularly crucial to the continued survival of some threatened or endangered species include adequate good quality water, spawning and maturation areas, nesting areas, protective cover, adequate and reliable food supply, and resting areas for migratory species. Each of these elements can be adversely affected by changes in either the normal water conditions for clarity, chemical content, nutrient balance, dissolved oxygen, pH, temperature, salinity, current patterns, circulation and fluctuation, or the physical removal of habitat; and

(3) Facilitating incompatible activities.

(c) Where consultation with the Secretary of the Interior occurs under section 7 of the Endangered Species Act, the conclusions of the Secretary concerning the impact(s) of the

food chain organisms. The availability of contaminants from the discharge of dredged or fill material may lead to the bioaccumulation of such contaminants in wildlife. Changes in such physical and chemical factors of the environment may favor the introduction of undesirable plant and animal species at the expense of resident species and communities. In some aquatic environments lowering plant and animal species diversity may disrupt the normal functions of the ecosystem and lead to reductions in overall biological productivity.

Note: Possible actions to minimize adverse impacts regarding characteristics of biological components of the aquatic ecosystem can be found in subpart H.

Subpart E--Potential Impacts on Special Aquatic Sites

Note: The impacts described in this subpart should be considered in making the factual determinations and the findings of compliance or non-compliance in subpart B. The definition of special aquatic sites is found in Sec. 230.3(q-1).

Sec. 230.40 Sanctuaries and refuges.

(a) Sanctuaries and refuges consist of areas designated under State and Federal laws or local ordinances to be managed principally for the preservation and use of fish and wildlife resources.

(b) Possible loss of values: Sanctuaries and refuges may be affected by discharges of dredged or fill material which will:

(1) Disrupt the breeding, spawning, migratory movements or other critical life requirements of resident or transient fish and wildlife resources;

(2) Create unplanned, easy and incompatible human access to remote aquatic areas;

(3) Create the need for frequent maintenance activity;

(4) Result in the establishment of undesirable competitive species of plants and animals;

(5) Change the balance of water and land areas needed to provide cover, food, and other fish and wildlife habitat requirements in a way that modifies sanctuary or refuge management practices;

(6) Result in any of the other adverse impacts discussed in subparts C and D as they relate to a particular sanctuary or refuge.

Sec. 230.41 Wetlands.

(a)(1) Wetlands consist of areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

(2) Where wetlands are adjacent to open water, they generally constitute the transition to upland. The margin between wetland and open water can best be established by

decomposition process occurring on the mud flat and change the deposition of suspended material affecting the productivity of the area. Changes may reduce the mud flat's capacity to dissipate storm surge runoff.

Sec. 230.43 Vegetated shallows.

(a) Vegetated shallows are permanently inundated areas that under normal circumstances support communities of rooted aquatic vegetation, such as turtle grass and eelgrass in estuarine or marine systems as well as a number of freshwater species in rivers and lakes.

(b) Possible loss of values: The discharge of dredged or fill material can smother vegetation and benthic organisms. It may also create unsuitable conditions for their continued vigor by:

(1) Changing water circulation patterns;

(2) releasing nutrients that increase undesirable algal populations;

(3) releasing chemicals that adversely affect plants and animals;

(4) increasing turbidity levels, thereby reducing light penetration and hence photosynthesis; and

(5) changing the capacity of a vegetated shallow to stabilize bottom materials and decrease channel shoaling. The discharge of dredged or fill material may reduce the value of vegetated shallows as nesting, spawning, nursery, cover, and forage areas, as well as their value in protecting shorelines from erosion and wave actions. It may also encourage the growth of nuisance vegetation.

Sec. 230.44 Coral reefs.

(a) Coral reefs consist of the skeletal deposit, usually of calcareous or silicaceous materials, produced by the vital activities of anthozoan polyps or other invertebrate organisms present in growing portions of the reef.

(b) Possible loss of values: The discharge of dredged or fill material can adversely affect colonies of reef building organisms by burying them, by releasing contaminants such as hydrocarbons into the water column, by reducing light penetration through the water, and by increasing the level of suspended particulates. Coral organisms are extremely sensitive to even slight reductions in light penetration or increases in suspended particulates. These adverse effects will cause a loss of productive colonies which in turn provide habitat for many species of highly specialized aquatic organisms.

Sec. 230.45 Riffle and pool complexes.

(a) Steep gradient sections of streams are sometimes characterized by riffle and pool complexes. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a coarse substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. Pools are characterized by a slower stream velocity, a steaming

(a) Recreational and commercial fisheries consist of harvestable fish, crustaceans, shellfish, and other aquatic organisms used by man.

(b) Possible loss of values: The discharge of dredged or fill materials can affect the suitability of recreational and commercial fishing grounds as habitat for populations of consumable aquatic organisms. Discharges can result in the chemical contamination of recreational or commercial fisheries. They may also interfere with the reproductive success of recreational and commercially important aquatic species through disruption of migration and spawning areas. The introduction of pollutants at critical times in their life cycle may directly reduce populations of commercially important aquatic organisms or indirectly reduce them by reducing organisms upon which they depend for food. Any of these impacts can be of short duration or prolonged, depending upon the physical and chemical impacts of the discharge and the biological availability of contaminants to aquatic organisms.

Sec. 230.52 Water-related recreation.

(a) Water-related recreation encompasses activities undertaken for amusement and relaxation. Activities encompass two broad categories of use: consumptive, e.g., harvesting resources by hunting and fishing; and non-consumptive, e.g. canoeing and sight-seeing.

(b) Possible loss of values: One of the more important direct impacts of dredged or fill disposal is to impair or destroy the resources, which support recreation activities. The disposal of dredged or fill material may adversely modify or destroy water use for recreation by changing turbidity, suspended particulates, temperature, dissolved oxygen, dissolved materials, toxic materials, pathogenic organisms, quality of habitat, and the aesthetic qualities of sight, taste, odor, and color.

Sec. 230.53 Aesthetics.

(a) Aesthetics associated with the aquatic ecosystem consist of the perception of beauty by one or a combination of the senses of sight, hearing, touch, and smell. Aesthetics of aquatic ecosystems apply to the quality of life enjoyed by the general public and property owners.

(b) Possible loss of values: The discharge of dredged or fill material can mar the beauty of natural aquatic ecosystems by degrading water quality, creating distracting disposal sites, inducing inappropriate development, encouraging unplanned and incompatible human access, and by destroying vital elements that contribute to the compositional harmony or unity, visual distinctiveness, or diversity of an area. The discharge of dredged or fill material can adversely affect the particular features, traits, or characteristics of an aquatic area which make it valuable to property owners. Activities which degrade water quality, disrupt natural substrate and vegetational characteristics, deny access to or visibility of the resource, or result in changes in odor, air quality, or noise levels may reduce the value of an aquatic area to private property owners.

site, or carried out on similar material for other permitted projects in the vicinity. Materials shall be considered similar if the sources of contamination, the physical configuration of the sites and the sediment composition of the materials are comparable, in light of water circulation and stratification, sediment accumulation and general sediment characteristics. Tests from other sites may be relied on only if no changes have occurred at the extraction sites to render the results irrelevant. (3) Any potential for significant introduction of persistent pesticides from land runoff or percolation;

(4) Any records of spills or disposal of petroleum products or substances designated as hazardous under section 311 of the Clean Water Act (See 40 CFR part 116);

(5) Information in Federal, State and local records indicating significant introduction of pollutants from industries, municipalities, or other sources, including types and amounts of waste materials discharged along the potential routes of contaminants to the extraction site; and

(6) Any possibility of the presence of substantial natural deposits of minerals or other substances which could be released to the aquatic environment in harmful quantities by man-induced discharge activities.

(c) To reach the determinations in Sec. 230.11 involving potential effects of the discharge on the characteristics of the disposal site, the narrative guidance in subparts C through F shall be used along with the general evaluation procedure in Sec. 230.60 and, if necessary, the chemical and biological testing sequence in Sec. 230.61. Where the discharge site is adjacent to the extraction site and subject to the same sources of contaminants, and materials at the two sites are substantially similar, the fact that the material to be discharged may be a carrier of contaminants is not likely to result in degradation of the disposal site. In such circumstances, when dissolved material and suspended particulates can be controlled to prevent carrying pollutants to less contaminated areas, testing will not be required.

(d) Even if the Sec. 230.60(b) evaluation (previous tests, the presence of polluting industries and information about their discharge or runoff into waters of the U.S., bio-inventories, etc.) leads to the conclusion that there is a high probability that the material proposed for discharge is a carrier of contaminants, testing may not be necessary if constraints are available to reduce contamination to acceptable levels within the disposal site and to prevent contaminants from being transported beyond the boundaries of the disposal site, if such constraints are acceptable to the permitting authority and the Regional Administrator, and if the potential discharger is willing and able to implement such constraints. However, even if tests are not performed, the permitting authority must still determine the probable impact of the operation on the receiving aquatic ecosystem. Any decision not to test must be explained in the determinations made under Sec. 230.11.
Sec. 230.61 Chemical, biological, and physical evaluation and testing.

Note: The Agency is today proposing revised testing guidelines. The evaluation and testing procedures in this section are based on the 1975 section 404(b)(1) interim final Guidelines and shall remain in effect until the revised testing guidelines are published as final regulations.

interpreted in terms of the potential for harm as supported by any pertinent scientific literature.

(2) When an analysis of biological community structure will be of value to assess the potential for adverse environmental impact at the proposed disposal site, a comparison of the biological characteristics between the excavation and disposal sites may be required by the permitting authority. Biological indicator species may be useful in evaluating the existing degree of stress at both sites. Sensitive species representing community components colonizing various substrate types within the sites should be identified as possible bioassay organisms if tests for toxicity are required. Community structure studies should be performed only when they will be of value in determining discharge conditions. This is particularly applicable to large quantities of dredged material known to contain adverse quantities of toxic materials. Community studies should include benthic organisms such as microbiota and harvestable shellfish and finfish. Abundance, diversity, and distribution should be documented and correlated with substrate type and other appropriate physical and chemical environmental characteristics.

(d) Physical tests and evaluation. The effect of a discharge of dredged or fill material on physical substrate characteristics at the disposal site, as well as on the water circulation, fluctuation, salinity, and suspended particulates content there, is important in making factual determinations in Sec. 230.11. Where information on such effects is not otherwise available to make these factual determinations, the permitting authority shall require appropriate physical tests and evaluations as are justified and deemed necessary. Such tests may include sieve tests, settleability tests, compaction tests, mixing zone and suspended particulate plume determinations, and site assessments of water flow, circulation, and salinity characteristics.

Subpart H--Actions To Minimize Adverse Effects

Note: There are many actions which can be undertaken in response to Sec. 203.10(d) to minimize the adverse effects of discharges of dredged or fill material. Some of these, grouped by type of activity, are listed in this subpart.

Sec. 230.70 Actions concerning the location of the discharge.

The effects of the discharge can be minimized by the choice of the disposal site. Some of the ways to accomplish this are by:

(a) Locating and confining the discharge to minimize smothering of organisms;

(b) Designing the discharge to avoid a disruption of periodic water inundation patterns;

(c) Selecting a disposal site that has been used previously for dredged material discharge;

(d) Selecting a disposal site at which the substrate is composed of material similar to that being discharged, such as discharging sand on sand or mud on mud;

The effects of a discharge can be minimized by the manner in which it is dispersed, such as:

(a) Where environmentally desirable, distributing the dredged material widely in a thin layer at the disposal site to maintain natural substrate contours and elevation;

(b) Orienting a dredged or fill material mound to minimize undesirable obstruction to the water current or circulation pattern, and utilizing natural bottom contours to minimize the size of the mound;

(c) Using silt screens or other appropriate methods to confine suspended particulate/turbidity to a small area where settling or removal can occur;

(d) Making use of currents and circulation patterns to mix, disperse and dilute the discharge;

(e) Minimizing water column turbidity by using a submerged diffuser system. A similar effect can be accomplished by submerging pipeline discharges or otherwise releasing materials near the bottom;

(f) Selecting sites or managing discharges to confine and minimize the release of suspended particulates to give decreased turbidity levels and to maintain light penetration for organisms;

(g) Setting limitations on the amount of material to be discharged per unit of time or volume of receiving water.

Sec. 230.74 Actions related to technology.

Discharge technology should be adapted to the needs of each site. In determining whether the discharge operation sufficiently minimizes adverse environmental impacts, the applicant should consider:

(a) Using appropriate equipment or machinery, including protective devices, and the use of such equipment or machinery in activities related to the discharge of dredged or fill material;

(b) Employing appropriate maintenance and operation on equipment or machinery, including adequate training, staffing, and working procedures;

(c) Using machinery and techniques that are especially designed to reduce damage to wetlands. This may include machines equipped with devices that scatter rather than mound excavated materials, machines with specially designed wheels or tracks, and the use of mats under heavy machines to reduce wetland surface compaction and rutting;

(c) Timing the discharge to avoid the seasons or periods when human recreational activity associated with the aquatic site is most important;

(d) Following discharge procedures which avoid or minimize the disturbance of aesthetic features of an aquatic site or ecosystem;

(e) Selecting sites that will not be detrimental or increase incompatible human activity, or require the need for frequent dredge or fill maintenance activity in remote fish and wildlife areas;

(f) Locating the disposal site outside of the vicinity of a public water supply intake.

Sec. 230.77 Other actions.

(a) In the case of fills, controlling runoff and other discharges from activities to be conducted on the fill;

(b) In the case of dams, designing water releases to accommodate the needs of fish and wildlife;

(c) In dredging projects funded by Federal agencies other than the Corps of Engineers, maintain desired water quality of the return discharge through agreement with the Federal funding authority on scientifically defensible pollutant concentration levels in addition to any applicable water quality standards;

(d) When a significant ecological change in the aquatic environment is proposed by the discharge of dredged or fill material, the permitting authority should consider the ecosystem that will be lost as well as the environmental benefits of the new system.

Subpart I--Planning To Shorten Permit Processing Time

Sec. 230.80 Advanced identification of disposal areas.

(a) Consistent with these Guidelines, EPA and the permitting authority, on their own initiative or at the request of any other party and after consultation with any affected State that is not the permitting authority, may identify sites which will be considered as:

(1) Possible future disposal sites, including existing disposal sites and non-sensitive areas; or

(2) Areas generally unsuitable for disposal site specification;

(b) The identification of any area as a possible future disposal site should not be deemed to constitute a permit for the discharge of dredged or fill material within such area or a specification of a disposal site. The identification of areas that generally will not be available for disposal site specification should not be deemed as prohibiting applications for permits to discharge dredged or fill material in such areas. Either type of

US Army Corps of Engineers®

SPECIAL PUBLIC NOTICE

Final Map and Drawing Standards for the South Pacific Division Regulatory Program

August 6, 2012

Corps contacts:
Sacramento District: Michael Finan (916) 557-5324 (Michael.C.Finan@usace.army.mil)
San Francisco District: Paula Gill (415) 503-6776 (Paula.C.Gill@usace.army.mil)
Los Angeles District: Dan Swenson (213) 452-3414 (Daniel.P.Swenson@usace.army.mil)
Albuquerque District: Deanna Cummings (505) 342-3280 (Deanna.L.Cummings@usace.army.mil)
South Pacific Division: Thomas Cavanaugh (415) 503-6574 (Thomas.J.Cavanaugh@usace.army.mil)

Introduction: This notice establishes final standards and guidelines for maps and drawings submitted as part of delineations and applications for U.S. Army permits and jurisdictional determinations. The intent of these standards is to improve the quality and consistency of maps and drawings and simplify and improve review and processing by Corps Regulatory project managers. We estimate that at least 70-80% of maps and drawings submitted to the Corps Regulatory Program in South Pacific Division (comprised of Albuquerque, San Francisco, Sacramento, and Los Angeles districts) already meet the majority of these standards. By adhering to a single standard for maps and drawings, applicants and consultants should have a clear and concise product, and project managers should be able to provide permit decisions and jurisdictional determinations in a more consistent and timely manner. In addition, electronic mapping of permit-related maps and drawings will enable data sharing with other resource agencies for coordination of mitigation decision-making.

Applicability: These standards apply to all submittals to Regulatory Divisions, within the Districts of the Corps' South Pacific Division, and supersede all previous SPD district-specific standards related to map and drawing requirements. At the Corps' discretion, these standards may be modified or waived on a case by case basis, for example, projects or activities with small or temporary impacts to waters of the U.S. (for example, less than a tenth of an acre of permanent impact), projects where the applicant possesses limited financial resources (for example, private homeowners and small land owners), emergencies, and restoration projects with limited grant funding. Additional examples where these standards may be modified or waived include reauthorization of previously-authorized work and maintenance, repair, and/or rehabilitation projects where the original authorization included adequate drawings that are available. In general, compensatory mitigation plans must adhere to these standards, regardless of whether the standards are waived for the overall project.

Standards:

1) General:
   a. Documents must include at a minimum: location (vicinity) map(s) and plan view map(s). Mitigation plans and construction drawings should also include representative cross-sectional views. Delineation maps must be provided for the project area, staging areas, disposal sites, access routes, and proposed mitigation sites, etc.
   b. The orientation of the map on the page (as it is read) must be the same for all maps submitted.
   c. By convention, North will normally be toward the top of the page.

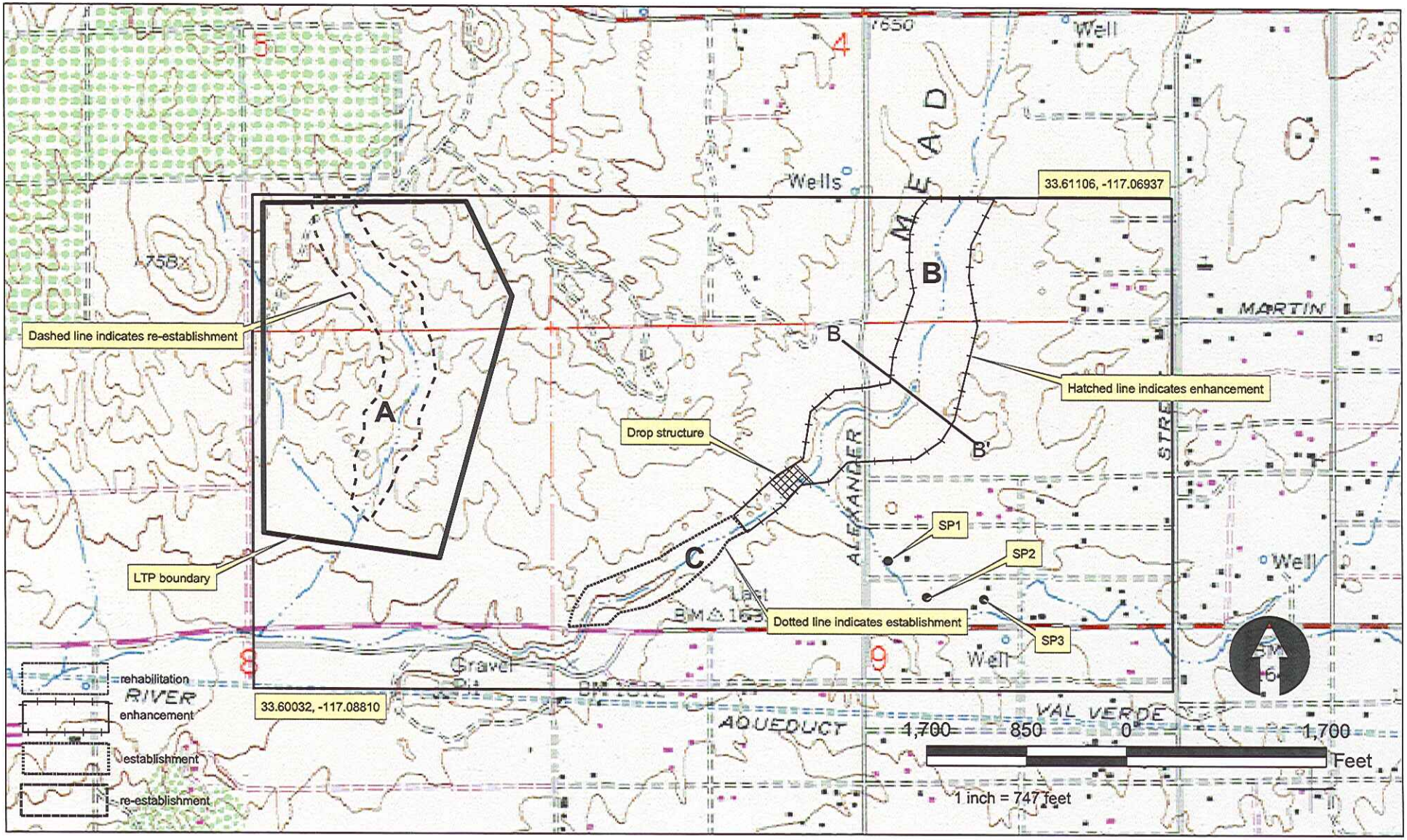
b. Clearly annotate all fills, structures, and /or limits of work as either permanent or temporary.
c. Pre-construction drawings (grading plans) and post-construction drawings (as-built plans) must include name, company/agency, and signature of preparer, date signed, drawing title, and total number of sheets.
d. Both plan view and cross-sectional view maps must be provided.

4) Post-construction drawings (as-built plans):
a. Both plan view and cross-sectional view maps must be provided.
b. Must be the same size and alignment (spatial) as authorized grading plans (i.e., grading plans and as-built plans must overlay such that structures, boundaries, etc. align).
c. Show any deviations from the fills and/or structures authorized as part of an approved pre-construction drawing in red.

5) Delineations of waters of the U.S.:
a. Plan view maps must be provided.
b. Cross-sectional view drawings must be provided at the Corps project manager's discretion. Examples of when cross-sectional view drawings would be appropriate include stream or wetland restorations, stream crossings, proposed structures, and delineations of tidal areas.
c. Clearly show location and extent of all areas potentially meeting the criteria for waters of the U.S., including special aquatic sites (e.g., wetlands, sanctuaries and refuges, mudflats, vegetated shallows, and riffle and pool complexes), and/or navigable waters. Each type of boundary (for example, ordinary high water mark, mean high water, wetlands or other special aquatic sites, and high tide line) must be clearly annotated and/or symbolized to ensure they are differentiable on the map.
d. The survey area boundary must be clearly annotated and/or symbolized and must include all potential waters of the U.S. The survey area boundary encloses the spatial area for which a Corps jurisdictional determination is being requested. Show locations of any wetland delineation or ordinary high water mark data points, labeled according to the number of the corresponding wetland delineation form or ordinary high water mark data sheet. Generally, a wetland boundary must be based on sets of at least two wetland delineation data points, one within the proposed wetland boundary and one outside it.
e. Include representative ordinary high water mark (OHWM) widths where measured in the field (averages may be acceptable for uniform channel reaches). OHWM widths must be shown with a transect/profile line (e.g., A-A') labeled with the corresponding width measurement in feet. In some cases, a corresponding cross section may be required, in which case the cross section must include the corresponding OHWM elevations.
f. Include information not directly related to a delineation of waters of the U.S. on a separate map(s).
g. If there are tidal areas within the survey area, identify the location and elevation of Mean High Water and the High Tide Line on all maps and cross-section drawings.
h. Each line or polygon representing a water of the U.S. must be labeled with a unique name (for example, WL1, WL2, VP1, VP2, STR1, STR2, etc.). The delineation report must be accompanied by the attached Aquatic Resources.xlsx table (Excel file format).
i. If impact areas within waters of the U.S. are shown, those must also be labeled with a unique name (for example,). In this case, the delineation report must also be accompanied by the attached Impacts.xlsx table (Excel file format).
j. If submitted, delineation-related GIS data must use the unique names as described above and conform to the Aquatic Resources.xlsx and Impacts.xlsx data tables and must include a text file of metadata, including datum, projection, and mapper contact information.

6) Mitigation plans and long-term preservation (LTP) maps (see attached example map, Figure 1):
a. Both plan view and cross-sectional view maps must be provided.
b. Mitigation boundaries must be clearly differentiable based on mitigation type: establishment, re-establishment, rehabilitation, enhancement, and preservation only. Establishment boundaries must use a dotted line. Re-establishment boundaries must use a dashed line. Rehabilitation boundaries must use an alternating dash-dot-dash line. Enhancement areas must use a hatched line. LTP boundaries

Figure 1. Happy Frogs development mitigation sites



US Army Corps of Engineers®

REGULATORY GUIDANCE LETTER

No. 08-03 **Date: 10 October 2008**

SUBJECT: Minimum Monitoring Requirements for Compensatory Mitigation Projects Involving the Restoration, Establishment, and/or Enhancement of Aquatic Resources.

1. Purpose and Applicability

a. Purpose. This Regulatory Guidance Letter (RGL) provides the Districts and regulated public guidance on minimum monitoring requirements for compensatory mitigation projects, including the required minimum content for monitoring reports. This RGL replaces RGL 06-03.

b. Applicability. The final Mitigation Rule published on April 10, 2008, states that the submission of monitoring reports to assess the development and condition of compensatory mitigation projects is required, but the content and level of detail for those reports must be commensurate with the scale and scope of the compensatory mitigation projects as well as the compensatory mitigation project type (see 33 CFR 332.6(a)(1)).

This RGL applies to all Department of the Army (DA) permit authorizations under Section 404 of the Clean Water Act and Sections 9 and 10 of the Rivers and Harbors Act that contain special conditions requiring compensatory mitigation provided through aquatic resource restoration, establishment and/or enhancement. This guidance also applies to monitoring reports that are prepared for mitigation bank sites and in-lieu-fee project sites.

This RGL supports the Program Analysis and Review Tool (PART) program goals for the Regulatory Program. Specifically, this RGL supports the PART performance measures for mitigation site compliance and mitigation bank/ in-lieu-fee compliance. These measures apply to active mitigation sites, mitigation banks, and in-lieu-fee project sites that still require monitoring.

2. Background

Recent studies by the Government Accountability Office (GAO) and National Research Council (NRC) indicated that the U.S. Army Corps of Engineers (Corps) was not providing adequate oversight to ensure that compensatory mitigation projects were successfully replacing the aquatic resource functions lost as a result of permitted activities. For example, the GAO study determined that many project files requiring

special conditions to determine if the site is achieving the desired functional capacity. Compensatory mitigation projects offset the impacts to diverse types of aquatic resources, including riverine and estuarine habitats. Special conditions of the DA permits will clearly state performance standards specific to the type and function of the ecosystem in relation to the objectives of the compensatory mitigation project.

ii. Monitoring Timeframe. The special conditions of the DA permit (or the mitigation plan as referenced in the special conditions) must specify the length of the monitoring period (see 33 CFR 332.6(a)(1)). For mitigation banks, the length of the monitoring period will be specified in either the DA permit, mitigation banking instrument, or approved mitigation plan. For in-lieu fee projects, the length of the monitoring period will be specified in either the DA permit or the approved in-lieu fee project plan.

The monitoring period must be sufficient to demonstrate that the compensatory mitigation project has met performance standards, but not less than five years (see 33 CFR 332.6(b)). The District determines how frequently monitoring reports are submitted, the monitoring period length, and report content. If a compensatory mitigation project has met its performance standards in less than five years, the monitoring period length can be reduced, if there are at least two consecutive monitoring reports that demonstrate that success. Permit conditions will support the specified monitoring requirement and include deadlines for monitoring report submittal. Longer monitoring timeframes are necessary for compensatory mitigation projects that take longer to develop (see 33 CFR 332.6(b)). For example, forested wetland restoration may take longer than five years to meet performance standards.

Annual monitoring and reporting to the Corps is appropriate for most types of compensatory mitigation projects, though the project sponsor may have to monitor progress more often during the project's early stages. Certain compensatory mitigation projects may require more frequent monitoring and reporting during the early stages of development to allow project managers to quickly address problems and/or concerns. Annual monitoring can resume once the project develops in accordance with the approved performance standards. In cases where monitoring is required for longer than five years, monitoring may be conducted on a less than annual timeframe (such as every other year), though yearly monitoring is recommended until the project becomes established as a successful mitigation project. In this case, off-year monitoring should include some form of screening assessment such as driving by the mitigation site, telephone conversations regarding condition of the mitigation site, etc. On-site conditions, the complexity of the approved mitigation plan, and unforeseen circumstances will ultimately determine whether the monitoring period should be extended beyond the specified monitoring time frame for a particular project. Complex and/or ecologically significant compensatory mitigation projects should have higher priority for site visits.

As discussed above, the remaining monitoring requirements may be waived upon a determination that the compensatory mitigation project has achieved its performance standards. The original monitoring period may be extended upon a determination that

conditions, as well as the results of functional, condition, or other assessments used to provide quantitative or qualitative measures of the functions provided by the compensatory mitigation project site.

c. Monitoring Report Narrative:

i. Project Overview (1 page)

(1) Corps Permit Number or Name of the Mitigation Bank or In-Lieu Fee Project

(2) Name of party responsible for conducting the monitoring and the date(s) the inspection was conducted.

(3) A brief paragraph describing the purpose of the approved project, acreage and type of aquatic resources impacted, and mitigation acreage and type of aquatic resources authorized to compensate for the aquatic impacts.

(4) Written description of the location, any identifiable landmarks of the compensatory mitigation project including information to locate the site perimeter(s), and coordinates of the mitigation site (expressed as latitude, longitudes, UTMs, state plane coordinate system, etc.).

(5) Dates the compensatory mitigation project commenced and/or was completed.

(6) Short statement on whether the performance standards are being met.

(7) Dates of any recent corrective or maintenance activities conducted since the previous report submission.

(8) Specific recommendations for any additional corrective or remedial actions.

ii. Requirements (1 page)

List the monitoring requirements and performance standards, as specified in the approved mitigation plan, mitigation banking instrument, or special conditions of the DA permit, and evaluate whether the compensatory mitigation project site is successfully achieving the approved performance standards or trending towards success. A table is a recommended option for comparing the performance standards to the conditions and status of the developing mitigation site.

iii. Summary Data (maximum of 4 pages)

Summary data should be provided to substantiate the success and/or potential challenges associated with the compensatory mitigation project. Photo documentation may be provided to support the findings and recommendations referenced in the monitoring report and to assist the PM in assessing whether the compensatory mitigation project is meeting applicable performance standards for that monitoring period. Submitted photos should be formatted to print on a standard 8 ½" x 11" piece of paper, dated, and clearly labeled with the direction from which the photo was taken. The photo location points should also be identified on the appropriate maps.

CASANOVA OAK KNOLL NEIGHBORHOOD ASSOCIATION

PO BOX 2304, Monterey, CA 93942
Fax 831-375-3465 • Email conamonterey@aol.com

February 3, 2016

RECEIVED
FEB 03 2016
MONTEREY PENINSULA
AIRPORT DISTRICT
2:10 pm MG

Monterey Airport District
Scoping Meeting on EIR for Airport Master Plan
Monterey Peninsula Airport Board of Directors

Dear Board members:

The information provided below are comments received from residents of Casanova Oak Knoll Neighborhood Association members regarding your pending Master Plan. These are initial comments, many of which we will go into detail at a future date.

EIR Lacks Analysis of Early-Turn and Take-Off Operations and Public Safety Considerations

Early-Turn and Take-Offs Authorized by FAA

The FAA changes now permit early-turn and take-offs, which allow aircraft to take-off before reaching the end of the runaway, and depart at an angle, sideways from the runway. Aircraft can now depart the runway early, turn and climb away at any point.

Take-offs such as these do not make use of the existing crash safety zone at the ends of the runway. This is not clearly explained in the EIR.

The EIR focuses on runway centerline take-offs using safety zones at either end of runways 28L and 28R. A center-line take-off affords a climbing aircraft a ground distance of over 6,000 feet of clear safety zone to climb out over. These operations and flight profiles are discussed in the EIR.

Runway 10L-28R is heavily used by general aviation operators, accounting for approximately 50% of total airport operations (page 6/3 Errata Chapter 6

Public Safety Concerns Not Addressed

Early-turn and take-offs from Runway 28L place turning/climbing aircraft immediately over on-site commercial buildings, aircraft operations and storage. After a ground distance of approximately 1,000 to 1,800 feet, aircraft are still climbing, turning and transitioning at low altitude but now over a residential neighborhood. This is a significant change to aircraft operations which is not addressed in the EIR.

These operations have departing aircraft climbing and turning at low altitude over a residential neighborhood with a preschool and some of the highest density multi-story housing in the City of Monterey. This endangers public safety and adversely impacts the well-being of residents. The operation of two pre-schools in the neighborhood needs to be mentioned and addressed according to Federal guidelines on height of Airport over these facilities. Noise and ground safety issues need to be addressed.

Impacts to North Side Development Not Adequately Addressed

The EIR does not adequately address possible safety concerns to existing and proposed on-site airport development adjacent to and north of Runway 28R.

The two access points designated in the EIR does not address the contingency that the Canyon Del Rey access not be built because of Del Rey Oaks withdrawing its consent, engineering costs may be too high and the same for construction costs. What is the alternative to development if Airport Road is the only option?

A description of planned future use, size of buildings, height of buildings, and number of vehicles generated each day. The EIR needs to consider the type of vehicles, weights of vehicles, cars, trucks, semi-trucks, and/or construction vehicles.

What are the proposed mitigations for this traffic passing through residential streets?

If there is an increase in traffic, the mitigations need to address the current situation on N. Fremont at peak hours. This long standing gridlock is seeing vehicles transiting through the back of our neighborhood to avoid the stoplights on N. Fremont. The Monterey Neighborhood Improvement Program has spent large sums of its budget on traffic calming addressing these issues. The Monterey Airport District generates about 20% of this impact, but needs to contribute accordingly to the solutions. This also applies to current drainage from the Airport property and in particular to the new growth (paving) in the Plan.

The EIR does not address the issue of proposed land use development on the north side also being over flown at low altitude by aircraft departing using early-turn and take-offs. Extensive new buildings, aircraft storage, non-aviation related commercial development, and a new larger fuel depot are proposed for the north side of the airport.

Our last point is in regards the two proposed access points for vehicles. As we read the EIR we see that vehicles have the option of using the Canyon Del Rey access point **or** Airport Road. In previous years planning meetings a card/key gate was shown between the New Northside and the Old Northside. All new traffic would be using Canyon Del Rey, only public safety vehicles were to use the card gate.

Logistically the majority of the destinations of vehicles would be to the Peninsula, thereby using Airport Road as the shortest, fastest route. This is unacceptable to our neighborhood. This is not discussed in the Master Plan. CONA requests a search of Airport documents showing the maps with this promised gate, and the inclusion of these documents in the Master Plan.

Sincerely,

Richard Ruccello, CONA president

Judi Krauss

From: Shelley Glennon <sglennon@montereyairport.com>
Sent: Tuesday, February 16, 2016 10:42 AM
To: Jim Harris; Judi Krauss
Cc: Mark Bautista
Subject: FW: EIR concerns

Hello Jim/Judi,

Please see the below comments from a nearby resident.

Thanks,
Shelley

From: Elizabeth Stacey []
Sent: Monday, February 15, 2016 7:32 PM
To: Shelley Glennon <sglennon@montereyairport.com>
Cc: ''Wayne Marien'' <>
Subject: EIR concerns

Dear Ms. Glennon:

I am responding to your letter of 12/28/15 regarding the EIR for the Monterey Airport. Our home backs on to the airport.

My current concerns are about two sources of noise pollution. The first one is some kind of activity that is carried out from time to time in the middle of the night and involves vehicles backing up with attendant beeping signals along with machinery or equipment running noisily. These sounds wake us up in the middle of the night and disturb our sleep. We would like the current activities to cease during normal sleeping hours and for there to be no further expansion of such nighttime noise pollution.

The second source of noise pollution comes from certain small private aircraft. I don't know what the aeronautical equivalent of a muffler is, but that is what is needed. Some hobbyist pilots appear to be oblivious to the loud noise their toys produce and they are annoying the whole neighborhood.

Thank you for your attention to these matters.

Sincerely,
Elizabeth Stacey
Del Rey Oaks

Received
FEB 16 2016
Planning and Development
Monterey Peninsula Airport District

STATE OF CALIFORNIA
NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone (916) 373-3710
Fax (916) 373-5471
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov
Twitter: @CA_NAHC

Edmund G. Brown Jr., Governor

February 9, 2016

Mark Bautista
Monterey Peninsula Airport District
200 Fred Kane Drive, Suite 200
Monterey, CA 93940

RE: SCH# 2015121105, Monterey Regional Master Plan

Dear Mr. Bautista:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP) for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.), specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, § 15064.5 (b) (CEQA Guidelines Section 15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared. (Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd.(a)(1) (CEQA Guidelines § 15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code § 21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code § 21084.3 (a)). **AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements**. If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. § 800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments. **Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws**.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
   a. A brief description of the project.
   b. The lead agency contact information.
   c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code § 21080.3.1 (d)).

d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code § 21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code § 21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or environmental impact report. (Pub. Resources Code § 21080.3.1(b)).
   a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18). (Pub. Resources Code § 21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
   a. Alternatives to the project.
   b. Recommended mitigation measures.
   c. Significant effects. (Pub. Resources Code § 21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
   a. Type of environmental review necessary.
   b. Significance of the tribal cultural resources.
   c. Significance of the project's impacts on tribal cultural resources.
   d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code § 21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code § 21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
   a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
   b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code § 21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
   a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
   b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code § 21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code section 21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code section 21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code § 21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code section 21084.3 (b). (Pub. Resources Code § 21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:
    a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.
ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
i. Protecting the cultural character and integrity of the resource.
ii. Protecting the traditional use of the resource.
iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code § 21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a nonfederally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code § 815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code § 5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An environmental impact report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code section 21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code § 21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code § 65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code § 65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code section 65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code sections 5097.9 and 5097.993 that are within the city's or county's jurisdiction. (Gov. Code § 65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
   a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
   b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52

and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
   a. If part or all of the APE has been previously surveyed for cultural resources.
   b. If any known cultural resources have been already been recorded on or adjacent to the APE.
   c. If the probability is low, moderate, or high that cultural resources are located in the APE.
   d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
   a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
   b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, section 15064.5(f) (CEQA Guidelines section 15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5, subdivisions (d) and (e) (CEQA Guidelines section 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

Sincerely,

Joshua Standing Horse
Associate Governmental Program Analyst
cc: State Clearinghouse

Monterey Bay Unified
Air Pollution Control District
Serving Monterey, San Benito, and Santa Cruz Counties

24580 Silver Cloud Court
Monterey, CA 93940
PHONE: (831) 647-9411 • FAX: (831) 647-8501

February 16, 2016

Shelley Glennon, Planning Manager - Environmental
Monterey Peninsula Airport District
200 Fred Kane Drive, Suite 200
Monterey, California 93940

Email: sglennon@montereyairport.com

Re: IS/NOP for EIR on Monterey Regional Airport – Airport Master Plan

Dear Ms. Glennon:

Thank you for providing the Monterey Bay Unified Air Pollution Control District (Air District) with the opportunity to provide scoping level input on the above NOP.

The Air District has reviewed the document and has the following comments:

1. Roundabouts, Exhibit 2 after Page 6 – This figure, as well as the Roadway Improvement discussion on page 13, indicate that at least two roundabouts are proposed as part of the Master Plan including one at Olmsted and Highway 68. The Air District supports roundabouts since they can reduce criteria as well as GHG emissions while facilitating traffic flow. Improving circulation on Highway 68 could benefit the airport as well as the general public. Partial funding for these roundabouts may be available through the Air District's AB 2766 grant program. Please contact Alan Romero, Air Quality Planner (831)647-9411 x241 for details.

2. Construction Near Neighborhoods, Exhibit 2 after Page 6 – This same figure suggests that construction/development will be occurring near neighborhoods, particularly along the northern perimeter of the airport. The Air District requests that additional diligence be used along these perimeters so as to not create a public nuisance due to dust or odors (See District Rule 402 - Nuisances). This could include additional watering in these areas, use of clean fuels such as propane or natural gas to power the construction equipment and the staging of activity so that clusters of heavy duty construction equipment are not operating all at once near these homes.

3. Project Description, Demolition of Existing Terminal. Pg. 13 – The first sentence indicates that the 60 year old passenger terminal will be demolished. Given the age of the structure, as well as other older facilities at the airport that may be removed, there is a potential for hazardous materials (asbestos and lead based paint) to be encountered. Should that occur, the requirements of Air District Rule 424 National Emissions Standards for Hazardous Air Pollutants could be triggered. Rule 424 contains the investigation and reporting requirements for asbestos. If you have any questions about District Rule 424 and prior to any demolition activities, please contact Mike Sheehan, District Compliance Program Coordinator, at (831) 647-9411 x217.

4. Environmental Checklist, III Air Quality a) to f), and Pg.s 29-30 - This section indicates that the project could have a potentially significant impact for all five elements on the list. We therefore support the plan to do a thorough study of the construction and operational phase emissions associated with the project.

Please follow the Air District's CEQA Air Quality Guidelines in developing this evaluation. The document can be downloaded at: http://mbuapcd.org/pdf/CEQA_full%20(1).pdf .

5. Environmental Checklist, VII. Greenhouse Gas Emissions, Pg. 34 – This section also indicates a potentially significant impact related to greenhouse gas emissions. The Air District suggests that the following measures be considered to mitigate GHG emissions:
   - Use solar energy as a supplemental source of electricity and heat for hot water.
   - The solar panels could be used in parking lots to create canopies that shade the cars while minimizing heat island effects caused by the pavement.
   - Create shaded areas using trees which can also remove criteria as well as GHG emissions from the air.
   - Use high efficiency LED lights where practical.
   - Expand the existing EV charging network by installing fast charge EV charge stations in the new areas of the airport.

6. List of Acronyms, Pg. 55 – This list shows MCUAPCD for a Monterey County Unified Air Pollution Control District. Please note, there is no such county level agency as the regional Air District has jurisdiction over all three counties that comprise the North Central Coast Air Basin. Also, the new name of the Air District is the Monterey Bay Air Resources District (MBARD), although the previous name, the Monterey Bay Unified Air Pollution Control District (MBUAPCD), can still be used for the time being.

7. Ground Support Vehicles - Encourage the replacement of gasoline or diesel fueled vehicles with either plug-in electric (PEV), fuel cell, propane or natural gas powered ground support vehicles to help reduce project related criteria and GHG emissions.

Please let me know if you have any questions. I can be reached at (831) 647-9418 ext. 226 or bnunes@mbuapcd.org.

Best Regards,

Robert Nunes

Bob Nunes
Air Quality Planner

cc: David Frisbey, Air Quality Planner
Alan Romero, Air Quality Planner
Mike Gilroy, Deputy APCO
Amy Clymo, Supervising Air Quality Planner

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

Received
FEB 25 2016
Planning and Development
Monterey Peninsula Airport District

February 23, 2016

Ms. Shelley Glennon, Planning Manager - Environmental
Monterey Peninsula Airport District
200 Fred Kane Drive, Suite 200
Monterey, California 93940

Subject: Notice of Preparation of Environmental Impact Report for the Monterey Regional Airport Master Plan

Dear Ms. Glennon:

The Monterey Peninsula Water Management District (MPWMD or District) appreciates the opportunity to comment on the Notice of Preparation (NOP) for an Environmental Impact Report (EIR) for the Monterey Peninsula Airport District's (MPAD) Initial Study on the Monterey Regional Airport Master Plan (AMP). The Initial Study evaluates the potential environmental effects of the proposed AMP. The project includes recommendations of improvements that will enhance the Airport's safety capabilities to the maximum extent feasible and projects aeronautical facility needs through the year 2033. The District will rely on the certified EIR for the issuance of Water Permits and Water Distribution System (WDS) Permit(s) for amendments to the California American Water Company (CAW) or for any new or amended WDS created by MPAD. Areas of District authority include hydrology/water quality and water/utilities. The District is submitting these comments based on current rules and policies which are subject to revision by action of the Board of Directors. The District has the following comments on the NOP:

MPWMD

The EIR should include a description of MPWMD. MPWMD is a California Special District whose boundaries encompass the cities of Carmel-by-the-Sea, Del Rey Oaks, Monterey, Pacific Grove, Sand City, Seaside, portions of Monterey County (primarily Carmel Valley, Pebble Beach and the Highway 68 corridor), and the Monterey Peninsula Airport District. Each of these Jurisdictions regulates land uses within its boundaries. The MPWMD does not regulate land uses. Although not a water supplier, MPWMD has power to regulate some aspect of water production and distribution by private purveyors such as CAW, which supplies water to ninety percent of the District's population, including the MPAD. One of MPWMD's responsibilities is to balance water supply and demand through the MPWMD Water Allocation Program, and to carefully track how much of the allotted water has been used by member Jurisdictions. Every applicant must receive the Jurisdiction's authorization for a specific quantity of water or sufficient Water Use Credits before applying to the District for a Water Permit. The District evaluates the project's water demand and issues a Water Permit for the project description as

depicted on the final construction plans.

Water Demand and Supply

The District has concerns about water supply and water demand for the proposed project. The Plan in the Initial Study is vague and does not provide clear details on the range of the new and expanded projects, and fails to include estimates for projected water demand. Furthermore, no details are provided regarding the source(s) of water to accommodate the proposed project, which is a critical step to confirm water availability for new development. There is no guarantee that water will be available when the permit applications for new or expanded projects are submitted. The District will respond to such requests in writing. The EIR should describe and evaluate sources of supply, project water demand, and confirm that there is adequate supply for the proposed AMP.

Water Permit Requirement

The EIR should describe MPWMD permit requirements. A Water Permit from MPWMD is required for this project. Section 9, Page 21 of the Initial Study, *Other Agencies Whose Approval is Required,* does not include MPWMD as a permitting agency. District Rule 20, *Permits Required*, states that "Any Change of Use or any expansion of a Non-Residential use requires a Water Permit." The expansion of square-footage and new construction described in the Initial Study for the AMP requires issuance of a Water Permit by MPWMD. The Non-Residential water factors are found in District Rule 24, Table 2, *Non-Residential Water Factors*. Water Permits will be required prior to undertaking this project. Prior to issuance of a building permit, a final review of the project demand will take place. Water Permits will be issued for the project if sufficient water is available.

Water Permit applications are processed in accordance with MPWMD Rules and Regulations. Current MPWMD Rules and Regulations are available at the following website: www.mpwmd.net. All Non-Residential users must comply with MPWMD's extensive water conservation and water efficiency standards (Regulation XIV, Water Conservation and Regulation XV, Expanded Water Conservation and Standby Rationing Plan). The Monterey Regional Airport Master Plan is subject to these rules and regulations prior to issuance of a Water Permit.

Water Distribution System Permit Requirement

A MPWMD Permit is also required to create or modify a Water Distribution System pursuant to Rule 20-A, unless the project meets the criteria for an exemption (Rule 20-C). MPWMD Rule 21 describes the application process, and Rule 22-B lists required findings that must be made in order for a WDS Permit to be issued.

Hydrology and Water Quality

The Initial Study findings related to Section IX-b, Hydrology and Water Quality, and Section XVII-b and -d, Utilities and Service Systems, indicates that there is a "Potentially Significant Impact" on water supplies as a result of this project. There are no details provided in this document regarding the source of water to accommodate the proposed Intensification of Use, despite current local restrictions on water use that apply to this project. Thus, the EIR should evaluate the feasibility of potential sources of supply as well as the potential effects. It is noted that MPWMD has provided a $30,000 grant to MPAD to help evaluate development of a non-

potable supply from repurposed MPAD remediation wells. It could be examined how such a supply could be used to off-set potable water use and free-up supplies for the AMP.

Moratorium on New or Expanded Water Service Connections

On March 24, 2011, the California Public Utilities Commission (CPUC) approved CAW's request for a moratorium on water service connections. This action grants CAW's moratorium request to refuse to connect new customers in certain areas of its Monterey District, and to institute a moratorium on new or expanded water service connections for projects that obtained all their necessary governmental permits after October 20, 2009. The moratorium on expanded water service connections may affect the AMP.

Thank you for your consideration of MPWMD's comments. If you have any questions or would like to discuss our comments, please contact me at 831-658-5601 or s.locke@mpwmd.net or Gabriela Ayala at gabby@mpwmd.net.

Sincerely,

Stephanie Locke
Water Demand Manager

U:\demand\CEQA Docs\20160212_NOP_AMP_CommentLtr.docx

Judi Krauss

From: Shelley Glennon <sglennon@montereyairport.com>
Sent: Wednesday, March 09, 2016 1:37 PM
To: Jim Harris; Judi Krauss
Cc: Mark Bautista; Chris Morello; Robert Talbott, Inc. - NOP AMP EIR
Subject: questions/comments

Hi Jim and Judi,

FYI, yesterday, we spoke to Bob Corliss, CEO of Robert Talbott, Inc. over the phone. He also attended one of the public workshops last year. He received the NOP package and wanted to know what the process was and if he would still have time to comment. We told him yes he would have more opportunities to comment (and the NOP AMP EIR Comment deadline was extended to March 15). He understood that this would be a long environmental planning process (approx. 2 years) in which we would analyze the potential environmental impacts in great detail.

He did mention that he was very concerned that his 53 foot long trailers would not have enough room to turn into or depart from the proposed access point to his property as shown on exhibit 7 in the initial study. The trailers go directly to the warehouse (the building to the east). While he didn't specify their actual route, he informed us that the current access point off of Highway 68 does allow for sufficient turning radius for his trailers to go in and out, but if that access point is closed off he thinks there might be an issue.

Mark and I told him that we would look into it. We do plan on taking a site visit sometime this week to take some pictures… It might be that we just move the access point south to allow for more space…but we probably should ensure Robert Talbott, Inc. that they can sufficiently maneuver their trailers to and from their warehouse from our proposed access point.

Thanks,

Shelley Glennon | Planning Manager
Planning & Development Department
Monterey Peninsula Airport District

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MST
MONTEREY-SALINAS TRANSIT

JOINT POWERS AGENCY MEMBERS:
City of Carmel-by-the-Sea • City of Del Rey Oaks • City of Marina • City of Monterey • City of Pacific Grove
City of Salinas • City of Seaside • County of Monterey • City of Gonzales (ex. officio)

March 14, 2016

Monterey Peninsula Airport District, Environmental
ATTN: Shelly Glennon, Planning Manager
200 Fred Kane Drive, Suite 200
Monterey, CA 93940

RE: Monterey Regional Airport CEQA
EIR/NOP Scoping Comments

Dear Ms. Glennon:

Monterey-Salinas Transit would like to provide the following comments for your consideration in preparing an Environmental Impact Report (EIR) for the proposed Monterey Regional Airport Master Plan:

- In order to encourage transit usage by employees and patrons of the Airport, roadways to/from the Airport should be designed to accommodate large transit buses, as long as 45-feet in length and 10'7" wide (with mirrors).
- Please consider designing a bus stop zone close to the entrance of the passenger terminal to encourage transit usage. Please coordinate with MST on the design of a bus stop zone.

Thank you for the opportunity to provide comments on the Notice of Preparation for the Monterey Regional Airport Master Plan. We look forward to working with you to support transit ridership to and from the Airport as a part of this planning process.

Please feel free to contact me at (831) 393-8124 or lrheinheimer@mst.org if you have any questions.

Sincerely,

Lisa Rheinheimer
Director of Planning and Development

One Ryan Ranch Road • Monterey, California 93940-5703 USA • Fax 831.899.3954 • Phone 831.899.2558 or 888.MST.BUS1
www.mst.org • e-mail: mst@mst.org

Received

MAR 21 2016

Planning and Development
Monterey Peninsula Airport District

March 17, 2016

Mayor:
CLYDE ROBERSON

Councilmembers:
TIMOTHY BARRETT
LIBBY DOWNEY
ALAN HAFFA
ED SMITH

City Manager:
MICHAEL McCARTHY

Ms. Shelley Glennon
Planning Manager -- Environmental
200 Fred Kane Drive, Suite 200
Monterey, CA 93940

Dear Ms. Glennon,

The City of Monterey appreciates and welcomes the opportunity to provide comments related to the draft Master Plan for the Monterey Peninsula Airport. The City of Monterey respectfully requests that the Monterey Peninsula Airport, through their consultants Coffman & Associates, ensure that the following issues are fully evaluated in development of the Environmental Impact Report (EIR):

1. Northside Improvements and Access:
   Existing access to the northside of the airport is currently provided by Airport Road, which traverses through the Casanova Oak Knoll residential neighborhood. The use of this road has created negative noise, vibration and congestion impacts to the residents of this neighborhood for decades. The Master Plan proposes to designate an additional 92.4 acres on the northside of the airport for expanded non-aviation uses, which would be in addition to the 8.98 acres of existing non-aviation development, which is itself proposed for redevelopment in the Master Plan. As outlined in the Initial Study, development of this area could result in the development of approximately 1,000,000 sf of light industrial, commercial, or other non-aviation building space and approximately 23 acres of pavement, parking, and landscaping. The Master Plan indicates that access to the 92.4 acre area would be from both Del Rey Gardens Drive, and from Airport Road. The City requests that the EIR carefully evaluate the proposed northside redevelopment and new northside development as it relates to construction activities, future regular access activities and stormwater runoff/retention. If the EIR determines that all possible impacts to the Casanova Oak Knoll neighborhood associated with the use of Airport Road cannot be fully mitigated, the City of Monterey requests that Del Rey Gardens Drive be the sole roadway access point to the northside of the airport for the existing and future non-aviation uses.

2. Southside Improvements and Access:
   The relocated terminal building, the new 4-story parking structure adjacent to Olmstead Road, and the various surface parking lots are proposed to be accessed via Olmstead Road and Fred Kane Drive. Additional transportation system changes include the new service drive which is proposed to be a 2-way loop road which will be as close as 150 feet from Highway 68. The City of Monterey requests that the EIR carefully evaluate the potential impacts this new service road, the parking structure and the surface parking lots will create, including but not limited to the removal of Monterey pine, Coastal Live oak trees and assorted native plants, and the visual impacts to Highway 68, a designated scenic highway.

Appropriate mitigation needs to be incorporated into the EIR to ensure that the new development does not negatively impact this section of the scenic highway.

The Master Plan also proposes to develop a 12.3 acre area on the southside of the airport, immediately adjacent to the 4-story parking structure and Highway 68 with non-aviation uses. The EIR needs to include a detailed review of the possible impacts to Highway 68, and provide a listing of those mitigations necessary to prevent any potential impacts to this section of the highway.

3. Early-Turns and Take-Offs from Runway 10R-28L:
The EIR needs to include a review of the existing early-turns and take-offs from runway 10R-28L. By allowing these new departure options, departing aircraft have created new and unanticipated noise and safety impacts to the adjacent residential neighborhoods. The City requests that the EIR evaluate these early-turns and take-offs, and if they are determined to result in negative impacts to the surrounding properties, then the Master Plan should specifically disallow these maneuvers.

Sincerely,

Clyde Roberson
Mayor

c: Mike La Pier, General Manager, MPAD
Mark Bautista, Deputy General Manager, Planning & Development, MPAD

MONTEREY
REGIONAL AIRPORT

Appendix B

FAA FORECAST APPROVAL LETTER AND PROPOSED AIRPORT MASTER PLAN FORECASTS

U.S. Department
of Transportation
Federal Aviation Administration

Western-Pacific Region
Airports Division

San Francisco Airports District Office
1000 Marina Boulevard, Suite 220
Brisbane, CA 94005-1835

September 24, 2014

Mr. Mark Bautista
Deputy General Manager
Planning and Development Department
City of Monterey
200 Fred Kane Drive, Suite 200
Monterey, CA 93940

Dear Mr. Bautista,

RE: FAA Review of Aviation Activity Forecast; Monterey Regional Airport,
Airport Improvement Program (AIP) Project No. 3-06-0159-059

The San Francisco Airports District Office (SFO-ADO) has completed the review of the updated *Aviation Activity Forecast* document titled "Chapter Two- Forecasts" for the Monterey Regional Airport (MRY) dated May 2014. The SFO-ADO review determination is as follows:

- Concur with the aviation activity forecast methodology. The forecast assumptions presented are considered reasonable and well supported.

- Concur with the total forecasted aircraft operations and based aircraft presented in Exhibit 2R-*Aviation Demand Forecast Summary* for the five-year and ten-year forecast. Recommend updating the Airport IQ 5010 data to reflect based aircraft at the airport. Acknowledge the discrepancy between the Terminal Area Forecast (TAF) based aircraft and the document provided.

- The SFO ADO finds the subject growth rates acceptable from a planning standpoint. Accordingly, the SFO-ADO has determined that the aviation activity forecasts are consistent with the TAF. The aviation activity forecast provides adequate justification for near-term airport planning and development of the subject airport facility.

If you have any questions, please contact me at 650-827-7611.

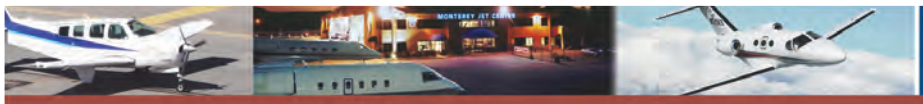
Kind regards,

Katherine Kennedy
FAA Airports Planner

Received

SEP 26 2014

Planning and Development
Monterey Peninsula Airport District



MONTEREY
REGIONAL AIRPORT

Chapter Two

FORECASTS

The definition of demand that may reasonably be expected to occur during the useful life of the Airport's key components (e.g. runways, taxiways, terminal buildings, etc.) is an important factor in facility planning. In airport master planning, this involves projecting potential aviation activity for a 20-year timeframe. Aviation demand forecasting for Monterey Regional Airport (MRY) will consider commercial passenger service projections, based aircraft projections, and aircraft operational activity projections.

The Federal Aviation Administration (FAA) has oversight responsibility to review and approve aviation forecasts developed in conjunction with airport planning studies. The FAA will review individual airport forecasts with the objective of comparing them to its *Terminal Area Forecasts* (TAF) and the *National Plan of Integrated Airport Systems* (NPIAS). It should be noted that there is almost always a disparity between the TAF and the Master Plan forecasts because the TAF forecasts do not consider local conditions or recent trends. In addition, aviation activity forecasts may be an important input to future benefit-cost analyses associated with airport development, and the FAA reviews these analyses when Federal funding requests are submitted.

As stated in FAA Order 5090.3C, *Field Formulation of the National Plan of Integrated Airport Systems* (NPIAS), forecasts should be:

- Realistic;
- Based on the latest available data;
- Reflective of current conditions at the airport (as a baseline);
- Supported by information in the study; and
- Able to provide adequate justification for airport planning and development.

Recognizing this, it is the intent to develop a Master Plan for the Airport that is based on safety and demand. As a result, the activity potential that is derived from this forecasting effort will be related to planning horizon levels (demand thresholds) rather than dates in time. The planning horizons are: short term (years 1-5), intermediate term (years 6-10, and long term (years 11-20). Specific development options, to be presented in subsequent chapters, will be tied to the airport achieving various activity thresholds.

The demand-based manner in which this Master Plan is being prepared is intended to accommodate variations in demand which can be caused by many factors, including changes in the aviation industry as well as the economy in general. Demand-based planning relates capital improvements to specific demand factors, such as based aircraft, instead of points in time. This allows the Airport to address capital improvement needs according to actual demand occurring at the Airport. Therefore, should growth in commercial passenger boarding's, aircraft operations, or based aircraft slow or decline, it may not be necessary to implement some improvement projects. However, should the Airport experience accelerated growth; the Master Plan will be flexible enough to allow for expedited development of capital projects.

In order to fully assess current and future aviation demand for the Airport, an examination of several influencing factors is needed. These include national and regional aviation trends, historical and forecast socioeconomic information of the area, and competing transportation modes and facilities. Consideration and analysis of these factors will ensure a comprehensive outlook for future aviation demand at Monterey Regional Airport.

This forecast effort was completed in the first quarter of 2014, using 2013 as the base year. Every effort has been made to utilize 2013 base year data, including related socioeconomic data such as population, employment, and income. Where actual 2013 base year data was not yet available, other sources were utilized or estimates have been made.

NATIONAL AVIATION TRENDS

Each year, the FAA updates and publishes a national aviation forecast. Included in this publication are forecasts for the large air carriers, regional/commuter air carriers, general aviation, and FAA workload measures. The forecasts are prepared to meet budget and planning needs of the constituent units of the FAA and to provide information that can be used by state and local authorities, the aviation industry, and the general public. The current edition when this chapter was prepared was FAA *Aerospace Forecasts – Fiscal Years 2014-2034*, published in March 2014. The FAA primarily uses the economic performance of the United States as an indicator of future aviation industry growth. Similar economic analyses are applied to the outlook for aviation growth in international markets. The following discussion is summarized from the FAA Aerospace Forecasts.

U.S. ECONOMIC OUTLOOK

Since the beginning of the century, the commercial air carrier industry has suffered several major shocks that have led to reduced demand for air travel. These shocks include the terror attacks of September 11, 2001, periods of rising fuel prices, and the most significant economic recession (Great Recession from 2007-2009) since the Great Depression (1929-1939). To manage this period of extreme volatility, air carriers have fine-tuned their business models with the aim of minimizing financial losses by lowering operating costs, eliminating unprofitable routes and grounding older, less fuel efficient aircraft. To increase operating revenues, carriers have initiated new services that customers are willing to purchase, and unbundled other services that were typically included in the price of a ticket such as checked bags and on-board meals. The capacity discipline exhibited by carriers and their focus on additional revenue streams bolstered the industry to profitability in 2013 for the fourth consecutive year. Going into the next decade, there is cautious optimism that the industry has been transformed from that of a boom-to-bust cycle to one of sustainable profits.

According to the FAA Forecast report, as the economy recovers from the most serious economic downturn and slow recovery in recent history, aviation will continue to grow over the long run. Fundamentally, demand for aviation is driven by economic activity. As economic growth picks up, so will growth in aviation activity. The FAA Forecast calls for passenger growth over the next 20 years to average 2.2 percent annually. In the next five years growth is anticipated to be somewhat muted, primarily due to uncertainty that surrounds the U.S. and global economies, with most growth in passengers taking place in years six through 20.

U.S. economic performance in 2013 continued to be mixed with modest growth in real GDP and real incomes, a slowly falling unemployment rate, and oil prices and consumer inflation remaining in check. The economy grew at an average annual rate of 1.6 percent in fiscal year (FY) 2013 after expanding 2.8 percent in FY 2012. Given the uncertainty that characterized 2013, it was not surprising that growth in 2013 was lower than the previous year. GDP growth accelerated throughout the year with the negative effects of Hurricane Sandy and the expiration of the temporary payroll tax cut impacting the first and second quarters. Despite the slow growth, there were some favorable signs as the housing market continued to improve, the stock market entered record territory, and the labor market saw steady but slow improvement.

One of the unique features about the economic recovery (now in its 5th year) has been the slow improvement in the nation's unemployment rate. Since 1960 there have been five economic expansions in the U.S. that have lasted longer than 48 months, including this latest expansion. On average, for the prior four expansions, the unemployment rate four years after the peak rate in the recession prior to the expansion, has declined by about one-third. If the current recovery had been similar to the prior four recoveries, the unemployment rate would be 0.6 to 0.7 points lower than the 7.5 percent in the fourth quarter of FY 2013, and 7.6 percent for all of FY 2013. The persistently high unemployment rate is

thought to be a contributing factor to the slow recovery in consumer spending and aviation demand that has been experienced since 2009.

In the medium term, (the four-year period between 2015 and 2019), U.S. economic growth is projected to average 3.0 percent per year with rates ranging between 2.9 and 3.2 percent. Income growth picks up during the same period averaging 3.2 percent per year. For the balance of the forecast period, both U.S. real GDP and real income growth slow to around 2.4 percent annually. The long-term stability of U.S. economic growth depends on sustained growth in the workforce and capital stock along with improved productivity and competitiveness.

U.S. TRAVEL DEMAND

By year end of FY 2013, the U.S. commercial aviation industry consisted of 15 scheduled mainline air carriers that used large passenger jets (over 90 seats) and 63 regional carriers that used smaller piston, turboprop, and regional jet aircraft (up to 90 seats) to provide connecting passengers to the larger carriers. Mainline and regional carriers offer domestic and international passenger service between the U.S. and foreign destinations, although regional carrier international service is confined to the border markets in Canada, Mexico, and the Caribbean. Thirty all-cargo carriers were providing domestic and/or international air cargo service at the end of 2013.

Shaping today's commercial air carrier industry are three distinct trends: (1) continuing industry consolidation and restructuring; (2) continued capacity discipline in response to external shocks, and (3) the proliferation of ancillary revenues.

The restructuring and consolidation of the U.S. airline industry that began in the aftermath of the terror attacks of September 11, 2001 continued in 2013. During the year, Southwest continued to integrate the former AirTran network into its operations as did United with the former Continental Airlines network. In 2013, American and US Airways (the third and fifth largest U.S. airlines, respectively) announced a merger agreement that, if approved, would create the world's largest airline. Consequently, when compared to 2007, 7.0 percent fewer domestic available seat miles (ASMs) were flown and 5.2 percent fewer passengers were carried domestically in 2013.

One of the most striking outcomes of industry restructuring has been the unprecedented period of capacity discipline (achieving higher passenger loads through scheduled flight and fleet mix consolidation, primarily), especially in domestic markets. Between 1978 and 2000, ASMs in domestic markets increased at an average annual rate of four percent per year, recording only two years of decline. Even though domestic ASMs shrank by 6.9 percent in FY 2002, following the events of September 11, 2001, growth resumed and by 2007, domestic ASMs were 3.6 percent above the FY 2000 level. However, since 2007, ASMs in the U.S. domestic market have decreased by 7.0 percent, as the industry responded first to the sharp rise in oil prices (up 155% between 2004 and 2008) and then the Global Recession that followed (2009 to the present).

The 7.0 percent reduction in domestic capacity since 2007 has not been shared equally between the mainline carriers and their regional counterparts. To better match demand to capacity, the mainline carriers contracted out "thin" routes to their regional counterparts because they could provide lift at a lower cost, or simply removed the capacity altogether. In 2013, the mainline carrier group provided 8.0 percent less capacity than it did in 2007 (and carried 6.6 percent fewer passengers). Capacity flown by the regional group has shrunk by 0.4 percent over the same five-year period (with passengers carried decreasing by 0.5 percent).

The most recent trend to take hold is that of ancillary revenues. Carriers generate ancillary revenues by selling products and services beyond that of an airplane ticket to customers. This includes the un-bundling of services previously included in the ticket price such as checked bags and on-board meals, and by adding new services such as boarding priority. As a result of capacity reduction and the introduction of ancillary revenue sources, U.S. passenger carriers posted net profits for the fourth consecutive year in 2013.

AIRPORT SERVICE AREA

The initial step in determining the aviation demand for an airport is to define its generalized service area for various segments of aviation. The service area is determined primarily by evaluating the location of competing airports, their capabilities, their services, and their relative attraction and convenience. In determining the aviation demand for an airport, it is necessary to identify the role of the airport, as well as the specific areas of aviation demand the airport is intended to serve. For Monterey Regional Airport, the primary civilian roles are to accommodate commercial passenger airline service, as well as general aviation demand in the region.

The service area for an airport is a geographic region from which an airport can be expected to attract the largest share of its activity. The definition of the service area can then be used to identify other factors, such as socioeconomic and demographic trends, which influence aviation demand at the airport. Aviation demand will be impacted by the proximity of competing airports, the surface transportation network, and the strength of commercial airline and/or general aviation services provided by the airport and competing airports.

As in any business enterprise, the more attractive the facility is in terms of service and capabilities, the more competitive it will be in the market. If an airport's attractiveness increases in relation to nearby airports, so will the size of its service area. If facilities and services are adequate and/or competitive, some level of aviation activity might be attracted to an airport from more distant locales.

COMPETING COMMERCIAL SERVICE AIRPORTS

The surface transportation network provides options for local travelers to use other commercial service airports in the region. Regional competing airports include Mineta San Jose International (SJC), San Francisco International (SFO), and Oakland International (OAK). Airline service factors for these airports will contribute greatly to whether a passenger will elect to use one of these regional airports instead of Monterey Regional Airport. Mineta San Jose International and San Francisco International play a significant role in passenger leakage from Monterey. Oakland International draws a small portion of its passengers from the Monterey catchment area. The following is a brief discussion of the primary competing commercial service airports. At the time of this analysis official FAA passenger data for 2013 was not available, therefore 2012 data is presented for these airports.

Mineta San Jose International Airport (SJC) is a medium hub commercial service airport which plays a significant role in passenger leakage at Monterey Regional Airport. The airport has service from 11 different carriers offering more than 32 non-stop destinations. In 2012, the airport had 4.07 million passenger enplanements. In 2012, the airport opened a new passenger terminal offering all the modern amenities that travelers have come to expect.

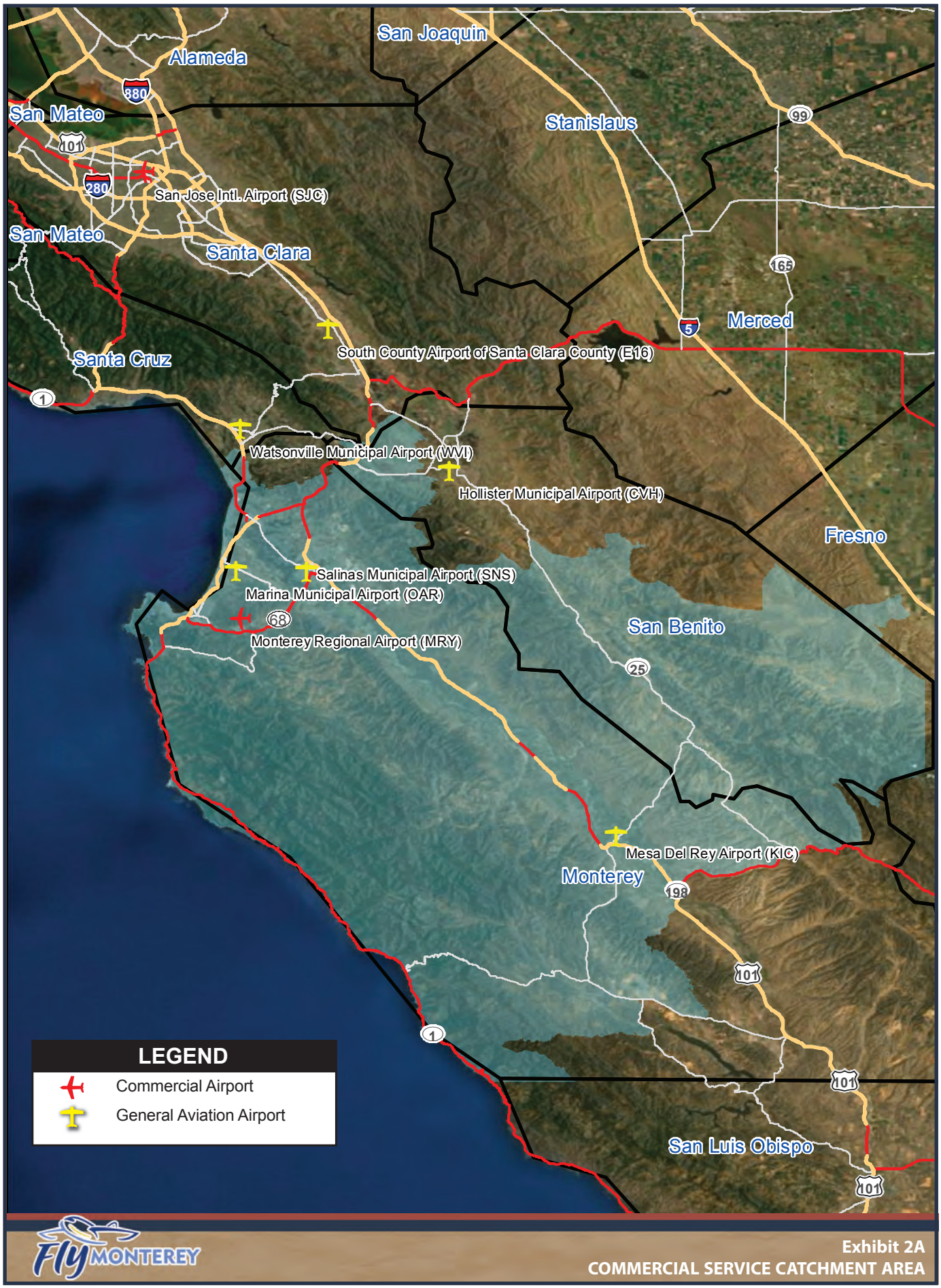
San Francisco International Airport (SFO) is a large hub commercial service airport offering service from more than 37 carriers with more than 50 non-stop destinations, including destinations in Europe and Asia. In 2012, the airport had more than 21.28 million passenger enplanements.

Oakland International Airport (OAK) is a medium hub commercial service airport offering 11 carriers and 50 non-stop or direct flights. In 2012, the airport experienced an 8.19 percent increase in passenger enplanements over the previous year. There were nearly five million enplanements in 2012.

COMMERCIAL SERVICE CATCHMENT AREA

The administration of the Airport monitors and maintains information regarding air service. In 2008, the Airport conducted a *Passenger Demand Analysis* and in 2011, portions of this study were updated in the *True Market Analysis* study of commercial service activity.

According to the *Passenger Demand Analysis* report, the primary catchment area represents the population of travelers who should use Monterey Regional Airport based on the shortest drive time to a commercial service airport. **Exhibit 2A** identifies the commercial service catchment area for the Airport as defined in the *Passenger Demand Analysis* (2008) study. The catchment area had an estimated 2012 population of 405,152 residents.



Source: Passenger Demand Analysis (2008)

Factors Affecting Air Service

An airport's commercial airline passenger service area is influenced by several factors, with competing transportation modes playing a key role. The higher the level of competing factors, the less likely an airport is to capture a large percentage of its service area passengers. This is especially true for regionalized commercial service airports offering limited airline services. Some factors affecting the ability of an airport to retain passengers include flight schedules, airfares, non-stop service offered at competing airports, travel time to competing airports, and the quality and capacity of air service offered by competing airports.

The first consideration for determining the Airport's commercial service area is an examination of the level of commercial services available at the Airport. Levels of service factors that typically shape the market share within a service area include frequency of service, number of airlines, type of aircraft utilized, and non-stop destinations available.

As of February 2014, Monterey Regional Airport had scheduled service from five different carriers: United Express, American Eagle, US Airways, Alaska, and Allegiant. United Express is the most active at the Airport offering eight daily departures. Of this total, four are to San Francisco International, three to Los Angeles International, and one to Denver International. The flights to San Francisco International utilize the 27-seat Embraer Brasilia, a twin-engine turboprop aircraft. The flights to Los Angeles International and Denver International utilize the 50-seat CRJ200.

American Eagle offers three daily departures to Los Angeles International utilizing the 50-seat CRJ 200 regional jet. US Airways offers three daily departures to Phoenix Sky Harbor International utilizing the CRJ200. Alaska Air offers one flight per day to San Diego International utilizing the 76-seat Q-400 twin turboprop aircraft. Finally, Allegiant provides twice weekly departures to Las Vegas McCarran International utilizing the 150/166 seat MD-80 aircraft. **Exhibit 2B** presents the flight schedule for these airlines as of February 2014. Republic Airlines provides non-scheduled charter service to Laughlin and Reno, Nevada for gambling trips.

The type of aircraft utilized can influence a passenger's decision of which airport to depart. Passenger preference surveys have shown that jet service is desirable. Airline reliability also needs to be factored for commercial service potential at Monterey Regional Airport. Typically, passengers with fixed schedules, primarily business travelers, may elect not to risk the chance of missing a flight due to a mechanical, weather, or scheduling conflict, instead opting for other transportation modes or other airports.

Ticket pricing is a significant factor for travelers when deciding which airport to originate from. According to the *Passenger Demand Analysis* (2008) study, when considering the top 25 destinations for travelers within the catchment area, average airfares were higher than those from Mineta San Jose International or Oakland International. Relative to San Francisco International, Monterey Regional Airport had a higher average fare in 18 of the top 25 markets. The overall average fare for calendar year 2007 was $83 higher than for flights from Mineta San Jose International or 37.0 percent higher. Flights from Monterey Regional

Airport were $10 higher than from San Francisco International or 4.5 percent higher. As compared to Oakland International Airport fares were $98 higher or 44.0 percent higher.

The driving distance, potential congestion, and parking rates can influence traveler decisions on which airport to depart from. The drive from the Monterey area to Mineta San Jose International is 77 miles and is estimated to take approximately an hour and a half. The drive from Monterey to San Francisco International is 101 miles and is estimated to take two hours. The drive from Monterey to Oakland International is 106 miles and is estimated to take two hours. Parking fees is another factor which increases the cost of driving versus flying from Monterey Regional Airport. The cost of driving to the Bay area for airline service can be high for a single passenger, but much lower if a family or group is traveling together.

According to the *True Market Analysis* (2011) study, Monterey Regional Airport captures approximately 40 percent of the air travelers who purchase tickets within the catchment area of the Airport; Mineta San Jose International captures 33 percent, San Francisco International captures 24 percent, and Oakland International captures the remaining three percent.

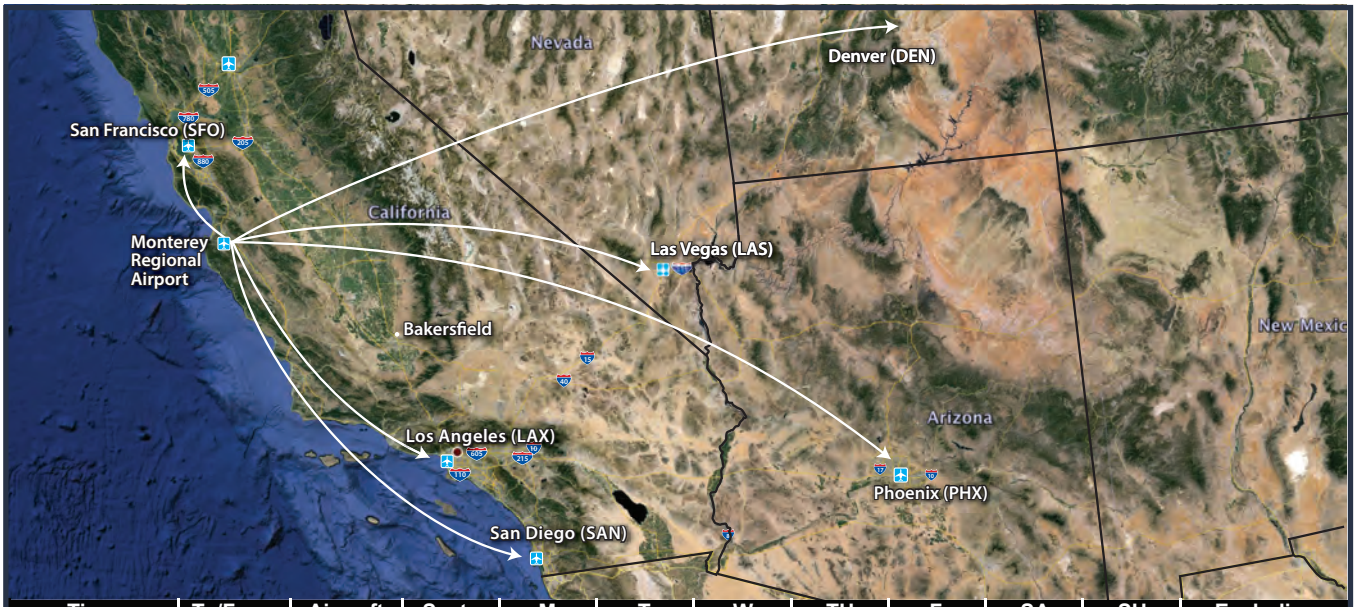
Top 25 Origin and Destination Markets

The U.S. Department of Transportation (DOT) maintains a rolling quarterly survey of 10 percent of all airline tickets sold for each commercial service airport. This Origin & Destination (O&D) Survey provides information on passengers' starting and ending cities and shows the volume of traffic between city pairs. The figures do not include "through" connecting/transfer passengers.

Information obtained from the O&D Survey for calendar year 2012 provides final destinations for those traveling from Monterey Regional Airport. This information is typically useful in determining if additional airline service is feasible by another carrier or by the same carrier offering additional destinations/connections from the airport. **Exhibit 2C** provides a depiction of the top 25 O&D markets based on the survey information. It also shows the top 25 markets in 2003 for comparison purposes.

In 2012, the top destination of passengers departing from Monterey Regional Airport was Los Angeles, accounting for 17.03 percent of all passengers. Next was Las Vegas, which accounted for 8.35 percent of passengers. The top five was rounded out by San Diego (7.38 percent), Phoenix (6.67 percent), and Washington, D.C. (6.04 percent). A total of 76.63 percent of all passenger enplanements are destined for one of the top 25 markets.

By comparison, in 2003, the top destination for passengers departing from Monterey Regional Airport was Washington, D.C., which was 8.71 percent of the passengers. Los Angeles was second with 7.81 percent, followed by Phoenix (6.91 percent), New York (5.14 percent), and Chicago (4.49 percent).



Time	To/From	Aircraft	Seats	M	T	W	TH	F	SA	SU	Excluding
DEPARTURES											
UNITED EXPRESS											
5:22 AM	SFO	EMB120	27	Y	Y	Y	Y	Y	Y	Y	-
5:40 AM	DEN	CRJ200	50	Y	Y	Y	Y	Y	Y	Y	2/2,3,9
5:45 AM	LAX	CRJ200	50	Y	Y	Y	Y	Y	Y	Y	-
9:10 AM	SFO	EMB120	27	Y	Y	Y	Y	Y	Y	Y	-
10:15 AM	LAX	CRJ200	50	Y	Y	Y	Y	Y	Y	Y	-
1:00/1:15 PM	SFO	EMB120	27	Y	Y	Y	Y	Y	Y	Y	-
5:40/5:55 PM	LAX	CRJ200	50	Y	Y	Y	Y	Y	Y	Y	-
8:13 PM	SFO	EMB120	27	Y	Y	Y	Y	Y	Y	Y	2/15,22
AMERICAN EAGLE											
6:00 AM	LAX	CRJ200	50	Y	Y	Y	Y	Y	Y	Y	-
10:35 AM	LAX	CRJ200	50	Y	Y	Y	Y	Y	Y	Y	-
5:35 PM	LAX	CRJ200	50	Y	Y	Y	Y	Y	N	Y	-
U.S. AIRWAYS											
6:15 AM	PHX	CRJ200	50	Y	Y	Y	Y	Y	Y	Y	-
12:20 PM	PHX	CRJ200	50	Y	Y	Y	Y	Y	Y	Y	-
4:05 PM	PHX	CRJ200	50	Y	Y	Y	Y	Y	N	Y	2/4,8,11
ALASKA/HORIZON											
7:30 AM	SAN	Q400	76	Y	Y	Y	Y	Y	Y	Y	-
ALLEGIANT AIR											
Various PM	LAS	MD80	150	N	N	N	Y	N	N	Y	-
ARRIVALS											
UNITED EXPRESS											
8:50 AM	SFO	EMB120	27	Y	Y	Y	Y	Y	Y	Y	-
9:50 AM	LAX	CRJ200	50	Y	Y	Y	Y	Y	Y	Y	-
12:35/1:50 PM	SFO	CRJ200	50	Y	Y	Y	Y	Y	Y	Y	-
5:10/5:25 PM	LAX	CRJ200	50	Y	Y	Y	Y	Y	Y	Y	-
7:46 PM	SFO	EMB120	27	Y	Y	Y	Y	Y	Y	Y	-
9:12/10:02 PM	DEN	CRJ200	50	Y	Y	Y	Y	Y	Y	N	2/1,2,8,16,23
11:10 PM	SFO	EMB120	27	Y	Y	Y	Y	Y	Y	Y	2/4,11
11:25 PM	LAX	CRJ200	50	Y	Y	Y	Y	Y	Y	Y	-
AMERICAN EAGLE											
10:05 AM	LAX	CRJ200	50	Y	Y	Y	Y	Y	Y	Y	-
5:05 PM	LAX	CRJ200	50	Y	Y	Y	Y	Y	Y	Y	-
9:50 AM	LAX	CRJ200	50	Y	Y	Y	Y	Y	N	Y	-
U.S. AIRWAYS											
11:50 AM	PHX	CRJ200	50	Y	Y	Y	Y	Y	Y	Y	-
3:35 PM	PHX	CRJ200	50	Y	Y	Y	Y	Y	Y	Y	2/1,4,8,11
9:54/6:47 PM	PHX	CRJ200	50	Y	Y	Y	Y	Y	Y	Y	2/4,11
ALASKA/HORIZON											
8:25 PM	SAN	Q400	76	Y	Y	Y	Y	Y	Y	Y	-
ALLEGIANT AIR											
Various	LAS	MD80	150	N	N	N	Y	N	N	Y	-

DEN - Denver International
LAX - Los Angeles International
SAN - San Diego International
PHX - Phoenix International
LAS - Las Vegas International
SFO - San Francisco International
EMB - Embraer Brasilia Twin Turboprop
CRJ200/Q400 - Bombardier Regional Jet
MD80 - McDonnell Douglas MD-80 Jet
Q400 - Twin Turboprop

FLY MONTEREY

Exhibit 2B
FEBRUARY 2014 FLIGHT SCHEDULE

Source: Airport records

GENERAL AVIATION SERVICE AREA

General aviation is the term used to describe a diverse range of aviation activities which includes all segments of the aviation industry, with the exception of commercial air carriers and military. General aviation is the largest component of the national aviation system and includes common activities such as pilot training, recreational flying, agricultural applications, medical support, and other business and corporate uses. General aviation aircraft can range from small glider and single engine aircraft to large turboprop and jet-powered aircraft. In fact, some larger commercial airline aircraft models such as the Boeing 737, known as the Boeing Business Jet (BBJ), have been converted to private general aviation uses. Many retired military aircraft are now in service with general aviation functions.

The service area for the general aviation component is heavily influenced by the proximity of an airport to an aircraft owner's home or business, as well as the level of service available at competing airports. A description of airports within an approximate 30-nautical mile radius of Monterey Regional Airport was discussed in Chapter One. This included Marina Municipal Airport, Salinas Municipal Airport, Watsonville Municipal Airport, and Hollister Municipal Airport.

Monterey Regional Airport's location in the northwest portion of the county, adjacent to the City of Monterey, makes it an important facility serving the needs of general aviation users in Monterey County. Existing Airport facilities, including the 7,000+ -foot long primary runway, precision instrument approach capabilities, high quality aviation service providers, and hangar space, places the Airport as a premier general aviation option. No other airport in the immediate region can match the general aviation facilities and services provided at Monterey Regional Airport, especially for business jet operators.

When discussing the general aviation service area, another primary demand segment that needs to be addressed is an airport's ability to attract based aircraft. As long as reasonably priced hangars and aviation services are offered, most aircraft owners and operators will choose to base at an airport near their home or business. As a result, the general aviation service area will tend to be more compact than a commercial service area. The corporate aviation component (typically turboprops and business jets) of the service area can extend a bit further depending on the capabilities of competing airports.

For planning purposes, the primary general aviation service area for Monterey Regional Airport will be the northern portion of Monterey County. This service area will overlap somewhat with the service areas for both Marina Municipal Airport and Salinas Municipal Airport. For users of corporate aviation (turboprops and business jets), the service area is considered somewhat larger and may extend to the extent of the commercial service catchment area. **Exhibit 2D** identifies the general aviation service areas.

SOCIOECONOMIC FORECASTS

The socioeconomic conditions for the area provide an important baseline for preparing aviation demand forecasts. Local socioeconomic variables, such as population, employ-

Top 25 Destination Markets 2012

Top 25 Destination Markets 2003

Rank	City Market	Airport Name	2003 O&D Passengers	% of MRY Total Enplanements	Total Enplanements
2003 MONTEREY PENINSULA AIRPORT ENPLANEMENTS					182,725
1	Washington D.C.	Total	1,120	8.71%	15,914
		DCA - Reagan National	136	1.06%	1,932
		BWI - Baltimore/Washington	376	2.92%	5,343
		IAD - Washington Dulles Int'l.	608	4.73%	8,639
2	Los Angeles	Total	1,005	7.81%	14,280
		LAX - Los Angeles Int'l.	800	6.22%	11,367
		SNA - Orange County/John Wayne	119	0.93%	1,691
		ONT - Ontario	2	0.02%	28
		BUR - Burbank/Bob Hope	84	0.65%	1,194
3	Phoenix	PHX - Phoenix Sky Harbor	889	6.91%	12,632
4	New York	Total	661	5.14%	9,392
		EWR - Newark Liberty Int'l	239	1.86%	3,396
		JFK - John F. Kennedy	391	3.04%	5,556
		LGA - LaGuardia	31	0.24%	440
5	Chicago	Total	577	4.49%	8,198
		ORD - O'Hare Int'l	576	4.48%	8,184
		MDW - Midway Int'l	1	0.01%	14
6	Dallas	DFW - Dallas/Fort Worth Int'l	516	4.01%	7,332
7	Seattle	SEA - Seattle-Tacoma Int'l	499	3.88%	7,090
8	Las Vegas	LAS - Mc Carran Int'l	483	3.76%	6,863
9	Denver	DEN - Denver Int'l	484	3.76%	6,877
10	San Diego	SAN - San Diego Int'l	399	3.10%	5,669
11	Boston	BOS - Logan Int'l	334	2.60%	4,746
12	Philadelphia	PHL - Philadelphia Int'l	234	1.82%	3,325
13	Atlanta	ATL - Hartsfield-Jackson Int'l	220	1.71%	3,126
14	Orlando	MCO - Orlando Int'l	190	1.48%	2,700
15	Houston	Total	162	1.26%	2,302
		IAH - Bush Intercontinental	160	1.24%	2,273
		HOU - Hobby	2	0.02%	28
16	Albuquerque	ABQ - Albuquerque Sunport	154	1.20%	2,188
17	Minneapolis	MSP - Minneapolis/St. Paul Int'l	144	1.12%	2,046
18	San Antonio	SAT - San Antonio Int'l	139	1.08%	1,975
19	Tucson	TUS - Tucson Int'l	136	1.06%	1,932
20	St. Louis	STL - Lambert-St. Louis Int'l	135	1.05%	1,918
21	Detroit	DTW - Detroit Metropolitan Airport	125	0.97%	1,776
22	Salt Lake City	SLC - Salt Lake City Int'l	120	0.93%	1,705
23	Tampa	TPA - Tampa Int'l	99	0.77%	1,407
24	Yuma	NYL - Yuma Int'l	72	0.56%	1,023
25	Charlotte	CLT - Charlotte/Douglas Int'l	33	0.26%	469
TOTAL			**8,930**	**69.44%**	**126,884**

Top 25 Destination Markets 2012

Rank	City Market	Airport Name	O&D Passengers	% of MRY Total Enplanements	Total Enplanements	% Change from 2003
2012 MONTEREY REGIONAL AIRPORT ENPLANEMENTS					196,268	7.41%
1	Los Angeles	Total	3,416	17.03%	33,416	239.90%
		LAX - Los Angeles Int'l.	3,259	16.24%	31,880	307.38%
		SNA - Orange County/John Wayne	70	0.35%	685	-41.18%
		ONT - Ontario	67	0.33%	655	3250.00%
		BUR - Burbank/Bob Hope	20	0.10%	196	-76.19%
2	Las Vegas	LAS - Mc Carran Int'l	1,676	8.35%	16,395	247.00%
3	San Diego	SAN - San Diego Int'l	1,480	7.38%	14,478	270.93%
4	Phoenix	PHX - Phoenix Sky Harbor	1,339	6.67%	13,098	50.62%
5	Washington D.C.	Total	1,212	6.04%	11,856	8.21%
		DCA - Reagan National	307	1.53%	3,003	125.74%
		BWI - Baltimore/Washington	233	1.16%	2,279	-38.03%
		IAD - Washington Dulles Int'l.	672	3.35%	6,574	10.53%
6	New York	Total	904	4.51%	8,843	36.76%
		EWR - Newark Liberty Int'l	435	2.17%	4,255	82.01%
		JFK - John F. Kennedy	393	1.96%	3,844	0.51%
		LGA - LaGuardia	76	0.38%	743	145.16%
7	Chicago	Total	540	2.69%	5,282	-6.41%
		ORD - O'Hare Int'l	539	2.69%	5,273	-6.42%
		MDW - Midway Int'l	1	0.00%	10	0.00%
8	Dallas	DFW - Dallas/Fort Worth Int'l	534	2.66%	5,224	3.49%
9	Denver	DEN - Denver Int'l	500	2.49%	4,891	3.31%
10	Salt Lake City	SLC - Salt Lake City Int'l	398	1.98%	3,893	231.67%
11	Boston	BOS - Logan Int'l	380	1.89%	3,717	13.77%
12	Houston	Total	341	1.70%	3,336	110.49%
		IAH - Bush Intercontinental	340	1.69%	3,326	112.50%
		HOU - Hobby	1	0.00%	10	-50.00%
13	Orlando	MCO - Orlando Int'l	275	1.37%	2,690	44.74%
14	Atlanta	ATL - Hartsfield-Jackson Int'l	250	1.25%	2,446	13.64%
15	Philadelphia	PHL - Philadelphia Int'l	246	1.23%	2,406	5.13%
16	San Antonio	SAT - San Antonio Int'l	225	1.12%	2,201	61.87%
17	Yuma	NLY - Yuma Int'l	222	1.11%	2,172	208.33%
18	Minneapolis	MSP - Minneapolis/St. Paul Int'l	206	1.03%	2,015	43.06%
19	St. Louis	STL - Lambert-St. Louis Int'l	203	1.01%	1,986	50.37%
20	Tampa	TPA - Tampa Int'l	203	1.01%	1,986	105.05%
21	Tucson	TUS - Tucson Int'l	196	0.98%	1,917	44.12%
22	Seattle	SEA - Seattle-Tacoma Int'l	165	0.82%	1,614	-66.93%
23	Detroit	DTW - Detroit Metropolitan Airport	159	0.79%	1,555	27.20%
24	Albuquerque	ABQ - Albuquerque Sunport	155	0.77%	1,516	0.65%
25	Charlotte	CLT - Charlotte/Douglas Int'l	150	0.75%	1,467	354.55%
TOTALS			**15,375**	**76.63%**	**150,400**	

FLY MONTEREY

Exhibit 2C
TOP 25 ORIGIN AND DESTINATION MARKETS

Source: U.S. Department of Transportation

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ment, and income are indicators for understanding the dynamics of the county and, in particular, the trends in aviation growth. Socioeconomic data for the area has been utilized in various statistical analyses to develop forecasts of aviation demand for the Monterey Regional Airport. **Table 2A** presents historical trends and forecasts for population, employment, and income for both Monterey County and the State of California.

TABLE 2A
Demographic Trends and Forecast

	HISTORIC			FORECAST			
	2000	2010	2013	2018	2023	2033	AAGR 2013-2033
Monterey County							
Population	401,762	415,057	421,494	434,256	448,075	487,324	0.81%
Employment	220,991	222,244	238,115	251,639	265,616	295,124	1.43%
Income (PCPI)	35,142	36,687	38,401	$40,369	$43,262	$50,411	1.60%
California							
Population	33,871,653	37,253,956	37,966,471	39,896,320	41,719,033	45,353,147	0.99%
Employment	19,466,172	19,770,762	20,532,291	22,054,252	23,673,131	27,233,607	1.61%
Income (PCPI)	$37,191	$38,271	$39,230	$41,542	$44,826	$52,999	1.64%

AAGR: Average annual compound growth rate
PCPI - Per Capita Personal Income ($2005)

Source - 2000 & 2010 Population: California Department of Finance, Historical Census Populations of Counties and Incorporated Cities in California, 1850-2010. Accessed on 6.11.13 at http://www.dof.ca.gov/research/demographic/state_census_data_center/historical_census_1850-2010/view.php

Source - 2013 Population: California Department of Finance - Report E5 City/County Population and Housing Estimates with 2010 Benchmark accessed on 6.11.13 at: http://www.dof.ca.gov/research/demographic/

Source - Population Forecast: California Department of Finance - Report P-1 (County): State and County total Population Projections, 2010-2060

Source Employment and Income Historic and Forecast: Woods & Poole Economics - Complete Economic Demographic Data Source (CEDDS-2013)

The population in Monterey County has shown steady growth since 2000, growing from 401,762 to an estimated 421,494 in 2013. Population is forecast to continue to grow steadily at an annual rate of 0.81 percent. By 2033, the population is forecast to reach 487,324. The population growth in California is forecast to exceed that of the county on an annual rate.

Employment for Monterey County is forecast to grow at 1.43 percent from 2013 through 2033. Growth for the county is forecast to be slightly less than that forecast for the state as a whole (1.61 percent). Per Capita Personal Income is forecast to grow 1.60 percent annually from 2013 through 2033. This is nearly the same as that projected for the State of California (1.64 percent) over the same timeframe.

Employment and income for both the state and the county are forecast to grow at a higher rate over the next 20 years as compared to the period from 2000 through 2010. During the first decade of this century, employment in Monterey County grew at 0.06 percent and 0.16 percent in the state. Income for the county grew at 0.43 percent and 0.29 percent for the state.

San Joaquin
Alameda
San Mateo
Stanislaus
San Jose Intl. Airport (SJC)
San Mateo
Santa Clara
Merced
Santa Cruz
South County Airport of Santa Clara County (E16)
Watsonville Municipal Airport (WVI)
Hollister Municipal Airport (CVH)
Fresno
Salinas Municipal Airport (SNS)
Marina Municipal Airport (OAR)
Monterey Regional Airport (MRY)
San Benito
Mesa Del Rey Airport (KIC)
Monterey
San Luis Obispo
LEGEND
Commercial Airport
General Aviation Airport
General Aviation Service Area
General AviationJet/Turboprop Service Area
FLY MONTEREY
Exhibit 2D
GENERAL AVIATION SERVICE AREA

The draft Association of Monterey Bay Area Governments (AMBAG) *Regional Growth Forecast* was consulted to identify any significant differences from the primary data sources utilized. The primary data sources are the California Department of Finance for population and Woods & Poole Economics for employment and income. For population, the 2010 figures are identical and the 2033 figures are within 0.007 percent. There is a variance in employment numbers; however, the Woods & Poole Economics data presents both historical trends and forecast years, providing a consistency of data. Income data is not included in the AMBAG forecasts; therefore, the Woods & Poole data is utilized.

FORECASTING APPROACH

The development of aviation forecasts proceeds through both analytical and judgmental processes. A series of mathematical relationships is tested to establish statistical logic and rationale for projected growth. However, the judgment of the forecast analyst, based upon professional experience, knowledge of the aviation industry, and assessment of the local situation, is important in the final determination of the preferred forecast.

The most reliable approach to estimating aviation demand is through the utilization of more than one analytical technique. Methodologies frequently considered in the aviation industry include trend line projections, correlation/regression analysis, and market share analysis. By developing several projections for each aviation demand indicator, a reasonable planning envelope will emerge. The selected forecast may be one of the individual projections or a combination of several projections based on local conditions. The selected forecast will almost always fall within the planning envelope. Some combination of the following forecasting techniques is utilized to develop the planning envelope for each demand indicator.

Trend line projections are probably the simplest and most familiar of the forecasting techniques. By fitting growth curves to historical demand data, then extending them into the future, a basic trend line projection is produced. A basic assumption of this technique is that outside factors will continue to affect aviation demand in much the same manner as in the past. As broad as this assumption may be, the trend line projection does serve as a reliable benchmark for comparing other projections.

Correlation analysis provides a measure of the direct relationship between two separate sets of historic data. Should there be a reasonable correlation between the data, further evaluation using regression analysis may be employed.

Regression analysis measures the statistical relationship between dependent and independent variables, yielding a "correlation coefficient." The correlation coefficient (Pearson's "r") measures associations between the changes in a dependent variable and independent variable(s). If the r-squared (r^2) value (coefficient determination) is greater than 0.90, it indicates good predictive reliability. A value below 0.90 may be used with the understanding that the predictive reliability is lower.

Market share analysis involves a historical review of aviation activity as a percentage, or share, of a larger regional, state, or national aviation market. A historical market share trend is determined providing an expected market share for the future. These shares are then multiplied by the forecasts of the larger geographical area to produce a market share projection. This method has the same limitations as trend line projections, but can provide a useful check on the validity of other forecasting techniques.

It is important to note that forecasts will age and the further one is from the base year the less reliable a forecast may become, particularly due to changing local and national conditions. Nonetheless, the FAA requires that a Master Plan include a 20-year forecast for the airport. Facility and financial planning usually require at least a ten-year view, since it often takes more than five years to complete a major facility development program. However, it is important to use forecasts which do not overestimate revenue-generating capabilities or understate demand for facilities needed to meet public (user) needs.

A wide range of factors is known to influence the aviation industry and can have significant impacts on the extent and nature of air service provided in both the local and national markets. Technological advances in aviation have historically altered, and will continue to change, the growth rates in aviation demand over time. The most obvious example is the impact of jet aircraft on the aviation industry, which resulted in a growth rate that far exceeded expectations. Such changes are difficult, if not impossible, to predict, and there is simply no mathematical way to estimate their impacts.

Using a broad spectrum of local, regional, and national socioeconomic and aviation information and analyzing the most current aviation trends, forecasts are presented for the following demand indicators:

- COMMERCIAL PASSENGER SERVICE
  - Annual Enplaned Passengers
  - Operations and Fleet Mix

- COMMERCIAL AIR CARGO
  - Enplaned Tons

- GENERAL AVIATION
  - Based Aircraft
  - Based Aircraft Fleet Mix
  - Local and Itinerant Operations

- AIR TAXI AND MILITARY
  - Local and Itinerant Operations

- PEAKING CHARACTERISTICS
  - Airline Enplanement Peaks
  - Operations Peaks

COMMERCIAL PASSENGER SERVICE FORECASTS

To determine commercial service potential at Monterey Regional Airport and the facilities necessary to properly accommodate present and future airline activity, two basic elements must be forecast: annual enplaned passengers and annual airline operations. Annual enplaned passengers serve as the most basic indicator of demand for commercial passenger service activity. The combination of enplanements and deplanements would approximate the total passengers using the airport. The annual number of enplanements is the figure utilized by the FAA to determine entitlement funding levels for the airport.

The term "enplanement" refers to a passenger boarding an airline flight. Enplaning passengers are then described in terms of either "originating" or "connecting/transferring." Originating passengers depart a specific airport for a destination or hub airport to connect/transfer to another flight. Connecting/transferring passengers are those who have departed from another location and are using the airport as an intermediate stop. These passengers may disembark their originating flight to wait in the terminal for their next flight or could simply remain on the aircraft at an intermediary stop as a "through" passenger. Monterey Regional Airport and airports similar to it tend to have mostly originating passengers, while larger hubs like those in Denver, Chicago, and Dallas could have a majority of passengers who are connecting/transferring.

An important resource utilized in aviation demand forecasting is the annual FAA aviation forecasts. The most recent available version is *Aerospace Forecasts – Fiscal Years 2014-2034*, published in March 2014. The FAA forecasts a variety of aviation demand indicators on an annual basis. In the most current edition, fiscal year 2012 is presented as the baseline, with 2013 shown as an estimate. Years 2014 through 2034 are projections. Many forecasting elements utilized in this analysis will consider the history and projections presented by the FAA in its annual forecast.

FAA COMMERCIAL AIR CARRIER FORECASTS

Although the recession has been officially over for several years, in 2013 carriers continued to deal with economic uncertainties as business travel budgets remained strained, unemployment persisted and uncertainty surrounding federal fiscal policy (expiration of the payroll tax break in January, sequestration, and a partial shutdown of the federal government) remained. In such as uncertain economic environment, industry capacity growth was restrained (up 0.8 percent in 2013), after only a 0.1 percent increase in 2012. Given the minimal increase in seats available to the traveling public, carriers were still able to raise airfares despite the slow growth in demand. Higher airfares and ancillary revenue, coupled with flat to falling fuel prices resulted in U.S. carriers being profitable in 2013.

The FAA provides several measures for commercial airline activity in its *Aerospace Forecasts – Fiscal Years 2014-2034*. After experiencing slight growth in 2013 (up 0.8 percent), domestic system capacity (as measured in available seat miles – ASMs) was projected to increase 1.0 percent in 2014. From 2013 through 2034 domestic ASMs are projected to

grow 2.0 percent annually. Mainline carrier capacity is forecast grow 0.8 percent in 2014 and 2.0 percent through 2034. Regional carrier capacity grew by 2.2 percent and is forecast to grow 2.3 percent annually through 2034. Overall domestic capacity is projected to increase at an average annual rate of 2.1 percent through 2034, which is slightly slower that economic growth.

The FAA forecasts indicate that enplanements are forecast to grow slightly (up 0.6 percent) in 2014, following a 0.1 percent increase in 2013. Over the forecast period, domestic enplanements are projected to grow at an average annual rate of 1.9 percent, with mainline carriers growing at the same rate (1.9percent). **Exhibit 2E** presents the annual historical and forecast enplanement totals for both large air carriers and commuter airlines in the U.S. as forecast by the FAA.

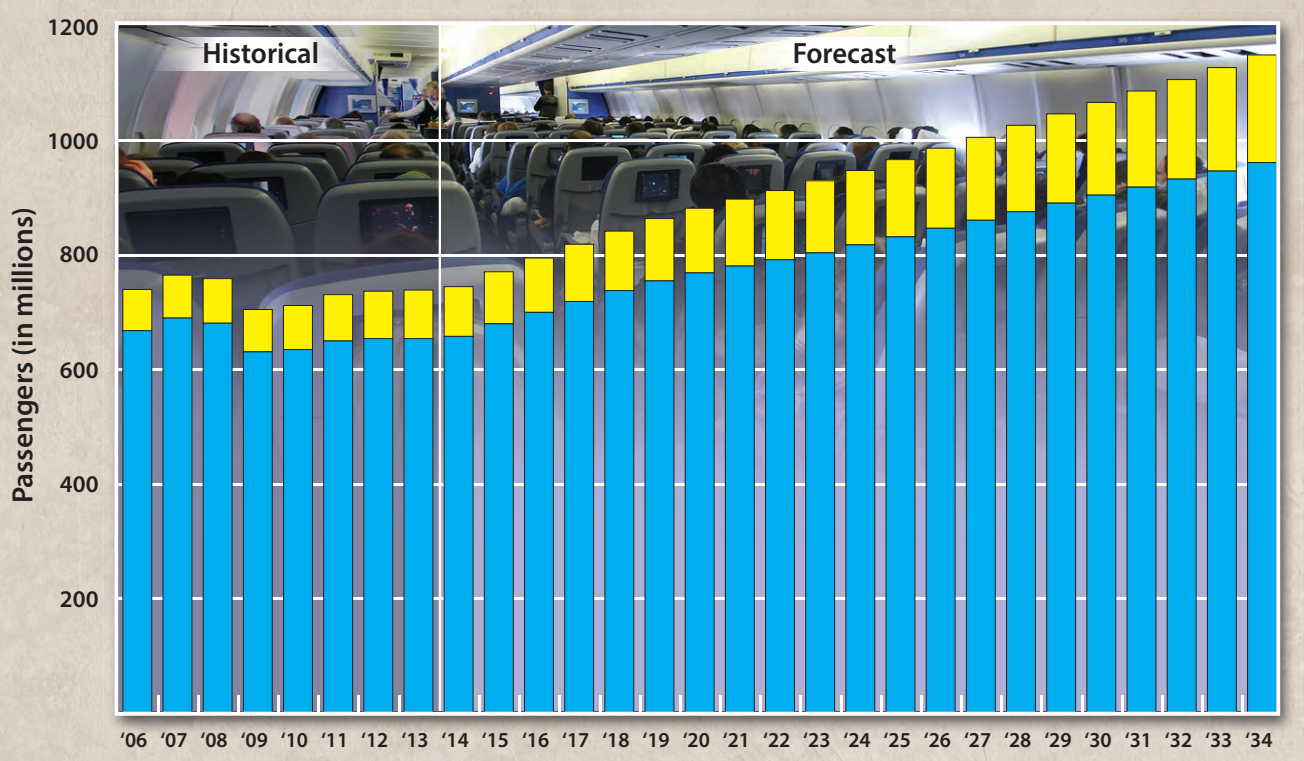
FAA COMMERCIAL AIRCRAFT FLEET FORECAST

The commercial passenger carrier fleet is undergoing transformation. The mainline carriers are retiring older, less fuel efficient aircraft (e.g. 737-300/400/500, 757/767, and MD-80) and replacing them with more technologically advanced A319/320 and 737-700/800/900 aircraft. The regional carriers are growing their fleet of 70-90 seat regional jet aircraft and reducing their fleet of 50-seat jet aircraft. The total number of aircraft in the U.S. commercial fleet (including regional carriers) is estimated at 6,727 for 2013, a decrease of 184 aircraft from 2012. This includes 3,774 mainline air carrier passenger aircraft (over 90 seats), 740 mainline air cargo aircraft and 2,213 regional carrier aircraft (jets, turboprops, and pistons).

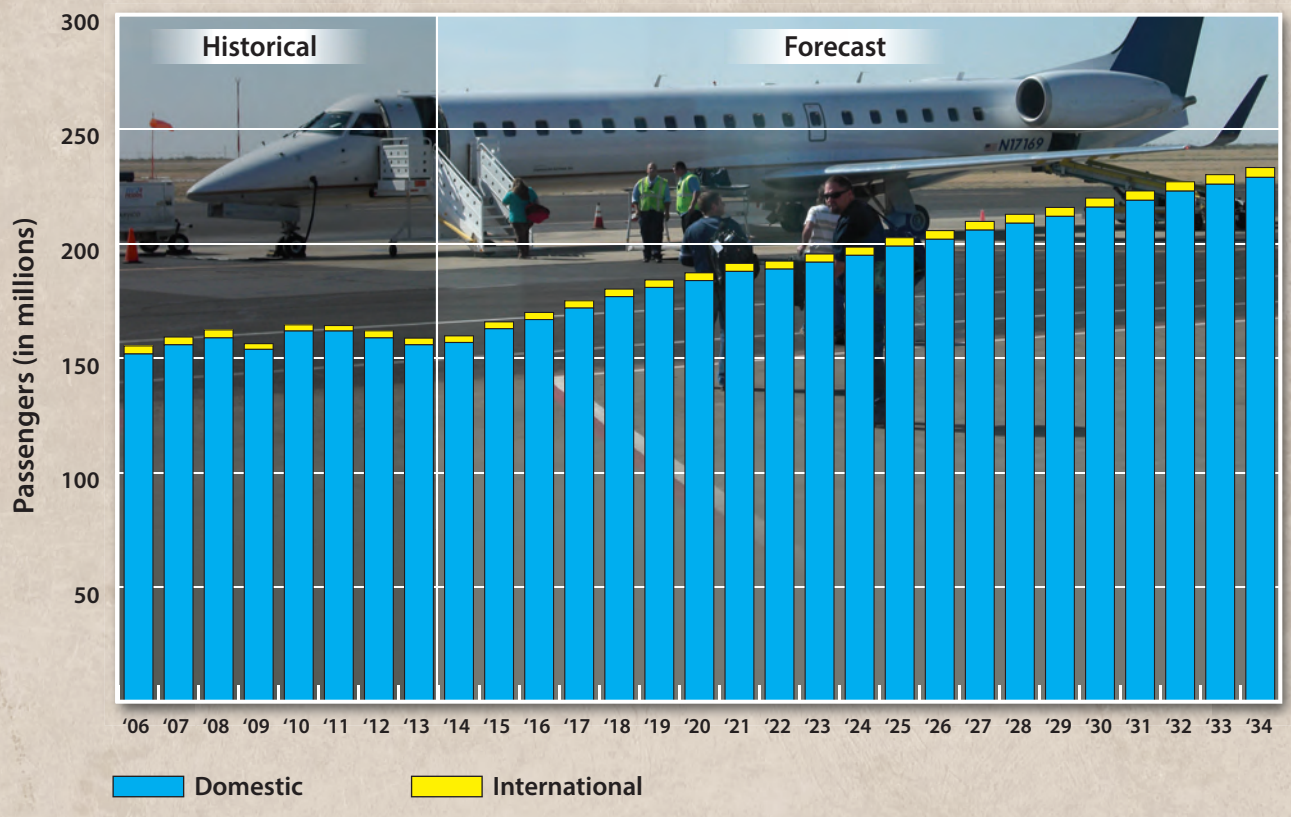
The number of passenger jets in the mainline fleet is estimated to have increased by 41 in 2013. After 2013, the mainline aircraft fleet was projected to add approximately 65 aircraft annually, totaling 5,112 aircraft in 2034. The mainline narrow-body fleet (including the Embraer 190s) was projected to grow by 42 aircraft annually from 2013-2034. The wide-body fleet (including the Boeing 787 and Airbus A-350) was projected to grow by 23 aircraft annually over the same period. Mainline passenger jet aircraft are forecast to increase 1.5 percent annually through 2034.

The regional passenger aircraft fleet is estimated to have decreased by 127 aircraft in 2013, as decreases in 50-seat and smaller regional jets and turboprops outpace production of new larger regional jets. After 2013, the regional carrier fleet (turboprops and jets) is expected to decrease by 0.1 percent per year over the remaining years of the forecast period, totaling 2,141 aircraft in 2034. The number of regional jets (90 seats or fewer) is projected to grow from 1,642 in 2013 to 1,953 in 2034, an average annual increase of 0.8 percent. All of the growth in regional jets over the forecast period occurs in the larger, 70- to 90-seat aircraft category. During the forecast period, all regional jets of 50 or less seats are projected to be retired from the fleet.

U.S. Scheduled Commercial Air Carrier Passenger Enplanements



U.S. Regional / Commuter Scheduled Passenger Enplanements



Source: FAA Aerospace Forecasts, Fiscal Years 2014-2034

FLY MONTEREY

Exhibit 2E
U.S. COMMERCIAL AIR CARRIER AND REGIONAL/COMMUTER FORECASTS

The commercial turboprop/piston fleet was expected to shrink from 571 units in 2013 to 188 in 2034. Turboprop/piston aircraft are expected to account for just 8.8 percent of the regional carrier passenger fleet in 2033, down from a 25.8 percent share in 2013.

Large cargo jet aircraft are forecast to grow from an estimate of 740 in 2013 to a total 1,182 aircraft in 2034. The narrow-body, cargo jet fleet is projected to increase by five aircraft per year over the 20-year forecast period as older 757s and 737s are converted to cargo service. The wide-body, cargo jet fleet is projected to increase by 18 aircraft yearly.

The FAA forecast of commercial aircraft in the U.S. fleet is presented on **Exhibit 2F**.

TABLE 2B
Enplanement History
Monterey Regional Airport

Year	Enplanements	Annual % Change
2013	200,651	2.18%
2012	196,268	7.45%
2011	181,640	-4.89%
2010	190,527	-0.56%
2009	191,585	-8.55%
2008	207,964	-3.77%
2007	215,797	7.28%
2006	200,091	3.18%
2005	193,728	5.13%
2004	183,785	0.58%
2003	182,725	3.44%
2002	176,437	-10.97%
2001	195,788	-20.25%
2000	235,430	-9.84%
1999	258,605	7.13%
1998	240,173	-7.83%
1997	258,975	8.53%
1996	236,891	12.99%
1995	206,130	-3.86%
1994	214,083	2.34%
1993	209,079	-5.41%
1992	220,393	2.99%
1991	213,808	-12.21%
1990	239,914	-3.99%
1989	249,480	-0.73%
1988	251,311	-9.53%
1987	275,260	10.59%
1986	246,111	-

Source: FAA Enplanements Statistics. 2013 from airport records.

HISTORICAL COMMERCIAL PASSENGER ACTIVITY

Historical passenger enplanements at Monterey Regional Airport from 1986 through 2013 are presented on **Exhibit 2G**. The same information, with annual percentage rate change, is presented in **Table 2B**. This timeline is significant in that it documents most of the enplanement activity at the Airport since the U.S. airline industry was deregulated in the late 1970s.

The Airport reached more than 275,000 enplanements in 1987. Enplanements declined slightly from 1988 through 1993, the end of which coincided with a recessionary period from July 1990 through May 1991 and also coincided with the coming closure of nearby Fort Ord in 1994. The latter half of the 1990s saw substantial increases in enplanements, culminating with more than 258,000 enplanements in 1999. This period coincided with the longest period of economic growth in American history.

The end of the 1990s saw the collapse of the speculative dot-com bubble, a fall in business outlays and investments, and the subsequent terrorist attacks of September 11, 2001. This recessionary period, which lasted from March to November 2001, was relatively shallow, but enplanements dipped to only 176,000 in 2002. Moderate growth resumed and the Airport saw steady enplanement growth through 2007 when there were 215,797 enplanements. The Great Recession extended from De-

cember 2007 through June of 2009 officially, and the recovery has been slow. By 2011, enplanements had dipped to 181,640. Over the last three years, the economic recovery seems to have taken effect with enplanement figures reaching 196,268 for 2012 and then over 200,000 in 2013.

Table 2C presents annual passengers, which includes scheduled and non-scheduled flights and revenue and non-revenue passengers by airline for 2003, 2008, and 2013. In 2003, the Airport's market was dominated by United Airlines/SkyWest, its regional carrier, with 62.4 percent of the market. In 2013, SkyWest continued to maintain the largest market share; however, its share has currently dropped to 41.0 percent. US Airways (20.6%), American Eagle (19.3%), Alaska/Horizon (9.7%), and Republic (0.6%) combine to account for the remaining market share at the Airport in 2013.

TABLE 2C
Annual Total Passengers by Airline
Monterey Regional Airport

	2003		2008		2013	
	Passengers	% of Total	Passengers	% of Total	Passengers	% of Total
America West/ US Airways Express	64,805	17.35%	68,673	16.06%	84,474	20.60%
American Eagle	75,567	20.23%	58,401	13.66%	79,073	19.29%
United/Skywest	233,134	62.42%	195,890	45.82%	168,112	41.00%
Delta/Skywest	-	-	304	0.07%	-	-
Express Jet	-	-	79,329	18.55%	-	-
Alaska/Horizon	-	-	-	-	39,818	9.71%
Allegiant	-	-	24,945	5.83%	35,897	8.76%
Republic	-	-	-	-	2,623	0.64%
Total Passengers	**373,506**	**100.00%**	**427,542**	**100.00%**	**409,997**	**100.00%**

Note: Includes enplanements, deplanements, revenue, and non-revenue passengers.
Source: Airport records

Monthly Passenger Distribution

Table 2D presents the monthly passenger enplanement levels for the Airport from 2003 through 2013. Consistently, the Airport realizes its busiest activity during the summer and into early fall. On average, the peak month has represented 9.6 percent of annual enplanements.

Exhibit 2H illustrates the monthly moving total airline enplanements from 2007 through 2013. As can be seen, the 12-month moving enplanement totals over the last seven years have followed a predictable trend with summers being busier than winters. The exhibit also shows the trend in revenue passengers over the same period. Revenue passenger data can be important to airlines for analysis of the sustainability of various routes.

TABLE 2D
Historical Monthly Enplanements - Combined Airlines
Monterey Regional Airport

Month	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
JAN	12,378	11,275	12,669	13,645	13,700	14,312	11,658	12,626	11,779	11,980	14,017
FEB	13,982	13,825	13,907	15,448	14,623	15,378	12,819	12,681	12,492	13,178	14,273
MAR	14,266	14,979	14,944	17,124	16,287	17,288	14,636	15,266	13,987	13,961	17,420
APR	13,735	15,276	15,529	16,373	15,718	17,491	15,194	16,495	14,039	14,836	17,136
MAY	15,797	16,541	15,905	17,665	17,756	18,579	17,730	17,171	16,355	16,121	17,142
JUN	16,214	15,986	15,803	17,528	18,896	20,510	17,815	18,132	16,062	17,661	18,046
JUL	16,234	15,801	16,137	17,252	19,641	20,969	18,408	18,223	16,449	17,752	18,246
AUG	15,961	16,211	17,405	17,566	22,432	21,702	18,001	17,126	15,762	18,044	17,252
SEP	15,712	15,942	18,251	16,920	19,258	15,994	16,227	16,248	16,391	17,112	17,435
OCT	15,908	16,684	19,623	18,011	20,188	16,935	16,162	16,165	16,830	18,327	17,860
NOV	14,997	15,195	17,413	16,567	19,378	14,612	15,602	14,856	14,810	17,266	15,821
DEC	13,911	13,091	15,840	15,339	17,365	14,403	15,683	14,143	14,265	16,535	16,003
TOTAL	**179,095**	**180,806**	**193,426**	**199,438**	**215,242**	**208,173**	**189,935**	**189,132**	**179,221**	**192,773**	**200,651**
Peak Month %	9.06%	9.23%	10.14%	9.03%	10.42%	10.42%	9.69%	9.64%	9.39%	9.51%	9.09%

Source: FAA records; 2013 from airport records.
Peak month highlighted.

ENPLANEMENT FORECAST

As discussed in this chapter's introduction, the first step involved in updating an airport's forecasts include reviewing previous forecasts in comparison to actual activity to determine what changes, if any, may be necessary. After that comes the consideration of the effects of any potential new factors that could impact the forecasts, such as changes in the socioeconomic climate or the effects of changes in air carrier services.

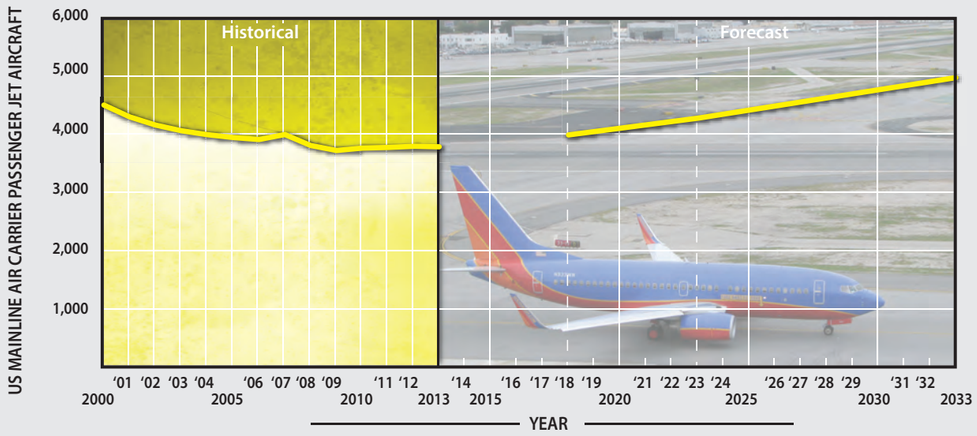
Previous Enplanement Forecasts

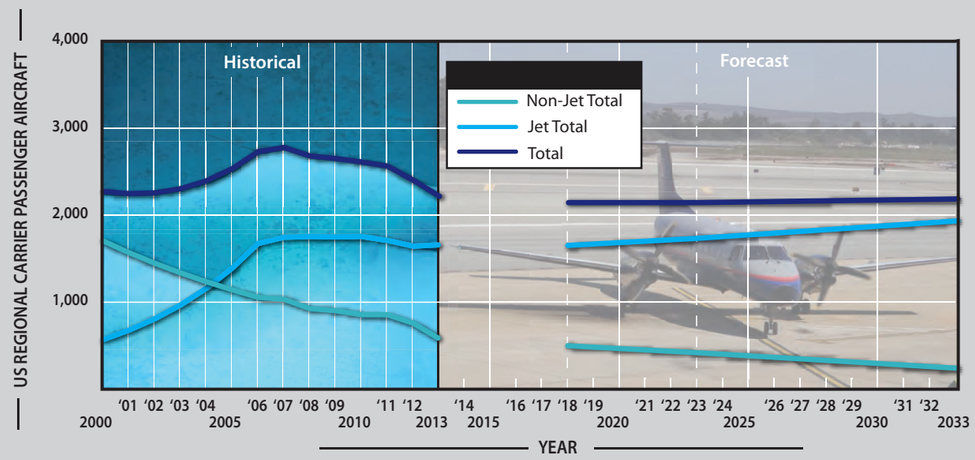
There are three existing forecasts of enplanement activity at Monterey Regional Airport to consider: the 1992 Master Plan forecasts, the forecasts developed for use in the 14 CFR Part 150 Noise Exposure Map Update (2008), and the 2014 FAA *Terminal Area Forecast* (TAF). The 1992 Master Plan enplanement forecast is over 20 years old and does not take into consideration recent aviation trends. Therefore, the forecasts from the 1992 Master Plan are considered outdated and are not utilized in this analysis.

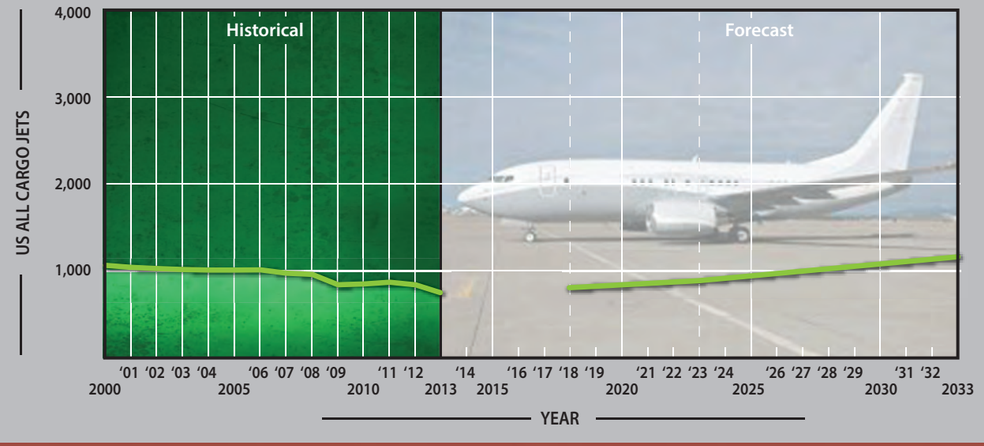
In 2008, the Airport updated their noise exposure maps as part of a larger sound insulation program. Enplanement forecasts were developed as part of this effort. As of 2014, these forecasts are eight years old. When compared to the actual enplanement trends at the Airport, the NEM enplanement forecast appears to be outdated and may not provide useful information for analysis today.

The FAA TAF forecast is published annually and is utilized by the FAA as a starting point for considering the reasonableness of master plan forecasts. **Table 2E** presents the FAA TAF as published in January 2014 and the 2006 Part 150 NEM enplanement forecasts (which

	2013	2018	2023	2033	AAGR 2013-2033
US MAINLINE AIR CARRIER PASSENGER JET AIRCRAFT					
Large Narrow Body					
2 Engine	3,155	3,273	3,476	3,948	1.13%
3/4 Engine	5	5	0	0	0.00%
Large Wide Body					
2 Engine	481	578	714	948	3.45%
3/4 Engine	43	26	2	0	0.00%
Total Large Jets	**3,681**	**3,896**	**4,194**	**4,896**	**1.44%**
Total Regional Jets	**93**	**107**	**97**	**113**	**0.98%**
Total Mainline Passenger Jets	**3,774**	**4,003**	**4,291**	**5,009**	**1.43%**
US REGIONAL CARRIER PASSENGER AIRCRAFT					
Less than 30 Seats					
	483	467	314	103	-7.44%
31-40 Seats					
Turboprop	37	31	24	8	-7.37%
Jet	0	0	0	0	0.00%
Over 40 Seats					
Turboprop	51	61	72	100	3.42%
Jet	1,642	1,644	1,724	1,928	0.81%
Non-Jet Total	**571**	**496**	**410**	**211**	**-4.86%**
Jet Total	**1,642**	**1,644**	**1,724**	**1,928**	**0.81%**
Total	**2,213**	**2,140**	**2,134**	**2,139**	**-0.17%**
US ALL CARGO JETS					
Large Narrow Body					
2 Engine	191	210	235	299	2.27%
3/4 Engine	15	13	2	0	0.00%
Large Wide Body					
2 Engine	296	338	421	608	3.66%
3/4 Engine	238	240	219	244	0.12%
Total All Cargo Jets	**740**	**801**	**877**	**1,151**	**2.23%**







Source: FAA Aerospace Forecast - Fiscal Years 2014-2034

Exhibit 2F
NATIONAL U.S. COMMERCIAL FLEET FORECAST

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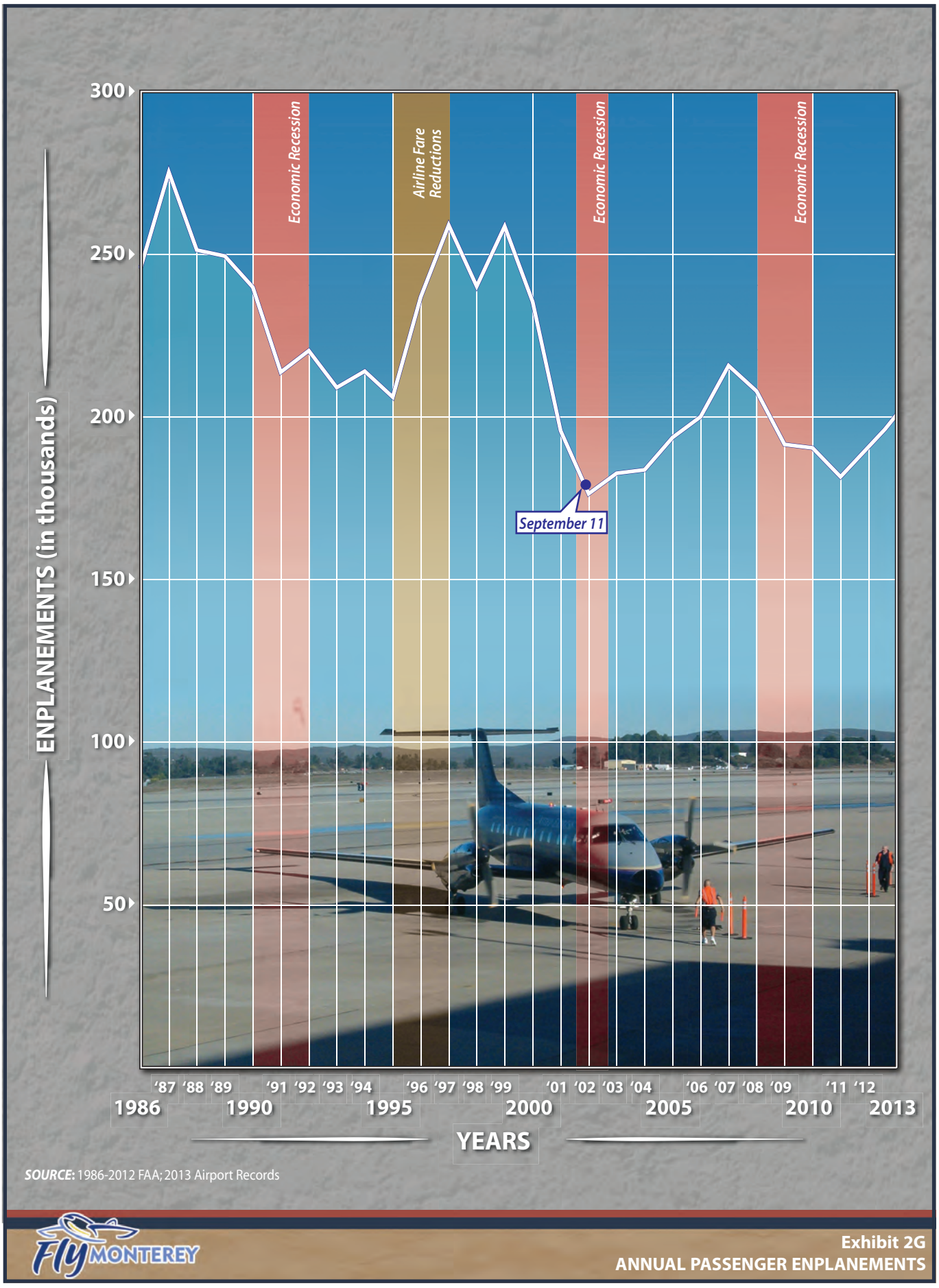

SOURCE: 1986-2012 FAA; 2013 Airport Records

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Exhibit 2G
ANNUAL PASSENGER ENPLANEMENTS

are the same as the 2006 TAF). The actual enplanements documented from the FAA are also included.

TABLE 2E
Previous Enplanement Forecast
Monterey Regional Airport

	HISTORY			FORECAST		
	2003	2008	2013	2018	2023	2033
Actual Enplanements	182,725	207,964	200,651			
FAA TAF 2014	182,709	219,306	204,851	219,220	234,692	269,322
Part 150 NEM 2006/2006 FAA TAF		214,159	237,798	275,935	320,983	434,346

NEM: Noise Exposure Map; TAF: Terminal Area Forecast
Note: The Part 150 NEM study utilized the 2008 FAA TAF figures (rounded to nearest 1,000); figures interpolated and extrapolated to plan years.

Regression Enplanement Forecasts

A time-series extrapolation and regression analyses using multiple variables, including aviation and socioeconomic factors, were conducted. It is optimal to have an "r^2" value near or above 0.90, which would represent a very strong correlation and statistical reliability. The results of the regression analysis did not provide values near the 0.90 indicator. This is not surprising as historical enplanements have fluctuated, while comparative variables have followed relatively steady growth rates. As a result, the regression trends will no longer be considered in this analysis.

Travel Propensity Factor

There are a variety of local factors that affect the potential for passengers within an area. A key statistic to consider is the relationship of the airport's enplanements levels to the populace it serves. The ratio of enplanements to population is termed the Travel Propensity Factor (TPF). **Table 2F** presents a historical review of the TPF for Monterey Regional Airport since 1990.

The TPF is predominantly impacted by the proximity of an airport to other regional airports with higher levels of service or "hub" airports. Regional airports with higher TPF ratios tend to be located farther from hub airports in relatively isolated areas. These airports generally have a service area that extends into adjacent, well-populated regions or have some type of air service advantage that attracts more of those passengers that might otherwise choose to drive to a more distant hub airport. Generally, the higher the TPF, the more likely air travelers are to utilize the local airport for commercial service.

As can be seen in the table, the TPF has generally trended with the condition of the national economy. In 1990, when the economy was growing, the Airport experienced approximately 0.6746 enplanements per resident of Monterey County. This ratio declined to 0.5453 by 1995, a period following a recession. By 2000, the TPF had increased to 0.5860, a time when the economy was growing substantially. The recession and the terrorist attacks of

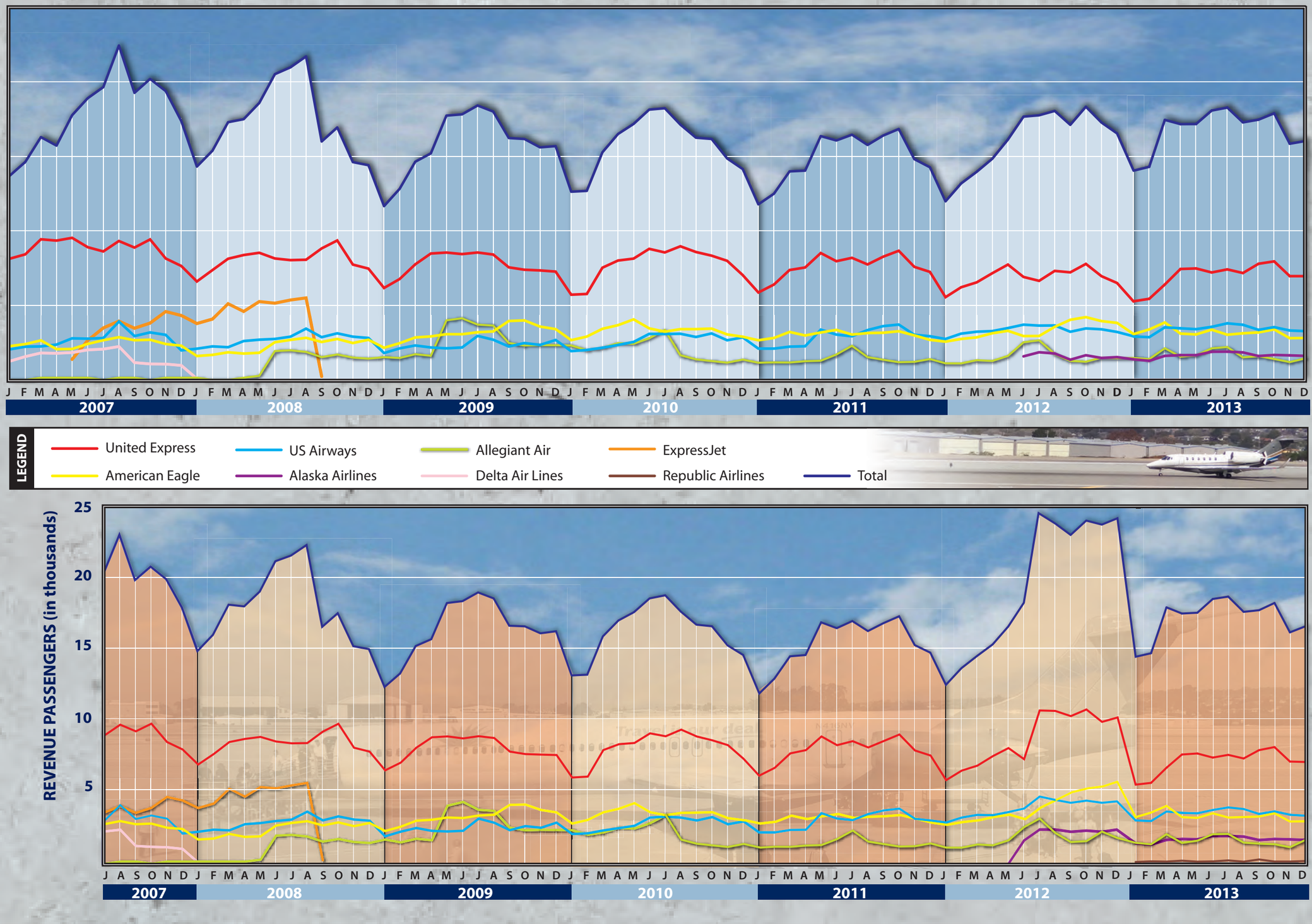

Exhibit 2H
12-MONTH MOVING TOTALS ENPLANEMENTS AND PASSENGERS

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September 11 are reflected in a decreasing TPF for the Airport. By 2007, the TPF had increased again, coinciding with the steady economic growth occurring from 2002 through 2007. As would be expected, the TPF decreased again to coincide with the Great Recession of 2008-2009. The previous two years, 2012 and 2013, realized an increase in TPF as the economy began to grow again.

TABLE 2F
Historical Travel Propensity Factor
Monterey Regional Airport

Year	Monterey Regional Airport Enplanements[1]	Monterey County Population[2]	Travel Propensity Factor
1990	239,914	355,660	0.6746
1995	206,130	378,009	0.5453
2000	235,430	401,762	0.5860
2001	195,788	403,072	0.4857
2002	176,437	404,387	0.4363
2003	182,725	405,705	0.4504
2004	183,785	407,028	0.4515
2005	193,728	408,356	0.4744
2006	200,091	409,687	0.4884
2007	215,797	411,023	0.5250
2008	207,964	412,364	0.5043
2009	191,585	413,708	0.4631
2010	190,527	415,057	0.4590
2011	181,640	416,968	0.4356
2012	196,268	419,586	0.4678
2013	200,651	421,494	0.4760

[1]*Source: FAA enplanement statistics accessed on 6.3.13 at: http://www.faa.gov/airports/planning_capacity/passenger_allcargo_stats/passenger/. 2013 from airport records.*

[2]*Source 1990-2010: California Department of Finance, Historical Census Populations of Counties and Incorporated Cities in California, 1850-2010. Accessed on 6.11.13 at http://www.dof.ca.gov/research/demographic/state_census_data_center/historical_census_1850-2010/view.php*

[2]*Source 2011-2013: California Department of Finance - Report E5 City/County Population and Housing Estimates with 2010 Benchmark accessed on 6.11.13 at: http://www.dof.ca.gov/research/demographic/*

For comparison purposes, those markets with 2012 (most recent available from the FAA) enplanement figures similar to Monterey Regional Airport were examined for their relative TPF. This analysis is presented in **Table 2G**. Each of these markets is served by an airport with scheduled commercial service, but is somewhat regionalized. Most of the airports are located within a manageable driving distance to a larger hub airport, while some are located farther distances from a major hub airport. Aspen, Colorado might be considered an outlier since this is clearly a tourist destination with a low population compared to the number of enplanements.

TABLE 2G
Travel Propensity Factor and Comparable Markets by Enplanement
Monterey Regional Airport

Comparable Markets by Enplanements	2002 MSA or County Population	2002 Enp.	TPF	2012 MSA Population	2012 Enp.	TPF
Appleton, WI (ATW)	208,747	259,624	1.2437	230,599	229,246	0.9941
Grand Junction, CO (GJT)	122,440	124,968	1.0206	149,631	217,369	1.4527
Melbourne, FL (MLB)	495,425	201,247	0.4062	548,329	215,300	0.3926
Aspen, CO (ASE)	15,098	188,330	12.4738	17,246	214,892	12.4604
Clinton Twp., MI (LAN)	455,420	260,685	0.5724	467,210	200,703	0.4296
Monterey, CA (MRY)	**404,387**	**176,437**	**0.4363**	**419,586**	**196,268**	**0.4678**
Kalispell, MT (GPI)	77,583	160,042	2.0628	93,270	192,437	2.0632
Gainesville, FL (GNV)	239,116	130,683	0.5465	269,609	190,324	0.7059
Alexandria, LA (AEX)	145,416	99,827	0.6865	156,208	189,476	1.2130
Great Falls, MT (GTF)	79,848	138,453	1.7340	81,861	186,776	2.2816
Durango, CO (DRO)	45,869	102,175	2.2275	53,715	186,567	3.4733
Newburgh, NY (SWF)	640,675	176,195	0.2750	675,396	185,389	0.2745

TPF: Travel Propensity Factor
Enp.: Enplanements
Source: Enplanements from FAA ACAIS database; MSA Population from Woods & Poole CEDDS data.

Of the 12 markets shown, 10 had growing or relatively flat TPFs from 2002 to 2012. This includes Monterey Regional Airport, which saw growth in its TPF. Only two saw significant decreases in TPF. The most common reason for movement in the TPF, other than the general condition of the economy, is the level of service provided by airlines. Generally, more flights to more destinations will help increase the TPF.

Two enplanement forecasts, developed utilizing the TPF, are shown in **Table 2H**. The first forecast considers the Airport maintaining a constant share of the 2013 TPF (0.4760). This forecast results in 231,989 enplanements by 2033. The last time the Airport reached this level of enplanements was in 2000, when there were 235,430. The 2000 enplanement level followed a period of sustained growth nationally. If such a sustained growth period were to return, then an increasing TPF might be considered.

TABLE 2H
Enplanement Projection Based on Travel Propensity Factor (TPF)
Monterey Regional Airport

Year	Enplanements	Monterey County Population	TPF
2013	200,651	421,494	0.4760
CONSTANT SHARE OF 2013 TPF (AAGR = 0.73%)			
2018	206,726	434,255	0.4760
2023	213,305	448,076	0.4760
2033	231,989	487,323	0.4760
INCREASING SHARE OF TPF (AAGR = 1.73%)			
2018	212,785	434,255	0.4900
2023	233,000	448,076	0.5200
2033	282,647	487,323	0.5800

AAGR: Average Annual Growth Rate
Source: 2013 enplanements from airport records. Population from California Department of Finance

The second projection considers a growing TPF to 0.5800 by 2033, which results in a 2033 enplanement forecast of 282,647. This long term TPF (0.5800) is below the level the Airport has achieved in the past (0.5860 in 2000) and may, therefore, still be somewhat conservative. One significant factor limiting consideration of a more aggressive TPF is the fact that airlines have been consolidating capacity with fewer flights and larger aircraft serving airports such as Monterey Regional Airport.

Market Share of U.S. Domestic Enplanements

The next forecasting method employed considers the Airport's market share of U.S. domestic enplanements. National forecasts of U.S. domestic enplanements are compiled each year by the FAA and take into account the state of the economy, fuel prices, and prior year developments. The most recent publication is FAA *Aerospace Forecasts – Fiscal Years 2014-2034*. Included are forecasts of both total domestic passenger enplanements as well as forecasts of regional carrier passenger enplanements. Enplanement forecasts based on Monterey Regional Airport's historic market share of total and regional carrier enplanements have been developed as follows.

U.S Air Carrier Enplanement Market Share

Two enplanement forecasts have been developed as a market share of total U.S. domestic airline enplanements, as shown in **Table 2J**. The FAA forecasts a 1.9 percent annual increase in U.S. commercial air carrier enplanements from 2013-2034. The first projection considers the Airport maintaining a constant market share of 0.03067 percent. This projection yields 290,565 enplanements by the end of the planning period. A second forecast projects Monterey Regional Airport gaining market share through the planning period as the Airport captures a higher percentage of the flying public in the region. This projection yields 336,363 enplanements by 2033.

U.S. Regional Carrier Enplanement Market Share

Two enplanement forecasts have been developed as a market share of U.S. domestic regional airline enplanement forecasts, as shown in **Table 2K**. The FAA forecasts enplanements by regional carriers grow at 1.9 percent annually from 2014-2034. The FAA's regional carrier forecast is a subset of total air carrier enplanements. The first projection considers the Airport maintaining a constant market share of 0.12904 percent. This projection yields 291,492 enplanements by the end of the planning period. A second forecast projects Monterey Regional Airport gaining market share through the planning period as the Airport captures a higher percentage of the flying public in the region. This projection yields 329,136 enplanements by 2033.

TABLE 2J
Market Share Projections of U.S. Commercial Enplanements
Monterey Regional Airport

Year	Domestic Air Carrier Enplanements[1]	MRY Enplanements[2]	MRY Market Share of U.S. Air Carrier Enplanements
2000	641,200,000	235,430	0.03672%
2001	626,751,000	195,788	0.03124%
2002	574,628,000	176,437	0.03070%
2003	587,830,000	182,725	0.03108%
2004	628,492,000	183,785	0.02924%
2005	669,500,000	193,728	0.02894%
2006	668,400,000	200,091	0.02994%
2007	690,100,000	215,797	0.03127%
2008	680,700,000	207,964	0.03055%
2009	630,800,000	191,585	0.03037%
2010	635,200,000	190,527	0.02999%
2011	650,100,000	181,640	0.02794%
2012	653,800,000	196,268	0.03002%
2013	654,300,000	200,651	0.03067%
Constant Market Share of 2013 Percent (AAGR = 1.87%)			
2018	738,200,000	226,380	0.03067%
2023	804,000,000	246,559	0.03067%
2033	947,500,000	290,565	0.03067%
Increasing Market Share of 2013 Percent (AAGR = 2.62%)			
2018	738,200,000	228,104	0.03090%
2023	804,000,000	258,888	0.03220%
2033	947,500,000	336,363	0.03550%

AAGR: Average Annual Growth Rate
Source: [1]FAA Aerospace Forecasts 2014-2034. [2]FAA records; 2013 airport records.

TABLE 2K
Market Share Projections of U.S. Regional Carrier Enplanements
Monterey Regional Airport

Year	Domestic Regional Carrier Enplanements[1]	MRY Enplanements[2]	MRY Market Share of U.S. Regional Carrier Enplanements
2000	79,700,000	235,430	0.29540%
2001	88,800,000	195,788	0.22048%
2002	98,900,000	176,437	0.17840%
2003	110,100,000	182,725	0.16596%
2004	122,700,000	183,785	0.14978%
2005	136,600,000	193,728	0.14182%
2006	152,200,000	200,091	0.13147%
2007	156,200,000	215,797	0.13815%
2008	159,100,000	207,964	0.13071%
2009	154,000,000	191,585	0.12441%
2010	161,600,000	190,527	0.11790%
2011	161,700,000	181,640	0.11233%
2012	159,000,000	196,268	0.12344%
2013	155,500,000	200,651	0.12904%
Constant Market Share of 2013 Percent (AAGR = 1.88%)			
2018	176,500,000	227,749	0.12904%
2023	192,000,000	247,749	0.12904%
2033	225,900,000	291,492	0.12904%
Increasing Market Share of 2013 Percent (AAGR = 2.51%)			
2018	176,500,000	232,804	0.13190%
2023	192,000,000	262,080	0.13650%
2033	225,900,000	329,136	0.14570%

AAGR: Average Annual Growth Rate
Source: [1]FAA Aerospace Forecasts 2014-2034. [2]FAA records; 2013 airport records.

Enplanement Forecast Summary

Several projections of future enplanement levels have been presented. The first methodologies analyzed were various time-series and regression analyses. These included consideration of historical enplanements as the dependent variable and population, employment, income, and FAA forecasts of national enplanements as the independent variable(s). None of these analyses resulted in a reliable correlation coefficient (Pearson's "r"). To be considered reliable, the correlation coefficient should be above 0.9; however, all were below 0.62. As a result, neither the time-series nor the regression methods were considered statistically reliable.

The next forecast method employed considered the Travel Propensity Factor (TPF), which is the ratio of enplanements to total area population. Two forecasts were developed utilizing this method. The first considered maintaining the 2013 TPF (0.4760) through the 20-year planning horizon. The second considered a moderately increasing TPF with the Airport ultimately approaching the TPF experienced in 2000 (0.5860).

Four additional market share forecasts were developed which consider the FAA forecast of both total U.S. domestic enplanements and U.S. regional carrier enplanements, a subset of total enplanements. These forecasts consider both a constant market share of the Airport's 2013 percent as well as an increasing market share. Both of the increasing market share projections are moderate in nature as neither result in reaching enplanement levels achieved in the recent history of the Airport. For example, in 2004, the Airport captured 0.14978 percent of U.S. regional carrier enplanements, but the increasing scenario considers a 2033 market share of 0.14570 percent.

Table 2L presents a summary of the enplanement forecasts considered for the Airport. These forecasts are also shown graphically on **Exhibit 2J**. For comparative purposes, the FAA *Terminal Area Forecast* is also shown.

TABLE 2L
Enplanement Projection Summary
Monterey Regional Airport

2013 Enplanements - 200,651	2018	2023	2033	AAGR 2013-2033
Travel Propensity Factor (TPF) Projections				
Constant TPF Share	206,726	213,305	231,989	0.73%
Increasing TPF Share	212,785	233,000	282,647	1.73%
Market Share of U.S. Air Carrier Enplanements				
Constant	226,380	246,559	290,565	1.87%
Increasing	228,104	258,888	336,363	2.62%
Market Share of U.S. Regional Carrier Enplanements				
Constant	227,749	247,749	291,492	1.88%
Increasing	232,804	262,080	329,136	2.51%
Comparable Projections				
FAA TAF - 2014	219,220	234,692	269,322	1.38%
Selected Forecast	**223,000**	**245,000**	**275,000**	**1.59%**

AAGR: Average Annual Growth Rate

The six new forecasts developed create a reasonable planning envelope. The selected forecast considers higher than average growth in the short and intermediate terms as the economy returns to more normal growth patterns. Enplanement levels at the Airport over the last three years (2011-3013) have already begun showing signs of recovery with an annual growth rate in enplanements of nearly 3.4 percent. While it is not reasonable to assume this growth rate for the extended future, strong growth in enplanements in the short and intermediate term is reasonable. By the long term planning period, enplanement growth is forecast to level out somewhat. The selected enplanement forecast for the Monterey Regional Airport is for 223,000 by end of the short term planning period, 245,000 by the intermediate term, and 275,000 by the long term.

AIRLINE OPERATIONS AND FLEET MIX

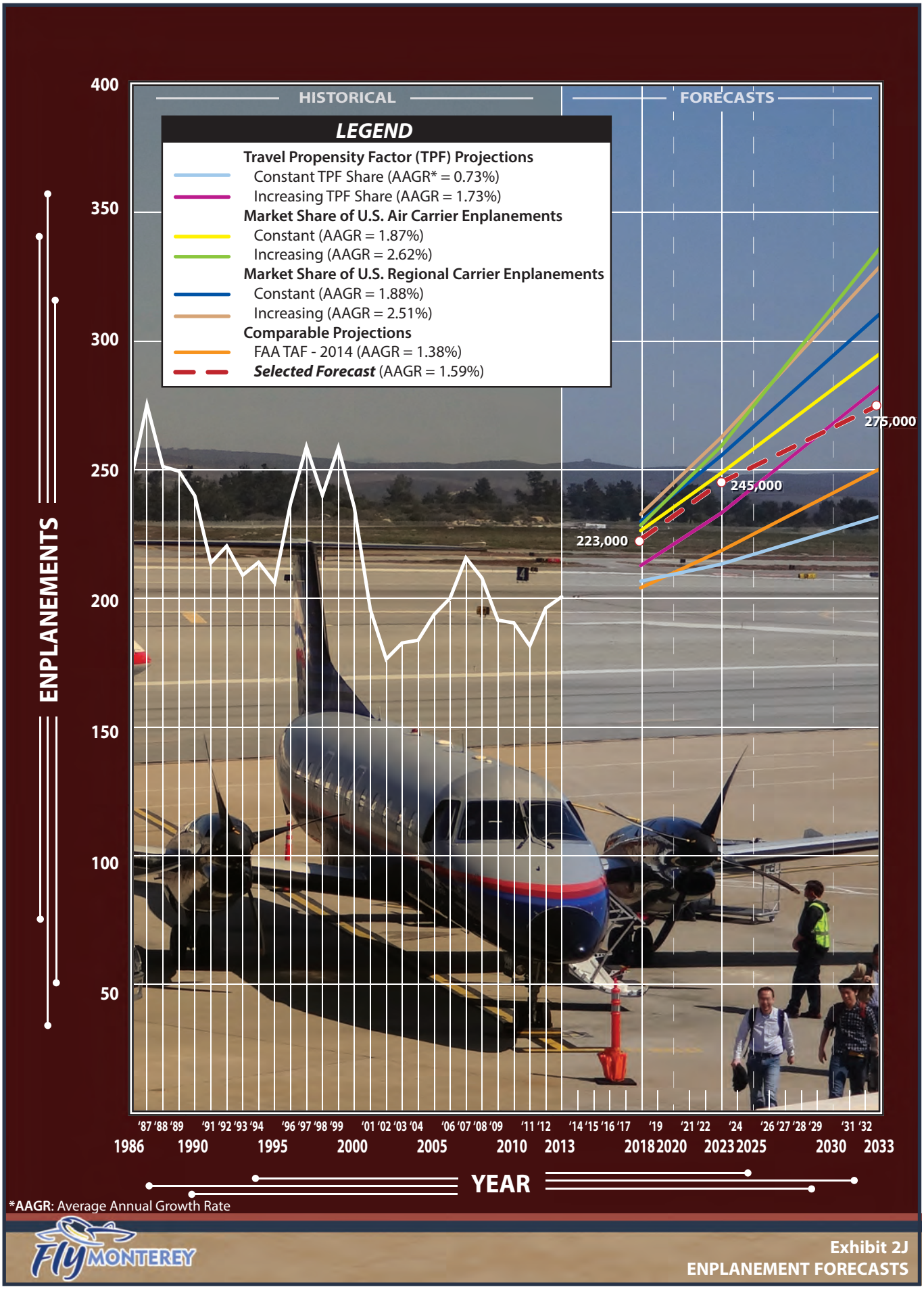
The type of aircraft in the commercial airline fleet serving the airport is an important component of airport planning. Not only is the commercial airline fleet mix serving an airport helpful in determining the number of commercial airline operations at an airport, but it is also helpful in defining many of the key parameters used in airport planning; namely, the critical aircraft serving the airport (used for pavement design, ramp apron geometry, and terminal complex layout), and the maximum stage length capabilities (which affects runway length evaluations).

Exhibit 2K presents the monthly moving totals for both airline landings and available seats since 2007 at the Airport. This graphic can be useful in identifying trends at the Airport. One noticeable trend has been the steady decline in the number of landings by United Express, yet at the same time, the number of available seats has remained fairly steady. This is an indication of the national trend toward consolidating flights using larger aircraft. United Express has done just this, moving from the smaller turboprop aircraft to regional jets over the years.

Table 2M presents an annual percentage breakdown of the airline fleet mix by seating capacity for the Airport since 2008. In 2013, approximately 61 percent of the commercial airline flights at the Airport were conducted by aircraft with between 50 and 59 passenger seats. This category includes the 50-seat CRJ-200 which is operated by US Airways, American Eagle, and United Express. The next highest category at approximately 30 percent is those aircraft with between 19 and 39 seats, which is exclusively the result of United Express's use of the Embraer 120 twin turboprop for flights to San Francisco.

By comparison, in 2008 these utilization rates were nearly reversed. The period in the mid-2000s saw many carriers transition from smaller turboprop aircraft, such as the Saab-340 and the DASH-8/200, to regional jets.

The 40-49 seat aircraft category accounted for up to 22 percent of activity at the Airport as recently as 2010. American Eagle utilized the 44-seat Embraer 140 until 2012 when they transitioned to the 50-seat CRJ-200. Today, there are no commercial flights utilizing an aircraft in this category and American Eagle is set to retire its entire fleet of Embraer 140 aircraft by 2017.



*AAGR: Average Annual Growth Rate

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Exhibit 2J
ENPLANEMENT FORECASTS

With the introduction of service by Alaska Airlines utilizing the 76-seat Q-400 turboprop, activity by aircraft in the 60-79 seat category has begun to rise, accounting for slightly over six percent of activity in 2013. This is a growth category for air carriers as they look to consolidate flights onto larger aircraft. There are several other aircraft that fall in this category which may soon operate at the Airport. These include the 70-seat Embraer 170 and 78-seat 175 models.

TABLE 2M
Existing Airline Fleet Mix by Seating Capacity and Operations
Monterey Regional Airport

	ACTUAL					
Seating Capacity/ Example Aircraft	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
100+/MD-87,82,83	1.5%	4.6%	3.6%	2.6%	2.5%	2.2%
80-99/ERJ-190,CRJ-900	1.7%	1.4%	2.6%	3.3%	0.1%	0.5%
60-79/CRJ-700,Q-400	4.7%	5.6%	6.1%	4.0%	3.5%	6.1%
50-59/ERJ-145,CRJ-200	26.3%	12.9%	29.1%	30.5%	44.6%	60.9%
40-49/ERJ-140	8.5%	19.4%	22.0%	18.9%	16.9%	0.0%
19-39/EMB-120,SAAB-340,DASH-8	57.3%	56.2%	36.6%	40.7%	32.3%	30.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Average Seats Per Departure	35	42	46	44	45	47
Board Loading Factor	53.5%	71.5%	72.9%	74.6%	72.2%	72.0%
Enplanements Per Departure	19	30	33	33	33	34
Annual Airline Enplanements	208,173	189,935	189,132	179,221	192,773	200,651
Annual Airline Departures	7,620	6,285	5,661	5,451	5,912	5,876
Annual Airline Operations	15,240	12,570	11,322	10,902	11,824	11,752
Air Carrier Ops (>59 seats)	1,200	1,452	1,400	1,078	724	1,062
Commuter Ops (<60 seats)	14,040	11,118	9,922	9,824	11,100	10,724

Source: Airport records of enplanements, landings, and equipment.

The Airport is also beginning to realize activity with larger regional jets. Republic Airlines began regular charter service to Reno and Laughlin, catering to vacationers who gamble. Republic Airlines utilizes the 99-seat Embraer 190 aircraft.

Allegiant Airlines operates the largest category of aircraft at the Airport. Currently, they utilize the 150/166 seat MD-83/88 aircraft for twice weekly trips to Las Vegas. These larger aircraft accounted for 2.2 percent of the fleet mix in 2013.

The average seats per departure have risen steadily from 35 in 2008 to 47 in 2013, reflecting the airline's shift away from the 50-seat regional jets. Over the short and intermediate term, the 50-seat regional jets will be gradually phased out entirely. It is expected that the Airport will continue to realize activity by aircraft with even greater seating capacity, such as the Q-400 turboprop, CRJ-700 and 900, and the ERJ-170 and 190 models. As passenger enplanements grow at the Airport, airlines could eventually introduce aircraft in the 115-124 seat range, such as the Boeing 737-700 or the Airbus A319. Allegiant is currently ordering the 156-seat A-319 aircraft for use on the west coast to replace the aging MD-80 series aircraft.

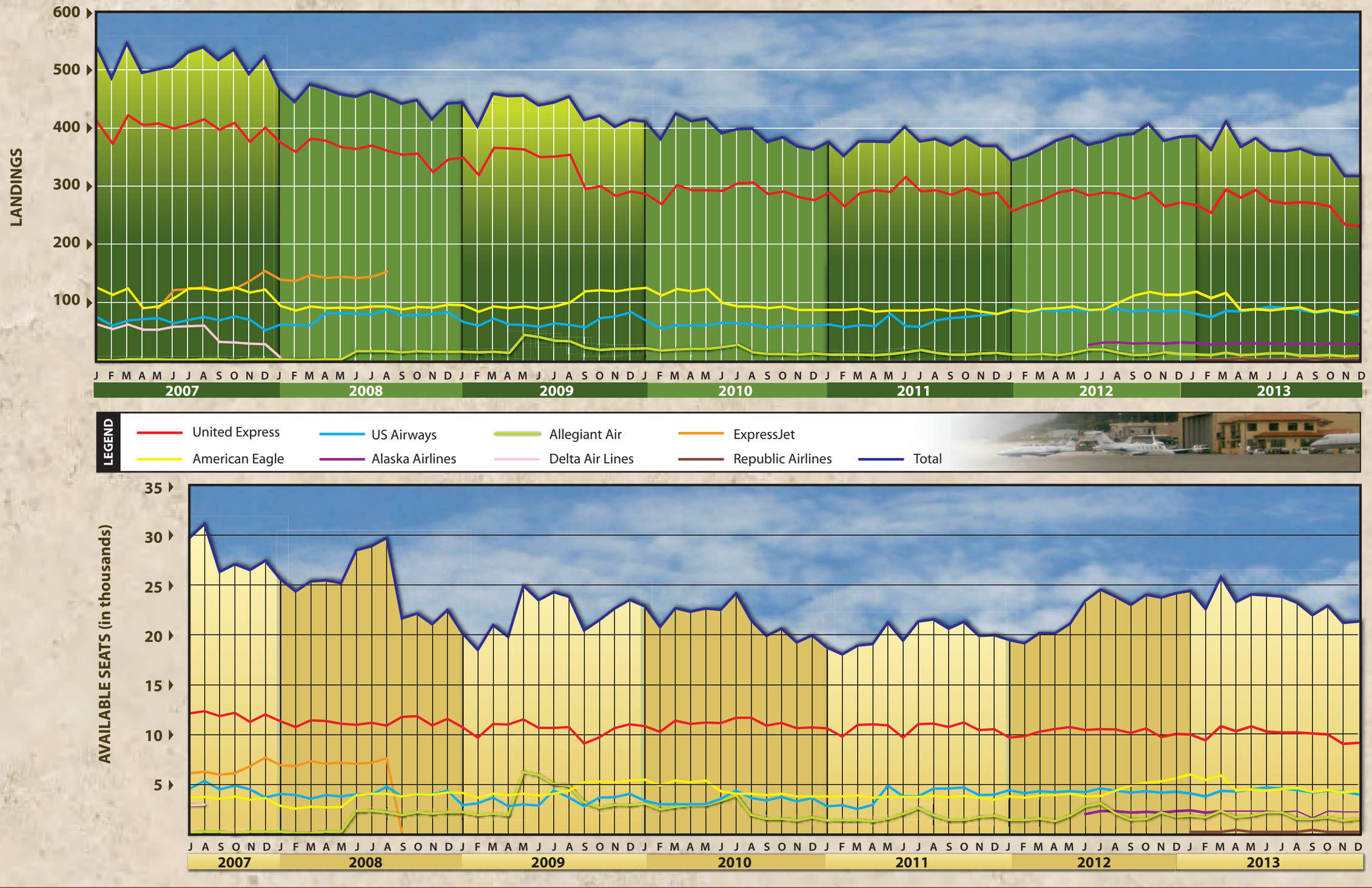

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Exhibit 2K
12-MONTH MOVING TOTALS LANDINGS AND AVAILABLE SEATS

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The boarding load factor (BLF) is defined as the ratio of passengers boarding an aircraft compared to the seating capacity of the aircraft. The BLF percentage at the Airport has been in the low to mid-70 percent since 2009. The BLF experienced by the airlines can be expected to continue to grow modestly in the future as the airlines continue to seek profitability.

The airline industry has been undergoing a dramatic adjustment in its fleet mix composition. Higher fuel prices led to a reduction in domestic capacity as airlines attempted to generate a profit. A slowing U.S. economy also impacted their ability to quickly return to profitable operations. With rising fuel costs, the original 50-seat regional jets have been found to be less cost-effective than the newer stretched versions of 66 seats and up.

The long term outlook for the airline fleet mix at the Airport is dependent on traffic growth and additional technological advancements. Current trends and fleet orders have provided input into the projection of annual departures and operations by the scheduled carriers. **Table 2N** depicts the aircraft fleet mix and seating capacities and the number of operations by each aircraft in 2013.

TABLE 2N
2013 Aircraft Seating and Operations
Monterey Regional Airport

		OPERATIONS						
Aircraft Type	**Seats**	**US Airways Express**	**American Eagle**	**United Express**	**Allegiant**	**Alaska**	**Republic**	**TOTAL**
EMB-120	27	-	-	3,566	-	-	-	3,566
CRJ200	50	2,036	2,260	2,862	-	-	-	7,158
CRJ700	70	-	-	2	-	-	-	2
Q-400	76	-	-	-	-	710	-	710
CRJ900	86	4	-	2	-	-	-	6
ERJ-190	99	-	-	-	-	-	56	56
MD-82	150	-	-	-	2	-	-	2
MD-83/88	150	-	-	-	252	-	-	252
TOTAL		2,040	2,260	6,432	254	710	56	11,752

Source: Airport records

Currently, US Airways relies heavily on the CRJ-200, but has begun to introduce the CRJ-900. American Eagle relies exclusively on the CRJ-200. United Express also heavily utilizes the CRJ-200 but has, at times, utilized the CRJ-700 and -900 at the Airport. In addition, United Express utilizes the 27-seat Embraer 120 turboprop for four daily departures to San Francisco. Alaska Airlines is utilizing the Q-400 for their once-a-day service to and from San Diego. Allegiant utilizes the MD-80 series aircraft for their twice weekly (on average) flights to and from Las Vegas. Finally, 2013 saw a new offering at the Airport. Republic Airlines is providing charter service to Reno and Laughlin utilizing the 99-seat ERJ-190 aircraft.

Table 2P presents the resulting fleet mix and operations forecast for the Airport. The table also serves as a summary of both forecast airline enplanements and operations at the Airport.

TABLE 2P
Airline Fleet Mix and Operations Forecast
Monterey Regional Airport

	ACTUAL	FORECAST		
Seating Capacity/ Example Aircraft	**2013**	**2018**	**2023**	**2033**
100+/MD-87,82,83, A-319, ERJ-195	2.2%	3.0%	4.0%	6.0%
80-99/ERJ-190,CRJ-900	0.5%	3.0%	6.0%	11.0%
60-79/CRJ-700,Q-400, ERJ-170,175	6.1%	8.0%	11.0%	17.0%
50-59/ERJ-145,CRJ-200	60.9%	61.0%	58.0%	51.0%
40-49/ERJ-140	0.0%	0.0%	0.0%	0.0%
19-39/EMB-120,SAAB-340,DASH-8	30.3%	25.0%	21.0%	15.0%
Total	100.0%	100.0%	100.0%	100.0%
Average Seats Per Departure	47	51	55	61
Board Loading Factor	72.0%	73.0%	74.0%	76.0%
Enplanements Per Departure	34	38	41	47
Annual Airline Enplanements	200,651	223,000	245,000	275,000
Annual Airline Departures	5,876	5,900	6,000	5,900
Annual Airline Operations	11,752	11,800	12,000	11,800
Air Carrier Ops (>59 seats)	1,062	1,400	2,200	3,500
Commuter Ops (<60 seats)	10,724	10,400	9,800	8,300

Source: Airport records of enplanements, landings, and equipment. Forecast: Coffman Associates.

Generally, the Airport can expect to see a transition to slightly larger aircraft over the forecast period. Aircraft with more than 60 seats are forecast to increase from 8.8 percent of the fleet activity to 34 percent by 2033. The 50-59 seat category is projected to decline by approximately 10 percent by 2033. The small commuter aircraft category with fewer than 39 seats is also expected to decline. Monterey Regional Airport will likely always have at least one smaller turboprop commuter airline providing service to the Bay area. Likewise, the 50-seat CRJs are almost ideally suited for intrastate flights.

AIR CARGO FORECASTS

Air freight includes the combined activities of the scheduled passenger airlines carrying freight on scheduled flights and the dedicated all-cargo carriers. Air mail may also be carried by both the scheduled passenger airlines and all-cargo carriers. Freight and mail together make up air cargo activity at an airport. This section describes the national aviation trends in the air cargo airline industry, historical activity at Monterey Regional Airport, and future projections of air cargo activity.

NATIONAL AIR CARGO TRENDS

Air cargo activity has historically had a high correlation to gross domestic product (GDP). Other factors that affect air cargo growth are real yields, improved productivity, and globalization. Ongoing trends that are and will continue to improve the air cargo market include the opportunities from open skies agreements, decreasing costs from global airline allianc-

es, and increasing business volumes from e-commerce. At the same time, trends that could limit air cargo growth include increased use of mail substitutes (e-mail) and increased airline costs due to environmental and security restrictions.

Before 2001, air cargo was the fastest growing sector of the aviation industry. From 1994 through 2000, total tons and revenue ton-miles (RTMs) grew at annual average rates of 8.0 and 8.6 percent, respectively. An economic slowdown in the U.S., combined with the collapse in the high-tech industry and a slowing of imports, resulted in declines of 5.0 percent in tons and 3.9 percent in RTMs in 2002. Domestic RTMs grew modestly through 2007 and then realized a steep decline that coincided with the 2008-2009 national recession. In 2006, RTMs had reached 15.4 billion tons; by 2009, 11.9 billion RTMs were realized. Domestic RTMs have been growing since 2011 and are forecast to grow 1.4 percent annually through the forecast period. By 2034, RTMs are forecast to reach 16.4 billion.

The FAA notes there are several structural changes that are occurring within the air cargo industry. Among them are the following:

- **Security regulations** – On August 3, 2007, *Recommendations of the 9/11 Commission Act of 2007* was signed into law. Section 1602 of this Act states that air cargo placed on passenger aircraft will receive the same level of screening as passenger-checked baggage. Legislation called for the establishment of a system by 2010 that required 100 percent inspection of cargo transported by passenger aircraft.

- **Market maturation** – The express market in the United States has matured after dramatic growth over the last two decades. This represents the majority of domestic air cargo activity.

- **Modal shift** – Improved service and economics from the use of alternative modes of cargo transported by the integrated cargo carriers (e.g., FedEx and UPS) has matured.

- **Increases in air fuel surcharges** – Fuel costs are a significant factor for all aviation.

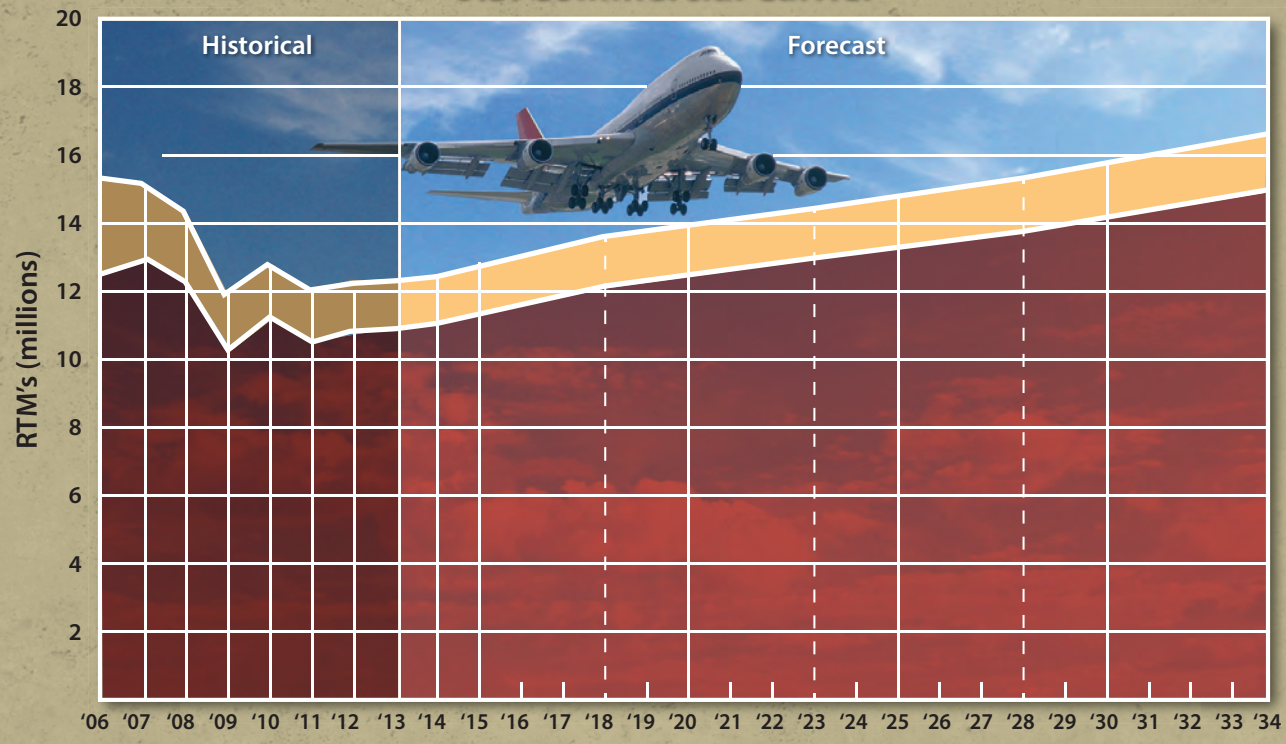
- **Increased USPS use of all-cargo carriers** – This initially resulted from the U.S. Postal Service's (USPS) need to improve control over delivery. The trend has continued due to security regulations.

- **Increased use of mail substitutes** – Substitutes such as e-mail affect mail volume. The residual fear of mail because of terrorism has also been a factor.

The FAA forecast for RTMs was based on several specific assumptions exclusive to the air cargo industry. First, security restrictions will remain in place. Second, most of the shift from air to ground transportation has occurred. Finally, long-term cargo activity is tied to economic growth.

The largest growth will continue to be in international cargo, which is projected to grow at an annual average rate of 5.2 percent from 2013 through 2034. Domestic cargo is forecast to grow at an annual rate of 1.4 percent over the same period. **Exhibit 2L** depicts the FAA forecasts for air cargo and the forecast for cargo activity at Monterey Regional Airport.

Domestic Air Cargo Revenue Ton Miles (RTM's)
U.S. Commercial Carrier



Source: FAA Aerospace Forecasts 2014-2034

Monterey Air Cargo Total Pounds

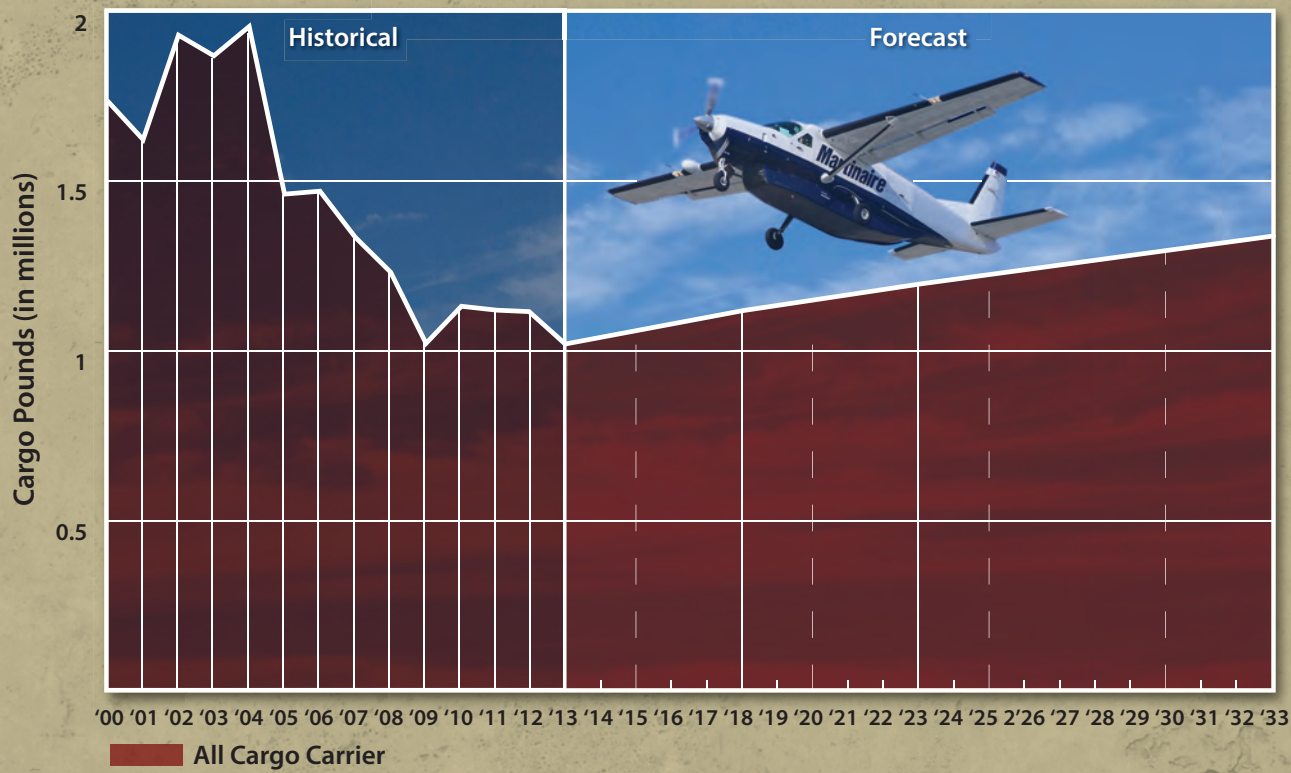


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Exhibit 2L
AIR CARGO FORECAST

Air cargo RTMs flown by all-cargo carriers comprised 79.7 percent of total RTMs in 2013, with passenger carriers flying the remainder. Total RTMs flown by the all-cargo carriers decreased 5.0 percent in 2013 from 29.2 billion to 27.7 billion. Total RTM flown by passenger carriers were 7.1 billion in 2013, 3.8 percent lower than in 2012. Both trends are forecast to reverse rather quickly with all-cargo RTMs increasing 4.3 percent annually through 2034, and passenger carrier RTM increasing 3.3 percent annually through the same period.

The number of large cargo jet aircraft declined by 98 aircraft in 2013, primarily due to the retirements of 727-200s and 747-200s by Federal Express, Evergreen, and Southern Air. For the remainder of the forecast period, cargo large jet aircraft at U.S. carriers are forecast to grow at an average annual rate of 2.4 percent to 1,182 aircraft in 2034. The narrow-body, cargo jet fleet is projected to increase by five aircraft per year over the forecast period as older 757's and 737's are converted to cargo service. The wide-body, cargo jet fleet is projected to increase by 16 aircraft yearly.

AIR CARGO FORECAST

Air cargo at Monterey Regional Airport is handled by primary carriers West Air/FedEx and Martin Aire/UPS. Both West Air and Martin Aire utilize the Cessna Caravan single engine turboprop aircraft. Both operate daily to Oakland International Airport. The Caravan has a maximum payload capacity of 3,665 pounds.

Table 2Q depicts air cargo activity at the Airport since 2000. The Airport has shown a steady decline in air cargo tons. The recessions of 2001 and 2008-2009 are clearly reflected by decreases in air cargo activity. The table provides a constant share projection of national domestic RTMs as the forecast for the Airport. Projected air cargo at the Airport is not expected to reach levels that will produce major air cargo fleet mix changes. The existing fleet of turboprops will be capable of accommodating the projected air cargo growth through 2033.

TABLE 2Q
Cargo Activity
Monterey Regional Airport

Year	MRY Air Cargo Total (lbs.)[1]	U.S. Revenue Ton-Miles[2]	Airport Market Share
2004	1,934,863	15,150,100,000	0.012771%
2005	1,450,523	15,265,000,000	0.009502%
2006	1,459,111	15,380,900,000	0.009487%
2007	1,325,757	15,219,100,000	0.008711%
2008	1,224,945	14,407,600,000	0.008502%
2009	1,019,314	11,898,600,000	0.008567%
2010	1,126,522	12,823,100,000	0.008785%
2011	1,115,218	12,046,900,000	0.009257%
2012	1,111,100	12,294,800,000	0.009037%
2013	1,021,856	12,375,200,000	0.008257%
FORECAST			
2018	1,124,000	13,608,400,000	0.008257%
2023	1,196,000	14,484,400,000	0.008257%
2033	1,339,000	16,212,900,000	0.008257%

Source: [1]Airport records; [2]FAA Aerospace Forecasts Fiscal Years 2014-2034.

GENERAL AVIATION FORECASTS

General aviation encompasses all portions of civil aviation except commercial service and military operations. To determine the types and sizes of facilities that should be planned to accommodate general aviation activity at Monterey Regional Airport, certain elements of this activity must be forecast. These indicators of general aviation demand include based aircraft, aircraft fleet mix, and annual operations.

FAA GENERAL AVIATION FORECASTS

The FAA forecasts the fleet and hours flown for single-engine piston aircraft, multi-engine piston aircraft, turboprops, business jets, piston and turbine helicopters, light sport, experimental, and others (gliders and balloons). The FAA forecasts "active aircraft," not total aircraft. An active aircraft is one that is flown at least one hour during the year. **Exhibit 2M** presents the historical and forecast U.S. active general aviation aircraft.

After growing rapidly for most of the past decade, the demand for business jet aircraft has slowed over the past few years as the industry has been hard hit by the economic recession. Nonetheless, the FAA forecast calls for robust growth in the long-term, driven by higher corporate profits and the growth of worldwide GDP. Additionally, continued concerns about safety, security, and flight delays keep business aviation attractive relative to commercial air travel. Overall, business aviation is projected to outpace personal/recreational use.

The active general aviation fleet is projected to increase at an average annual rate of 0.5 percent through 2034, growing from a 2013 estimate of 202,865 to 225,700 in 2034.

The turbine fleet, including helicopters, is forecast to grow annually at 2.6 percent, growing from 29,110 in 2013 to 49,565 in 2034. The fixed wing jet aircraft portion is forecast to grow 3.0 percent annually from a 2013 estimate of 11,890 to 14,370 in 2034. Turbine helicopter portion is forecast to grow 3.0 percent annually reaching 13,145 by 2034.

Piston-powered aircraft, including helicopters, are projected to decrease from the 2013 total of 141,325 to 131,615 through 2034, with declines in both single and multi-engine fixed wing aircraft but growth in piston helicopters. Over the forecast period, piston-powered fixed-wing aircraft are projected to decrease by an average annual rate of 0.4 percent. Although piston helicopters are forecast to increase by 1 percent a year, they are a relatively small portion of this segment of general aviation aircraft and, therefore, have little effect on the overall trend. Single-engine fixed-wing piston aircraft, which are much more numerous, are projected to decline at an annual rate of 0.4 percent, while multi-engine fixed wing piston aircraft are projected to decline by 0.5 percent a year.

The FAA began tracking the light sport aircraft segment of the general aviation fleet in 2005. At the end of 2013, a total of 2,110 of these aircraft were estimated. By 2034, a total

U.S. Active General Aviation Aircraft

CATEGORY	2013	2018	2023	2033	AAGR 2013-2033
FIXED WING					
Piston					
Single Engine	123,730	119,435	116,190	113,780	-0.42%
Multi-Engine	14,235	13,955	13,575	12,935	-0.48%
Turbine					
Turboprop	10,195	10,285	10,820	13,930	1.57%
Turbojet	11,890	13,225	15,315	21,340	2.97%
ROTORCRAFT					
Piston	3,360	3,710	4,030	4,680	1.67%
Turbine	7,025	8,405	9,870	12,825	3.06%
EXPERIMENTAL					
	25,305	27,705	29,715	34,010	1.49%
SPORT AIRCRAFT					
	2,110	2,830	3,450	4,780	4.17%
OTHER					
	5,015	5,065	5,110	5,190	0.17%
TOTAL PISTONS	**141,325**	**137,100**	**133,795**	**131,395**	**-0.36%**
TOTAL TURBINES	**29,110**	**31,915**	**36,005**	**48,095**	**2.54%**
TOTAL	**202,865**	**204,615**	**208,075**	**223,470**	**0.48%**

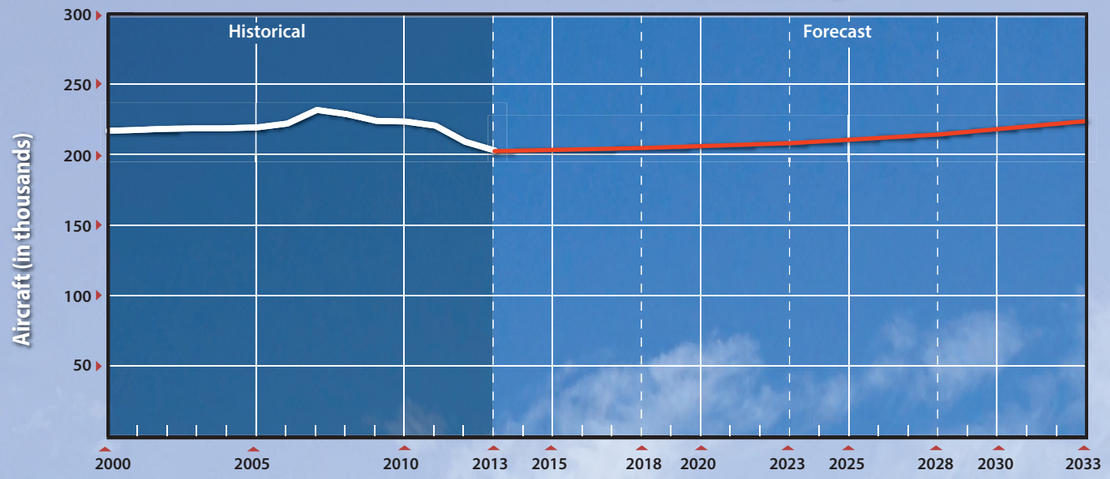
U.S. General Aviation Operations

CATEGORY	2013	2018	2023	2033	AAGR 2013-2033
ITINERANT					
	14,119,000	14,435,900	14,778,800	15,513,900	0.47%
LOCAL					
	11,690,000	12,207,100	12,474,700	13,048,100	0.55%
TOTAL GA OPERATIONS	**25,809,000**	**26,643,000**	**27,253,500**	**28,562,000**	**0.51%**

U.S. General Aviation Air Taxi

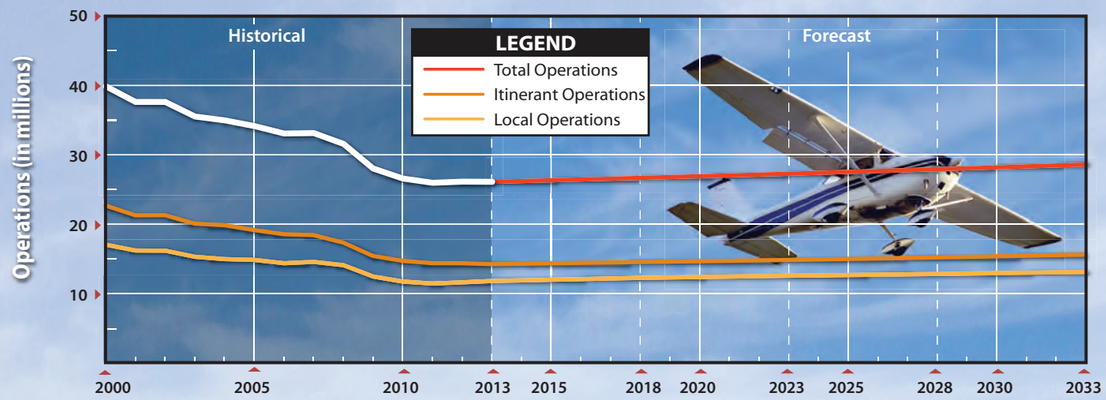
CATEGORY	2013	2018	2023	2033	AAGR 2013-2033
AIR TAXI/COMMUTER OPERATIONS					
	8,803,600	9,102,900	9,317,400	8,465,500	-0.20%

U.S. Active General Aviation Aircraft



Notes: An active aircraft is one that has a current registration and was flown at least one hour during the calendar year.

U.S. General Aviation Operations



U.S. General Aviation Air Taxi Operations

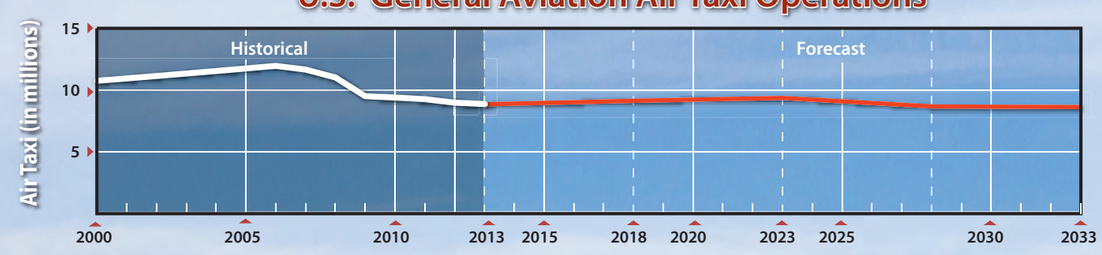


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Exhibit 2M
NATIONAL GA/AIR TAXI FORECASTS

Source: FAA Aerospace Forecasts 2014-2034

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of 4,880 light sport aircraft are forecast to be in the fleet for an annual growth rate of 4.1 percent.

BASED AIRCRAFT FORECAST

The number of based aircraft is the most basic indicator of general aviation demand. By first developing a forecast of based aircraft for Monterey Regional Airport, other general aviation activities and demand can be projected. The process of developing forecasts of based aircraft begins with an analysis of aircraft ownership in the primary general aviation service area through a review of historical aircraft registrations.

Area Aircraft Ownership (Registered Aircraft)

Analysis presented earlier indicates that Monterey County is the primary service area for general aviation demand. Aircraft ownership trends for the primary service area typically dictate the based aircraft trends for an airport. As such, an analysis of Monterey County aircraft registrations was made.

Table 2R presents the history of registered aircraft in Monterey County from 1993 through 2013. These figures are derived from the FAA aircraft registration database that categorized registered aircraft by county based on the zip code of the registered aircraft. Although this information generally provides a correlation to based aircraft, it is not uncommon for some aircraft to be registered in the county, but based at an airport outside the county or vice versa.

TABLE 2R
Monterey County Registered Aircraft

Year	SEP	MEP	TP	J	H	O	Total
1993	388	53	11	19	30	7	508
1994	387	50	10	19	30	7	503
1995	390	52	10	21	28	9	510
1996	376	49	13	23	30	8	499
1997	368	47	12	20	30	8	485
1998	368	42	13	20	31	10	484
1999	372	50	18	19	34	9	502
2000	391	49	17	23	35	13	528
2001	381	40	37	29	36	11	534
2002	377	40	37	31	36	11	532
2003	358	27	52	33	33	9	512
2004	354	29	49	34	32	8	506
2005	368	32	47	27	31	8	513
2006	391	50	18	15	31	10	515
2007	412	50	11	15	31	12	531
2008	407	42	21	20	32	14	536
2009	397	38	20	22	34	14	525
2010	381	36	17	15	37	13	499
2011	377	36	19	16	37	13	498
2012	335	31	17	17	34	8	442
2013	317	22	15	14	30	4	402

SEP-Single engine piston; MEP-Multi-engine piston, TP-Turboprop, J-Jet, H-Helicopter, O-Other (ultralights, etc.)
Source: FAA Aircraft Registration Database

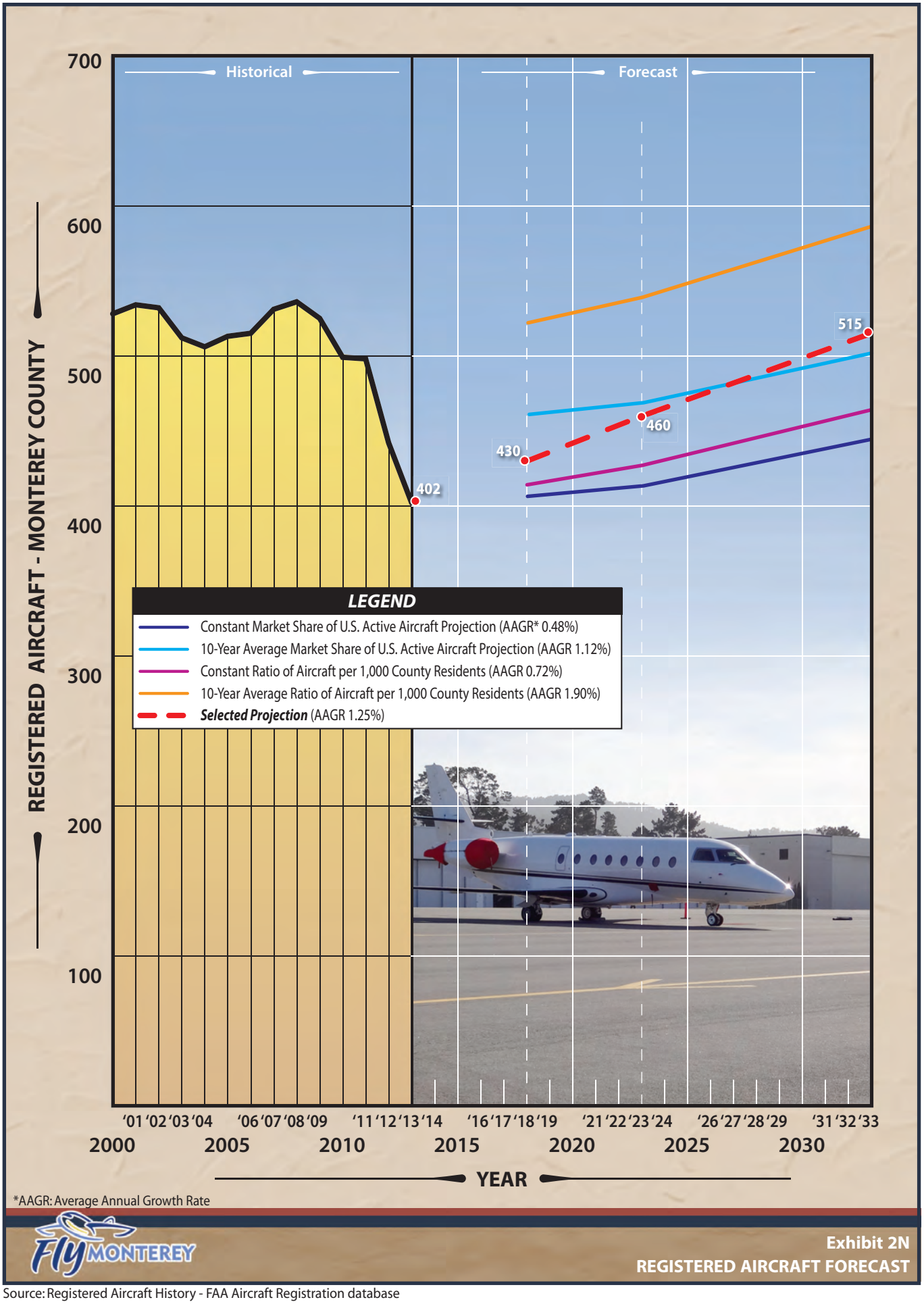
In 2013, there were 402 aircraft registered in the county. This represented the lowest level since 1993. The highest number of registered aircraft was 534 in 2001. Over the previous 20 years, the county has averaged 503 registered aircraft. Now that the actual number of registered aircraft has been identified, several projections of future registered aircraft are considered for the 20-year planning horizon.

Registered aircraft projections are presented in **Table 2S** and are graphically depicted on **Exhibit 2N**. These projections evaluate the potential growth of aircraft demand (registered aircraft) in Monterey County over the next 20 years.

TABLE 2S
Registered Aircraft Projections
Monterey County

Year	County Registrations[1]	U.S. Active Aircraft[2]	Market Share	County Population[3]	Aircraft Per 1,000 Residents
2000	528	217,533	0.2427%	401,762	1.3142
2001	534	211,446	0.2525%	403,072	1.3248
2002	532	211,244	0.2518%	404,387	1.3156
2003	512	209,606	0.2443%	405,705	1.2620
2004	506	219,319	0.2307%	407,028	1.2432
2005	513	224,257	0.2288%	408,356	1.2563
2006	515	221,942	0.2320%	409,687	1.2571
2007	531	231,606	0.2293%	411,023	1.2919
2008	536	228,664	0.2344%	412,364	1.2998
2009	525	223,876	0.2345%	413,708	1.2690
2010	499	223,370	0.2234%	415,057	1.2022
2011	498	220,453	0.2259%	416,968	1.1943
2012	442	209,034	0.2114%	419,586	1.0534
2013	402	202,865	0.1982%	421,949	0.9527
Constant Market Share of U.S. Active Aircraft Projection (AAGR = 0.48%)					
2018	405	204,615	0.1982%	434,255	0.9337
2023	412	208,075	0.1982%	448,076	0.9202
2033	443	223,470	0.1982%	487,323	0.9087
10-Year Average Market Share of U.S. Active Aircraft Projection (AAGR = 1.12%)					
2018	460	204,615	0.2249%	434,255	1.0595
2023	468	208,075	0.2249%	448,076	1.0442
2033	502	223,470	0.2249%	487,323	1.0311
Constant Ratio of Aircraft per 1,000 County Residents (AAGR = 0.72%)					
2018	414	204,615	0.2022%	434,255	0.9527
2023	427	208,075	0.2052%	448,076	0.9527
2033	464	223,470	0.2078%	487,323	0.9527
10-Year Average Ratio of Aircraft per 1,000 County Residents (AAGR =1.90%)					
2018	522	204,615	0.2551%	434,255	1.2020
2023	539	208,075	0.2588%	448,076	1.2020
2033	586	223,470	0.2621%	487,323	1.2020
Selected Projection (AAGR = 1.25%)					
2018	***430***	204,615	0.2102%	434,255	0.9902
2023	***460***	208,075	0.2211%	448,076	1.0266
2033	***515***	223,470	0.2305%	487,323	1.0568

Source: [1]County Aircraft Registrations from FAA Aircraft Registration Database
[2]FAA Aerospace Forecasts – Fiscal Years 2014-2034
[3]California Department of Finance



*AAGR: Average Annual Growth Rate

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Exhibit 2N
REGISTERED AIRCRAFT FORECAST

Source: Registered Aircraft History - FAA Aircraft Registration database

Since 2009, the number of registered aircraft in Monterey County has declined annually. In 2013, there were 402 registered aircraft compared to 536 in 2008. As a result, various regression and time-series analyses did not result in a reliable forecast. Therefore, several market share forecasts have been developed.

The first two projections consider the county's market share of total active general aviation aircraft in the U.S. fleet as identified in the FAA's annual forecasts. The first projection considers the county maintaining its 2013 percent (0.1982%) as a constant into the forecast years. This results in a long term projection of 443 registered aircraft and an annual growth rate of 0.48 percent. The second projection applies the 10-year average market share of registered aircraft as a ratio to the U.S. active aircraft fleet. This results in a constant market share of 0.2249 percent and an annual growth rate of 1.12 percent. By 2033, this projection results in 502 registered aircraft in the county.

The next two projections consider the ratio of forecast population for the county to registered aircraft. The first of these projections considers the Airport maintaining its 2013 ratio of 0.9527 aircraft per 1,000 people in the county. This results in a 2033 projection of 464 registered aircraft and an annual growth rate of 0.72 percent. The second projection considers the 10-year average (1.2020) of registered aircraft per 1,000 county residents.

The selected forecast of registered aircraft assumes that by 2033, the county can achieve an average of the four projections presented. By the long term, 515 registered aircraft are forecast. The 2018 and 2023 projections show progressive growth toward the long term projection.

The registered aircraft projection is one data point to be used in the development of a based aircraft forecast. The following section will present several potential based aircraft forecasts as well as the selected based aircraft master plan forecast.

Based Aircraft Forecasts

Determining the number of based aircraft at an airport can be a challenging task. Aircraft storage can be somewhat transient in nature, meaning aircraft owners can and do move their aircraft. Some aircraft owners may store their aircraft at an airport for only part of the year. For many years, the FAA did not require based aircraft records; therefore, historical records are often incomplete or non-existent. For this study, the Airport provided leasing information for those hangars that the Airport owns and obtained the number of aircraft housed in hangars owned by others. As of 2013, there were 152 aircraft based at Monterey Regional Airport.

The FAA TAF is an initial forecast source for based aircraft at the Airport. The 2014 TAF estimated that there were 138 based aircraft in 2013, which was forecast to grow to 171 by 2033 for an annual growth rate of 1.08 percent. **Table 2T** shows the FAA TAF history and forecasts of based aircraft. As can be seen, the 2014 TAF underestimates the number of based aircraft by 14 aircraft. Form 5010 is the FAA *Airport Master Record* for an airport and it presents a single year based aircraft figure. In 2013, Form 5010 for the Airport identified 136 based aircraft, which consisted of 112 single engine piston, 14 multi-engine pis-

ton, 7 jets, and 3 helicopters. Obviously, there is a range of based aircraft that have been reported for the Airport.

TABLE 2T
Existing Based Aircraft Forecasts
Monterey Regional Airport

	2004	2009	2013	2018	2023	2033
Monterey Regional Airport						
Actual Based Aircraft			152			
FAA TAF 2014	154	159	138	146	154	171
Form 5010 Airport Master Record			136			

TAF - Terminal Area Forecast

Several forecasts of based aircraft for the Airport have been developed. As with forecasts of registered aircraft, the goal is to develop a planning envelope of reasonable forecasts, then select a 20-year planning forecast for use in this study.

Table 2U considers several market share forecasts for based aircraft utilizing the forecast of registered aircraft in the county. In 2013, Monterey Regional Airport, with 152 based aircraft, accounted for 37.81 percent of the registered aircraft in the county. By maintaining this percent as a constant, a long term forecast of based aircraft emerges which results in 195 based aircraft by 2033. A second projection considers a modestly increasing market share of the county's registered aircraft. This forecast results in 216 based aircraft by 2033. A third projection shown utilizes the 2014 TAF projected annual growth rate of 1.08 percent as applied to the current based aircraft figure of 152. This results in a 2033 based aircraft estimate of 188. For comparative purposes, the 2014 TAF based aircraft projection is also presented.

TABLE 2U
Based Aircraft Forecast
Monterey Regional Airport

Year	Monterey County Registered Aircraft	Based Aircraft	Market Share
2013	402	152	37.81%
Constant Share Projection (AAGR 1.25%)			
2018	430	163	37.81%
2023	460	174	37.81%
2033	515	195	37.81%
Increasing Share Projection (AAGE 1.78%)			
2018	430	166	38.50%
2023	460	184	40.00%
2033	515	216	42.00%
2014 TAF Growth Rate With Current Baseline of 152 Based Aircraft (AAGR = 1.07%)			
2018	430	160	37.21%
2023	460	169	36.74%
2033	515	188	36.50%
FAA TAF 2014 (AAGR = 0.59%)			
2018	430	146	33.95%
2023	460	154	33.48%
2033	515	171	33.20%
Selected Planning Forecast (AAGR 1.38%)			
2018	430	160	37.21%
2023	460	175	38.04%
2033	515	200	38.83%

AAGR: Average Annual Growth Rate
Notes: 2013 based aircraft count from airport records.

The three new forecasts represent the reasonable planning envelope. The selected forecast is an approximate average of the projections. In the next five years, 160 based aircraft are projected. In 10 years, 175 are projected and by 2033, 200 based aircraft are projected. **Exhibit 2P** illustrates the based aircraft forecast.

BASED AIRCRAFT FLEET MIX

The fleet mix of based aircraft is oftentimes more important to airport planning and design than the total number of aircraft. For example, the presence of one or a few large business jets can impact design standards for the runway and taxiway system more than a large number of smaller single engine piston-powered aircraft.

The based aircraft fleet mix forecast for Monterey Regional Airport is presented in **Table 2V**. It has been developed based on local aircraft type usage and national trends as presented in FAA *Aerospace Forecasts - Fiscal Years 2014-2034*. The FAA expects business jets will continue to be the fastest growing general aviation aircraft type in the future. Monterey Regional Airport is well positioned to accommodate business jets in the future; nevertheless, smaller piston-powered aircraft will continue to dominate the based aircraft total at the Airport.

TABLE 2V
Based Aircraft Fleet Mix
Monterey Regional Airport

	EXISTING		FORECAST					
Aircraft Type	**2013**	**%**	**2018**	**%**	**2023**	**%**	**2033**	**%**
Single Engine	126	82.89%	129	80.63%	138	78.86%	152	76.00%
Multi-Engine	9	5.92%	9	5.63%	9	5.14%	8	4.00%
Turboprop	6	3.95%	8	5.00%	10	5.71%	14	7.00%
Jet	7	4.61%	9	5.63%	12	6.86%	18	9.00%
Helicopter	4	2.63%	5	3.13%	6	3.43%	8	4.00%
Totals	**152**	100.00%	**160**	100.00%	**175**	100.00%	**200**	100.00%

Source: Airport Records; Coffman Associates analysis

GENERAL AVIATION OPERATIONS

General aviation (GA) operations are classified by the airport traffic control tower (ATCT) as either local or itinerant. A local operation is a take-off or landing performed by an aircraft that operates within sight of an airport, or which executes simulated approaches or touch-and-go operations at an airport. Itinerant operations are those performed by aircraft with a specific origin or destination away from an airport. Generally, local operations are characterized by training operations. Typically, itinerant operations increase with business and commercial use, since business aircraft are operated on a higher frequency.

While the Airport is open 24-hours a day, year round, the tower is open from 6:00am to 9:00pm daily. Therefore, it is likely that the tower does not count all activity at the airport. To be consistence with FAA, the general aviation operations forecast to follow consider

those operations that occur when the tower is open. Certain analysis to be conducted later in the Master Plan may incorporate an estimate of nighttime activity.

Itinerant Operations

Table 2W depicts general aviation itinerant operations at the Airport from 2000 through 2013. General aviation itinerant operations have experienced a declining trend since the most recent national recession in 2008. National general aviation itinerant operations have been declining since 2005, but have taken a steeper decline since the beginning of the recession and have yet to recover; however, the FAA forecasts a reversal by 2014. From 2012 through 2033, the FAA forecasts an annual growth rate of 0.4 percent for itinerant general aviation operations.

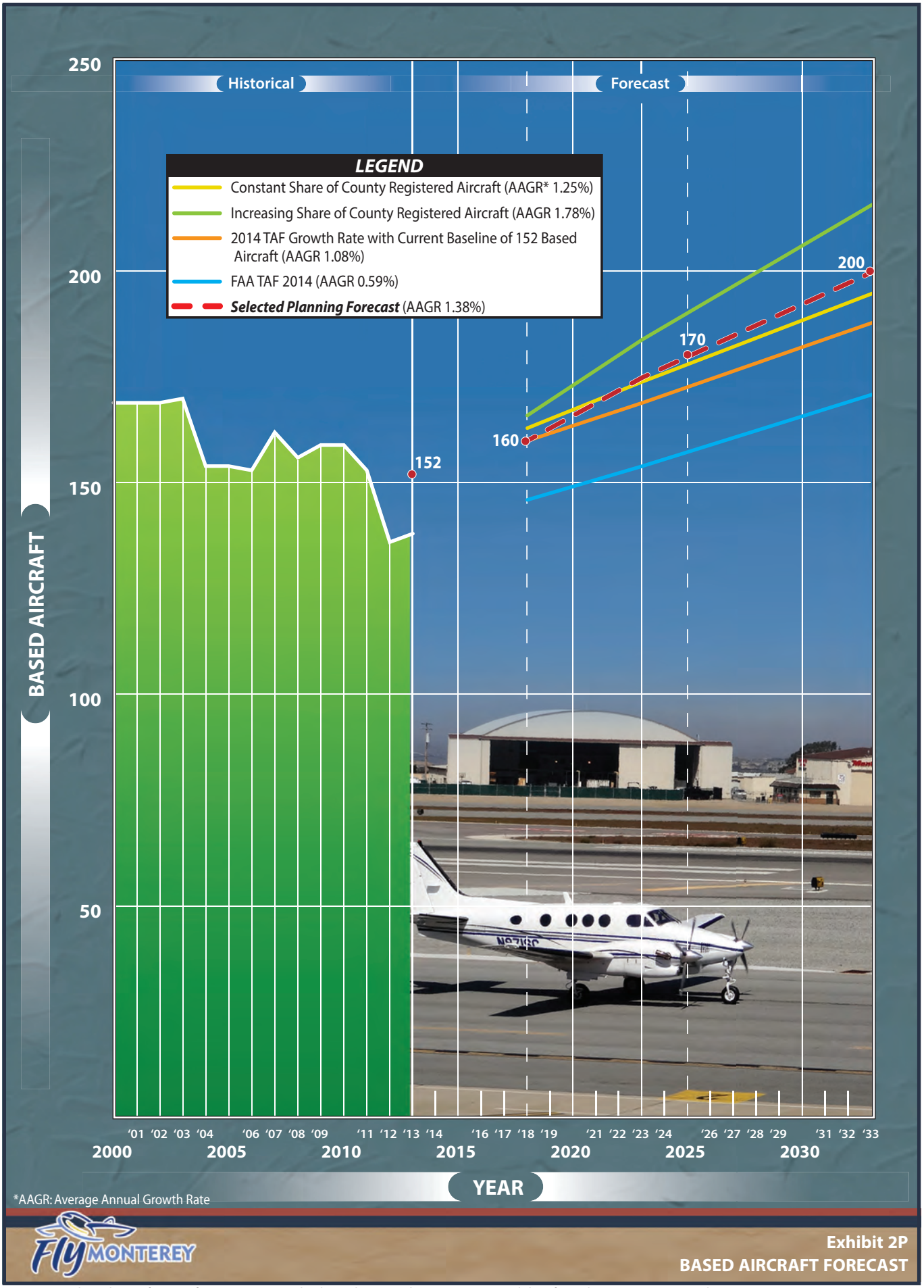
From 2000 through 2007, the Airport experienced more than 50,000 annual itinerant general aviation operations. With the onset of the 2008 recession and subsequent slow recovery, itinerant general aviation operations have steadily declined, reaching 25,270 in 2013.

The first two forecasts consider future itinerant general aviation operations in comparison to the Airport's market share of national itinerant general aviation operations as forecast by the FAA. The first forecast considers the Airport maintaining a constant market share (0.1790 percent) of national itinerant general aviation operations which yields 27,676 operations by 2033. The next considers the Airport beginning to regain market share with a modestly increasing share of national itinerant general aviation operations. By the long term, the increasing market share forecast results in 39,250 operations.

The next two projections consider the relationship between based aircraft and itinerant general aviation operations. In 2013, there were 166 itinerant general aviation operations per based aircraft. When maintaining this ratio, a forecast results in 33,250 itinerant general aviation operations by 2033. This represents an annual growth rate of 1.38 percent. The second forecast considers an increasing number of itinerant general aviation operations per based aircraft. By 2033, itinerant general aviation operations reach 44,000, which correspond to 220 operations per based aircraft and an annual growth rate of 2.81 percent.

The last new projection considers the Airport ultimately recapturing its high mark of itinerant general aviation operations, approximately 58,000, which was last achieved in 2006. This forecast results in an aggressive annual growth rate of 4.24 percent.

The 2014 FAA TAF also presents an itinerant general aviation operation forecast which is included in the table. The TAF forecasts a negative growth rate of -0.28 percent annually. This results in a 2033 itinerant general aviation operations projection of 23,896. The 20-year forecast from the TAF was exceeded as recently as 2013 and is, therefore, likely a very low estimate.



Notes: 2013 based aircraft count from airport records (through September 2013). Historical data from the 2014 FAA Terminal Area Forecast.

TABLE 2W
General Aviation Itinerant Operations Forecast
Monterey Regional Airport

Year	MRY GA Itinerant Ops[1]	US GA Itinerant Ops[2]	Market Share Itinerant Ops	MRY Based Aircraft[3]	Itinerant Ops Per Based Aircraft
2000	58,120	22,844,100	0.2544%		
2001	53,279	21,433,300	0.2486%		
2002	52,577	21,450,500	0.2451%		
2003	49,796	20,231,300	0.2461%		
2004	50,728	20,007,200	0.2535%		
2005	56,232	19,303,200	0.2913%		
2006	58,369	18,707,100	0.3120%		
2007	50,857	18,575,200	0.2738%		
2008	45,137	17,492,700	0.2580%		
2009	36,390	15,571,100	0.2337%		
2010	29,487	14,863,900	0.1984%		
2011	25,858	14,527,900	0.1780%		
2012	26,034	14,521,700	0.1793%		
2013	25,270	14,119,000	0.1790%	152	166
Constant Market Share of 2013 Percent (AAGR = 0.47%)					
2018	25,837	14,435,900	0.1790%	160	161
2023	26,451	14,778,800	0.1790%	175	151
2033	27,767	15,513,900	0.1790%	200	139
Increasing Market Share (AAGR = 2.23%)					
2018	27,861	14,435,900	0.1930%	160	174
2023	31,479	14,778,800	0.2130%	175	180
2033	39,250	15,513,900	0.2530%	200	196
Constant Operations Per Based Aircraft (AAGR = 1.38%)					
2018	26,600	14,435,900	0.1843%	160	166
2023	29,094	14,778,800	0.1969%	175	166
2033	33,250	15,513,900	0.2143%	200	166
Increasing Operations Per Based Aircraft (AAGR = 2.81%)					
2018	30,400	14,435,900	0.2106%	160	190
2023	35,000	14,778,800	0.2368%	175	200
2033	44,000	15,513,900	0.2836%	200	220
Recapture 10-Year High of Operations (AAGR = 4.24%)					
2018	30,000	14,435,900	0.2078%	160	188
2023	40,000	14,778,800	0.2707%	175	229
2033	58,000	15,513,900	0.3739%	200	290
2014 FAA TAF Projections (AAGR = -0.28%)					
2018	24,001	14,435,900	0.1663%	160	150
2023	23,966	14,778,800	0.1622%	175	137
2033	23,896	15,513,900	0.1540%	200	119
Selected Planning Forecast (AAGR = 2.37%)					
2018	28,100	14,435,900	0.1947%	160	176
2023	31,300	14,778,800	0.2118%	175	179
2033	40,400	15,513,900	0.2604%	200	202

[1]Historical data from ATCT records as reported to FAA in calendar years.
[2]FAA Forecasts Fiscal Years 2014-2034
[3]Airport records
AAGR = Average Annual Growth Rate from 2013 to 2033
Source: Coffman Associates analysis

The selected planning forecast is an approximate average of the five new forecasts (excluding the FAA TAF). In the next five years, itinerant general aviation operations are forecast to reach 28,100. In 10 years, 31,300 itinerant general aviation operations are forecast and by 2033, 40,400 itinerant general aviation operations are projected. **Exhibit 2Q** presents both the itinerant and local general aviation operations forecast.

Local Operations

A similar methodology was utilized to forecast local general aviation operations. **Table 2X** depicts the history of local operations at the Airport and examines its historic market share of GA local operations at towered airports in the United States. Historical local operations range from a low of 4,660 in 2003 to a high of 14,644 in 2001. Over the last three years (2011-2013), the Airport has experienced more than 10,000 annual local general aviation operations.

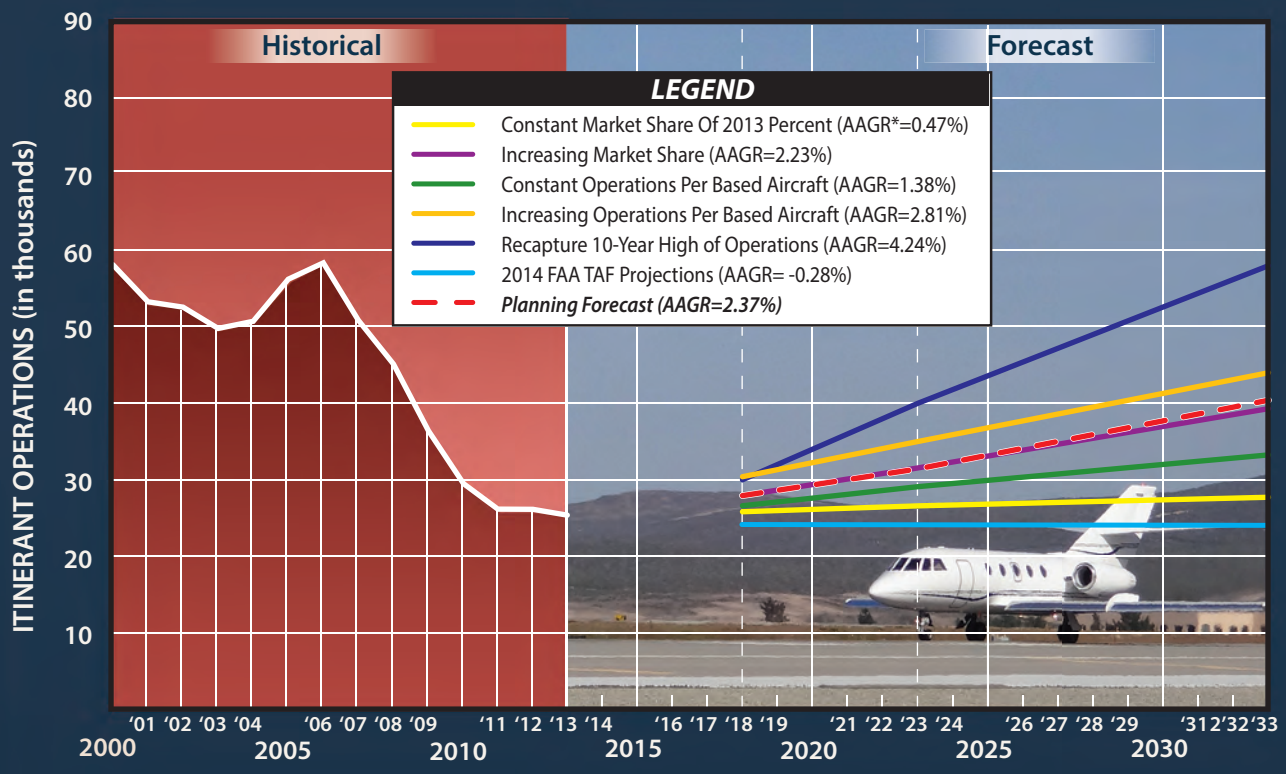
As with national itinerant operations, local operations declined significantly beginning with the recession of 2008. By 2010, this decline had stabilized and growth returned by 2012. While local general aviation operations declined by 2.9 percent annually from 2000-2013, the FAA forecasts that growth will return and continue at an annual rate of 0.5 percent through 2033.

The first two forecasts of local general aviation operations consider the Airport's market share of national local general aviation operations as counted by the FAA. The first maintains the Airport's 2013 market share at 0.0930 percent resulting in 12,140 local general aviation operations by 2033. This is likely a lower end forecast due to the fact that as recently as 2012, the Airport experienced more than 11,000 local general aviation operations. This forecast results in an annual growth rate of 0.55 percent. The second forecast applies an increasing market share forecast. This forecast results in 17,223 local general aviation operations by 2033 and an annual growth rate of 2.33 percent.

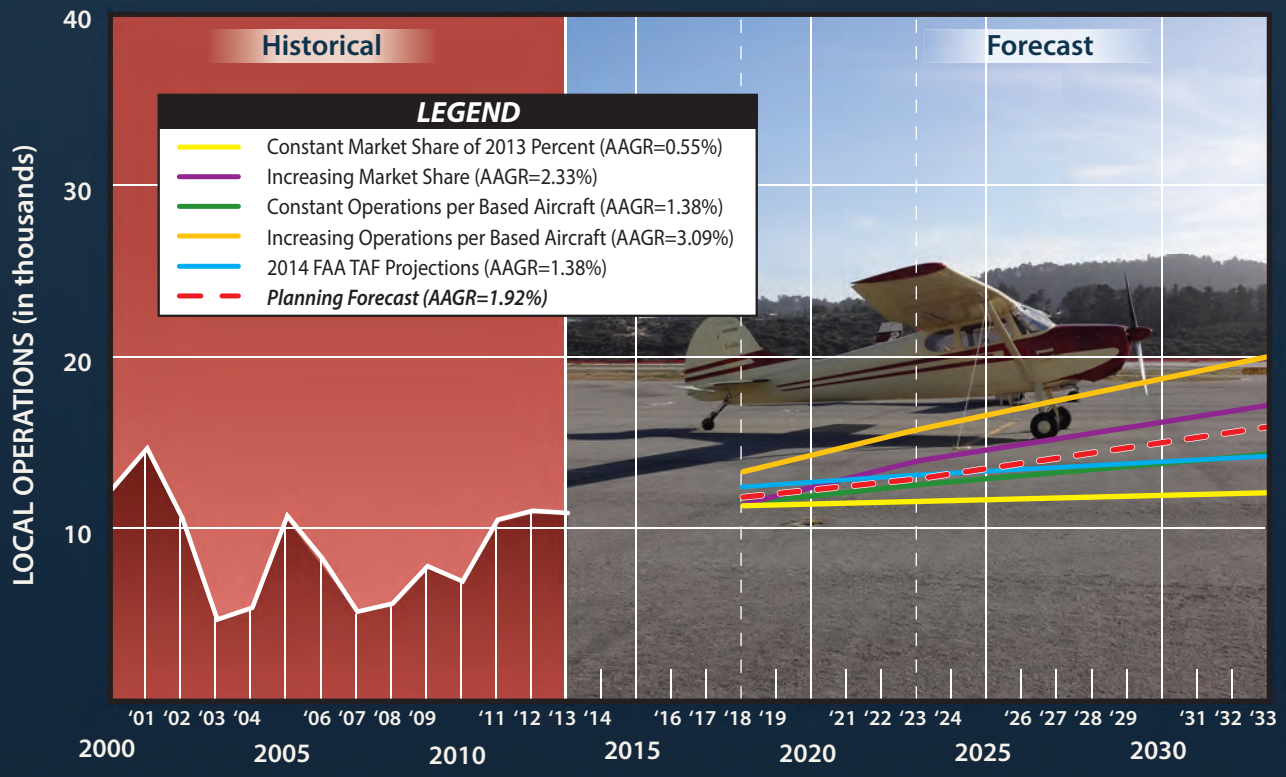
The next two forecasts consider the relationship between based aircraft and local general aviation operations. In 2013, there were 72 local general aviation operations per based aircraft. When maintaining this as a constant, a 2033 forecast of 14,311 local general aviation operations results. This is an annual growth rate of 1.38 percent. An increasing market share forecast is also presented which considers up to 100 local general aviation operations per based aircraft. This forecast results in 20,000 operations by 2033 and an annual growth rate of 3.09 percent. This forecast likely represents a high end forecast as the Airport has not exceeded 15,000 local general aviation operations in the last 13 years.

The 2014 FAA TAF projection is also presented in the table. The TAF identifies a 2033 projection of 14,293 local general aviation operations. This is an annual growth rate of 1.38 percent.

GENERAL AVIATION ITINERANT OPERATIONS



GENERAL AVIATION LOCAL OPERATIONS



Historical data from ATCT records as reported to FAA
***AAGR** - Average Annual Growth Rate from 2013-2033

FLY MONTEREY

Exhibit 2Q
GENERAL AVIATION OPERATIONS FORECAST

Source - Coffman Associates analysis

TABLE 2X
General Aviation Local Operations Forecast
Monterey Regional Airport

Year	MRY GA Local Ops[1]	US GA Local Ops[2]	Market Share Local Ops	MRY Based Aircraft[3]	Local Ops Per Based Aircraft
2000	12,273	17,034,400	0.0720%		
2001	14,644	16,193,700	0.0904%		
2002	10,599	16,172,800	0.0655%		
2003	4,660	15,292,700	0.0305%		
2004	5,356	14,960,400	0.0358%		
2005	10,711	14,843,600	0.0722%		
2006	8,222	14,365,400	0.0572%		
2007	5,121	14,556,800	0.0352%		
2008	5,593	14,081,200	0.0397%		
2009	7,775	12,448,000	0.0625%		
2010	6,888	11,716,300	0.0588%		
2011	10,478	11,437,000	0.0916%		
2012	11,008	11,608,300	0.0948%		
2013	10,876	11,690,000	0.0930%	152	72
Constant Market Share of 2013 Percent (AAGR = 0.55%)					
2018	11,357	12,207,100	0.0930%	160	71
2023	11,606	12,474,700	0.0930%	175	66
2033	12,140	13,048,100	0.0930%	200	61
Increasing Market Share (AAGR = 2.33%)					
2018	11,475	12,207,100	0.0940%	160	72
2023	14,096	12,474,700	0.1130%	175	81
2033	17,223	13,048,100	0.1320%	200	86
Constant Operations Per Based Aircraft (AAGR = 1.38%)					
2018	11,448	12,207,100	0.0938%	160	72
2023	12,522	12,474,700	0.1004%	175	72
2033	14,311	13,048,100	0.1097%	200	72
Increasing Operations Per Based Aircraft (AAGR = 3.09%)					
2018	13,280	12,207,100	0.1088%	160	83
2023	15,750	12,474,700	0.1263%	175	90
2033	20,000	13,048,100	0.1533%	200	100
2014 FAA TAF Projections (AAGR = 1.38%)					
2018	12,455	12,207,100	0.1020%	160	78
2023	13,040	12,474,700	0.1045%	175	75
2033	14,293	13,048,100	0.1095%	200	71
Selected Planning Forecast (AAGR = 1.92%)					
2018	11,800	12,207,100	0.0967%	160	74
2023	12,800	12,474,700	0.1026%	175	73
2033	15,900	13,048,100	0.1219%	200	80

[1]Historical data from ATCT records as reported to FAA in calendar years.
[3] FAA Forecasts Fiscal Years 2014-2034
[3]Airport records
AAGR = Average Annual Growth Rate from 2013 to 2033
Source: Coffman Associates analysis

The selected forecast is the approximate average of the four new forecasts presented. The planning forecast for local general aviation operations considers 11,800 by 2018, 12,800 by 2023, and 15,900 by 2033. The average annual growth rate is 1.92 percent.

AIR TAXI & MILITARY OPERATIONS FORECASTS

Air taxi operations include operations by for-hire aircraft with fewer than 60 passenger seats and/or less than 18,000 pounds payload. This will include many of the scheduled commercial service flights at Monterey Regional Airport. Some operations by aircraft operated under fractional ownership programs are also counted as air taxi operations. Air cargo and air ambulance activity is typically counted in the air taxi category as well. Since the airline and air cargo operations were forecast in the previous section, this section reviews the growth potential for the "other" air taxi operations at the Airport.

Exhibit 2M included the FAA forecasts for air taxi/commuter operations nationally. Following the national aviation trend, air taxi/commuter operations experienced a decline that corresponded with the recession years. From 2000-2012, air taxi/commuter operations declined at 1.5 percent annually, with the decline beginning in 2007. Unlike other sectors of aviation, the FAA projections indicate that air taxi/commuter operations may not return to a growth trend. In fact, the FAA's 2033 projection for air taxi/commuter operations is lower than that estimated for 2013. As a result, from 2013-2034, the FAA projects a negative growth rate of -0.1 percent annually.

According to ATCT records for 2013, there were 14,902 air taxi/commuter operations logged at the Airport. Of this total, Airport records indicate that approximately 72 percent were conducted by scheduled commercial airline service and four percent were conducted by air cargo carriers. The remaining 24 percent, or 3,610 operations, are classified in the "other" air taxi activity category which includes ultralights and lighter-than-air aircraft..

Historically, Monterey Regional Airport has had a high percentage of its overall operations included in the air taxi/commuter category. In 2000 and 2001, the Airport averaged nearly 30,000 air taxi/commuter operations. From 2002 through 2006, the Airport experienced a decline, averaging just over 22,000 air taxi/commuter operations. In 2007, the Airport had an increase to more than 25,500 operations, which was followed by the recession and a period of decline. By 2013, 14,902 air taxi/commuter operations were counted.

Air taxi forecasts have been prepared as a market share of all air taxi operations conducted at U.S. airports served by an ATCT. These forecasts are presented in **Table 2Y** and include the selected air taxi forecast.

The first air taxi/commuter forecast considers the Airport maintaining its 2013 market share (0.1693 percent) of national air taxi/commuter operations. Since 2013 represented the lowest number of air taxi/commuter operations recorded for the Airport, this forecast is likely the low end of the planning envelope. This forecast results in a negative growth rate of -0.20 percent. The next forecast considers an increasing market share with an an-

nual average growth rate of 1.56 percent. By 2033, this projection results in 20,317 air taxi/commuter operations.

TABLE 2Y
Air Taxi Operations Forecasts
Monterey Regional Airport

Year	MRY Air Taxi Operations[1]	U.S. ATCT Air Taxi Operations[2]	MRY Percent
2000	29,650	10,760,500	0.2755%
2001	30,055	10,952,900	0.2744%
2002	25,072	11,148,700	0.2249%
2003	21,140	11,348,000	0.1863%
2004	20,534	11,550,900	0.1778%
2005	21,267	11,757,400	0.1809%
2006	22,983	11,967,600	0.1920%
2007	25,533	11,667,300	0.2188%
2008	24,938	11,032,100	0.2260%
2009	19,420	9,520,800	0.2040%
2010	16,537	9,410,400	0.1757%
2011	15,922	9,278,500	0.1716%
2012	16,986	8,994,400	0.1889%
2013	14,902	8,803,600	0.1693%
Constant Market Share Projection (AAGR = -0.20%)			
2018	15,409	9,102,900	0.1693%
2023	15,772	9,317,400	0.1693%
2033	14,330	8,465,500	0.1693%
Increasing Market Share Projection (AAGR = 1.56%)			
2018	16,385	9,102,900	0.1800%
2023	18,635	9,317,400	0.2000%
2033	20,317	8,465,500	0.2400%
Recapture 10-Year High Air Taxi Operations (AAGR = 2.19%)			
2018	16,000	9,102,900	0.1758%
2023	19,000	9,317,400	0.2039%
2033	23,000	8,465,500	0.2717%
2014 FAA TAF Projection (AAGR = 0.92%)			
2018	16,109	9,102,900	0.1770%
2023	16,682	9,317,400	0.1790%
2033	17,891	8,465,500	0.2113%
Selected Planning Forecast (AAGR = 1.30%)			
2018	15,300	9,102,900	0.1681%
2023	16,800	9,317,400	0.1803%
2033	19,300	8,465,500	0.2280%

[1]Historical data from ATCT records as reported to FAA in calendar years.
[2]FAA Forecasts 2014-2034
AAGR = Average Annual Growth Rate from 2013 to 2033
Source: Coffman Associates analysis

A third projection was developed that considers the Airport recapturing the average number of air taxi/commuter operations experienced from 2002 through 2007. This is the period immediately before the national recession. This forecast results in 23,000 air taxi/commuter operations by 2033 and an annual average growth rate of 2.19 percent.

The 2014 FAA TAF for air taxi/commuter operations at the Airport is also presented in the table. The TAF projects 17,891 air taxi/commuter operations by 2033 for an annual average growth rate of 0.92 percent.

The selected forecast is an approximate average of the three new forecasts presented (excluding the FAA TAF). By 2018, a total of 15,300 air taxi/commuter operations are forecast. By 2033, a total of 19,300 air taxi/commuter operations are forecast. The average annual growth rate of the selected planning forecast is 1.30 percent.

MILITARY ACTIVITY

Military pilots are free to utilize civilian airports across the country and, as such, Monterey Regional Airport experiences some activity by the military. In 2013, there were 1,717 military operations. This total represents the highest level the Airport has experienced since at least 2000. The Airport has experienced an increasing level of military activity every year since 2009. This is a phenomenon being experienced at airports across the country and is attributable to the fact that the various overseas military commitments are drawing to a close, which brings military pilots home for continued training.

Developing a reliable forecast of military activity at civilian airports is inherently difficult primarily because the military mission can change rapidly. Generally, during peace time civilian airports will experience higher levels of military operations. When there are overseas commitments, many of those pilots and equipment will be out of the country. The FAA recognizes these challenges to forecasting military activity and, therefore, provides only a flat forecast for both local and itinerant military activity.

Table 2Z presents the history of military activity at Monterey Regional Airport. The forecast presented considers a zero growth scenario of 1,500 annual operations. These operations are then categorized as either local or itinerant based on historical averages.

TABLE 2Z
Military Operations Forecast
Monterey Regional Airport

Year	Military Itinerant	Military Local	Total
2000	807	203	1,010
2001	827	254	1,081
2002	977	293	1,270
2003	822	64	886
2004	947	116	1,063
2005	821	129	950
2006	839	104	943
2007	838	117	955
2008	783	142	925
2009	702	57	759
2010	839	180	1,019
2011	856	186	1,042
2012	935	330	1,265
2013	803	914	1,717
Military Operations Forecast (AAGR - 0.0%)			
2018	900	600	1,500
2023	900	600	1,500
2033	900	600	1,500

Note: History from ATCT records as reported to FAA in calendar years.
Source: Coffman Associates analysis

COMPARISON TO THE FAA TAF

The FAA will review the forecasts presented in this master plan for comparison to the *Terminal Area Forecast*. The local Airports District Office (ADO) of the FAA can approve the forecasts if they do not differ by more than 10 percent in the first five years and 15 percent for years 6-10. If the master planning forecasts exceed these parameters, then the forecasts must be forwarded to FAA headquarters in Washington, D.C. for further review. Any deviation from these thresholds will require specific local documentation. **Table 2AA** presents the direct comparison of the master planning forecasts with the TAF published in January 2014.

The reason the FAA allows this differential is because the TAF forecasts are not meant to replace forecasts developed locally (i.e. in this Master Plan). While the TAF can provide a point of reference or comparison, their purpose is much broader in defining FAA national workload measures.

TABLE 2AA
Forecast Comparison to the 2014 FAA Terminal Area Forecast (TAF)
Monterey Regional Airport

	2013	2018	2023	2028	2033	AAGR 2013-2033
Passenger Enplanements						
Master Plan Forecast	200,651	223,000	245,000	259,567	275,000	1.59%
FAA TAF (2014)	204,851	219,220	234,692	251,363	269,322	1.38%
% Difference	-2.1%	1.7%	4.4%	3.3%	2.1%	
Commercial Operations[1]						
Master Plan Forecast	15,964	16,700	19,000	20,813	22,800	1.80%
FAA TAF (2014)	16,625	17,181	17,754	18,348	18,963	0.66%
% Difference	-4.0%	-2.8%	7.0%	13.4%	20.2%	
Total Operations						
Master Plan Forecast	53,827	58,100	64,600	72,158	80,600	2.04%
FAA TAF (2014)	54,672	55,146	56,269	57,438	58,661	0.35%
% Difference	-1.5%	5.4%	14.8%	25.6%	37.4%	
Based Aircraft						
Master Plan Forecast	152	160	175	187	200	1.38%
FAA TAF (2014)	138	146	154	161	171	1.08%
% Difference	10.1%	9.6%	13.6%	16.1%	17.0%	

[1]Includes air carrier, commuter, air cargo, and air taxi.
Source: Coffman Associates analysis

In the five-year planning horizon, all forecasting categories included in the TAF are within 10 percent of the forecasts developed in this master planning effort. In the 10-year planning horizon, all forecasting categories included in the TAF are within 15 percent of the TAF.

PEAKING CHARACTERISTICS

Many airport facility needs are related to the levels of activity during peak periods. The periods used in developing facility requirements for this study are as follows:

- **Peak Month** – The calendar month when peak aircraft operations occur.
- **Design Day** – The average day in the peak month. This indicator is easily derived by dividing the peak month operations by the number of days in a month.
- **Busy Day** – The busy day of a typical week in the peak month.
- **Design Hour** – The peak hour within the design day.

It is important to note that only the peak month is an absolute peak within a given year. All other peak periods will be exceeded at various times during the year. However, they do represent reasonable planning standards that can be applied without overbuilding or being too restrictive.

AIRLINE PEAKING

Airport capacity and facility needs related to commercial service operations typically consider the levels of activity during a peak or design period. Determination of peaking characteristics related to airline activity is important for the planning and design of passenger terminal services. This includes the appropriate size of the terminal building and the functional areas therein. Terminal building elements include hold rooms, security checkpoints, concessions, restrooms, baggage claim area, etc. The airline peaking characteristics also relate to aircraft gates, ramp apron space, and overnight parking.

Between 2003 and 2013, the peak month enplanement totals have averaged approximately 9.6 percent of the annual enplaned passengers. For planning purposes, the future peak month enplanement level is estimated at 9.6 percent of annual forecasted enplanements.

The design day enplanement level for the peak month is essentially the average weekday enplanements of the peak month. Typically, this is derived by dividing the peak month enplanement level by the number of days in the month. Since 2003, the peak month enplanement level has occurred in a month with 31 days: July, August, or October. Therefore, the design day is determined by dividing the peak month by the number of days in the month, 31 in this case.

The design hour enplanement estimate is based on the current (February 2014) airline schedule at the Airport. According to the schedule, the hourly peak for departures was five which occurs in the early morning between 5:15 and 6:15 am. The combination of these aircraft provides 227 available seats. Utilizing the current average board loading factor (BLF) of 72 percent, plus a buffer of 20 additional seats, a design hour of 183 is determined.

The design hour is approximately 31 percent of the design day. This factor is carried over to the forecast years. It should be noted that, at times, the design hour may be much higher. For example, in the recent past, Allegiant Airlines has scheduled the arrival of their 150-seat MD-80 series aircraft at the existing peak hour for other commercial operations.

The average peak month for airline operations is 9.2 percent of total annual airline operations. The current design day for operations is known from the flight schedule. There are, on average, 15 commercial arrivals and 15 commercial departures per day; therefore, the current daily airline operations count is 30. Future design day operations forecasts are a function of daily airline operations and are based on the forecast fleet mix, BLF, and schedule (See Table 2P). Design hour operations include both arrival and departure activity.

GENERAL AVIATION PEAKING

The peak month of general aviation operations at Monterey Regional Airport has averaged 9.97 percent of the yearly total for the last five years. The peak month for general aviation operations at the Airport typically occurs in late summer and early fall. The peak month for the forecast years was determined by applying a factor of 9.97 to general aviation operations. The design day was determined by dividing the peak month operations by 31 (the number of days in the peak month).

The 2013 design hour was determined from hourly operations records maintained by the ATCT for the peak month of 2013 (August). The design hour was calculated as the average of the peak hour of the peak day of each week in August 2013. The design hour calculated to 13.85 percent of the design day, which was carried forward to the forecast years.

TOTAL OPERATIONS PEAKING

The total operations peak periods are utilized in examining the capacity of the airfield. The peak month of total operations has averaged 9.8 percent of total annual operations over the last five years, typically occurring during the summer months. **Table 2BB** outlines the peak period forecasts for total airport operations.

ANNUAL INSTRUMENT APPROACHES

Forecasts of annual instrument approaches (AIAs) provide guidance in determining an airport's requirements for navigational aid facilities. An instrument approach as defined by the FAA is "an approach to an airport with intent to land by an aircraft in accordance with an instrument flight rules (IFR) flight plan, when visibility is less than three miles and/or when the ceiling is at or below the minimum initial approach altitude."

Historical data on instrument approaches (under IFR conditions) to the Airport is not readily available. Therefore, an estimate of AIAs was prepared based upon information from

similar airports. The number of AIAs was calculated for the planning period by utilizing 50 percent of itinerant operations (to concentrate on arrivals), times the percentage of estimated IFR conditions (28 percent). The AIA projections are presented on **Table 2CC**.

TABLE 2BB
Peaking Characteristics
Monterey Regional Airport

	BASE YEAR	FORECAST		
	2013	2018	2023	2033
AIRLINE ENPLANEMENTS				
Annual Enplanements	200,651	223,000	245,000	275,000
Peak Month	18,246	21,496	23,617	26,509
Design Day	589	699	768	862
Design Hour	183	217	239	268
AIRLINE OPERATIONS				
Annual Operations	11,786	11,800	12,000	11,800
Peak Month	1,088	1,092	1,111	1,092
Design Day	30	32	32	32
Design Hour	5	5	5	5
GENERAL AVIATION OPERATIONS				
Annual Operations	36,146	39,900	44,100	56,300
Peak Month	3,478	3,976	4,395	5,611
Design Day	112	128	142	181
Design Hour	16	18	20	25
TOTAL AIRPORT OPERATIONS				
Annual Operations	53,827	58,100	64,600	80,600
Peak Month	5,177	5,695	6,332	7,900
Design Day	167	184	204	255
Design Hour	23	25	28	35

Source: Coffman Associated analysis

TABLE 2CC
Annual Instrument Approach Forecast
Monterey Regional Airport

	2013	2018	2023	2033
Annual Itinerant Operations	42,037	45,700	51,200	64,100
Annual Instrument Approaches	5,885	6,398	7,168	8,974

Source: Coffman Associates analysis

FORECAST SUMMARY

This chapter has outlined the various activity levels that might reasonably be anticipated over the planning period. **Exhibit 2R** is a summary of the aviation forecasts prepared in this chapter. Actual activity is included for 2013, which was the base year for these forecasts.

In 2013, the Airport exceeded 200,000 passenger enplanements for the first time since 2008. Enplanements have increased each year over previous years since 2010. Enplane-

AVIATION DEMAND FORECAST SUMMARY

	Base Year	Forecast		
	2013	2018	2023	2033
ENPLANEMENTS AND AIR CARGO				
Annual Enplanements	200,651	223,000	245,000	275,000
Air Cargo (lbs.)	1,021,856	1,124,000	1,196,000	1,339,000
ANNUAL OPERATIONS				
Commercial Operations (Itinerant)				
Air Carrier (>59 seats)	1,062	1,400	2,200	3,500
Commuter Airline (<60 seats)	10,724	10,400	9,800	8,300
Air Cargo	568	600	700	800
Total Commercial Operations	*12,354*	*12,400*	*12,700*	*12,600*
General Aviation Operations				
Itinerant	25,270	28,100	31,300	40,400
Local	10,876	11,800	12,800	15,900
Total General Aviation Operations	*36,146*	*39,900*	*44,100*	*56,300*
Military and Other Air Taxi Operations				
Other Air Taxi	3,610	4,300	6,300	10,200
Military Inínerant	803	900	900	900
Military Local	914	600	600	600
Total Military and Other Air Taxi Operations	*5,327*	*5,800*	*7,800*	*11,700*
Total Local Operations	*11,790*	*12,400*	*13,400*	*16,500*
Total Itinerant Operations	*42,037*	*45,700*	*51,200*	*64,100*
TOTAL ANNUAL OPERATIONS	**53,827**	**58,100**	**64,600**	**80,600**
BASED AIRCRAFT				
Single Engine	126	129	138	152
Multi-engine	9	9	9	8
Turboprop	6	8	10	14
Business Jet	7	9	12	18
Helicopter	4	5	6	8
TOTAL BASED AIRCRAFT	**152**	**160**	**175**	**200**

PEAKING ACTIVITY PROJECTIONS

	Base Year	Forecast		
	2013	2018	2023	2033
AIRLINE ENPLANEMENTS				
Annual Enplanements	200,651	223,000	245,000	275,000
Peak Month	18,246	21,496	23,617	26,509
Design Day	589	699	768	862
Design Hour	183	217	239	268
AIRLINE OPERATIONS				
Annual Operations	11,786	11,800	12,000	11,800
Peak Month	1,088	1,092	1,111	1,092
Design Day	30	32	32	32
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GENERAL AVIATION OPERATIONS				
Annual Operations	36,146	39,900	44,100	56,300
Peak Month	3,478	3,976	4,395	5,611
Design Day	112	128	142	181
Design Hour	16	18	20	25
TOTAL AIRPORT OPERATIONS				
Annual Operations	53,827	58,100	64,600	80,600
Peak Month	5,177	5,695	6,332	7,900
Design Day	167	184	204	255
Design Hour	23	25	28	35

FLY MONTEREY

Exhibit 2R
FORECAST SUMMARY

ments are forecast to reach 223,000 within the next five years and 275,000 within 20 years. Overall, Airport operations are forecast to continue to grow from 53,827 in 2013 to 80,600 by 2033. Based aircraft are forecast to grow from 152 in 2013 to 200 by 2033.

Naturally, projections of aviation demand will be influenced by unforeseen factors. In the recent past, factors such as the terrorist attacks of September 11, 2001, and two economic recessions impacted aviation demand. Nonetheless, the forecasts developed for this master planning effort are considered reasonable for planning purposes. The FAA will review and, if acceptable, approve these forecasts for planning purposes.

AIRCRAFT/AIRPORT/RUNWAY CLASSIFICATION

The FAA has established several aircraft classification systems that group aircraft types based on their performance (approach speed in landing configuration) and on design characteristics (wingspan and landing gear configuration). These classification systems are used to determine the appropriate airport design standards for specific airport elements such as runways, taxiways, taxilanes, and aprons.

AIRCRAFT CLASSIFICATION

The selection of appropriate FAA design standards for the development and location of airport facilities is based primarily upon the characteristics of the aircraft which are currently using or are expected to use an airport. The critical design aircraft is used to define the design parameters for an airport. The design aircraft may be a single aircraft type or, more commonly, is a composite aircraft representing a collection of aircraft classified by three parameters: Aircraft Approach Category (AAC), Airplane Design Group (ADG), and Taxiway Design Group (TDG). FAA AC 150/5300-13A, *Airport Design*, describes the following airplane classification systems, the parameters of which are presented on **Exhibit 2S**.

Aircraft Approach Category (AAC): A grouping of aircraft based on a reference landing speed (V_{REF}), if specified, or if V_{REF} is not specified, 1.3 times stall speed (V_{SO}) at the maximum certificated landing weight. V_{REF}, V_{SO}, and the maximum certificated landing weight are those values as established for the aircraft by the certification authority of the country of registry.

The AAC generally refers to the approach speed of an aircraft in landing configuration. The higher the approach speed, the more restrictive the applicable design standards. The AAC, depicted by a letter A through E, is the aircraft approach category and relates to aircraft approach speed (operational characteristic). The AAC generally applies to runways and runway-related facilities such as runway width, runway safety area (RSA), runway object free area (ROFA), runway protection zone (RPZ), and separation standards.

Airplane Design Group (ADG): The ADG, depicted by a Roman numeral I through VI, is a classification of aircraft which relates to aircraft wingspan or tail height (physical charac-

teristic). When the aircraft wingspan and tail height fall in different groups, the higher group is used. The ADG influences design standards for taxiway safety area (TSA), taxiway object free (TOFA), taxilane object free area, apron wingtip clearance, and various separation distances.

Taxiway Design Group (TDG): A classification of airplanes based on outer-to-outer Main Gear Width (MGW) and Cockpit to Main Gear (CMG) distance. The TDG relates to the undercarriage dimensions of the design aircraft. The taxiway design elements determined by the application of the TDG include the taxiway width, taxiway edge safety margin, taxiway shoulder width, taxiway fillet dimensions, and, in some cases, the separation distance between parallel taxiways/taxilanes. Other taxiway elements such as the taxiway safety area (TSA), taxiway/taxilane object free area (TOFA), taxiway/taxilane separation to parallel taxiway/taxilanes or fixed or movable objects, and taxiway/taxilane wingtip clearances are determined solely based on the wingspan (ADG) of the design aircraft utilizing those surfaces. It is appropriate for taxiways to be planned and built to different TDG standards based on expected use.

Exhibit 2T summarizes the classification of the most common jet aircraft in operation today. Generally, business jets will fall in approach categories B and C, while commercial aircraft will fall in C and D. Business jets typically have slower approach speeds as compared to commercial transport aircraft. Recreational and business piston and turboprop aircraft will generally fall in approach categories A and B and airplane design groups I and II.

AIRPORT AND RUNWAY CLASSIFICATION

These classifications, along with the aircraft classifications defined previously, are used to determine the appropriate FAA design standards to which the airfield facilities are to be designed and built.

***Airport Reference Code (ARC)*:** An airport designation that signifies the airport's highest Runway Design Code (RDC), minus the third (visibility) component of the RDC. The ARC is used for planning and design only and does not limit the aircraft that may be able to operate safely on the airport. The current Airport Layout Plan (ALP) for the airport, which will be updated as part of this master planning effort, identifies an ARC of D-III for the Airport currently with an ultimate ARC of D-IV.

Runway Design Code (RDC): A code signifying the design standards to which the runway is to be built. The RDC is based upon planned development and has no operational component.

The AAC, ADG, and runway visual range (RVR) are combined to form the RDC of a particular runway. The RDC provides the information needed to determine certain design standards that apply. The first component, depicted by a letter, is the AAC and relates to aircraft approach speed (operational characteristics). The second component, depicted by a Roman numeral, is the ADG and relates to either the aircraft wingspan or tail height (physical

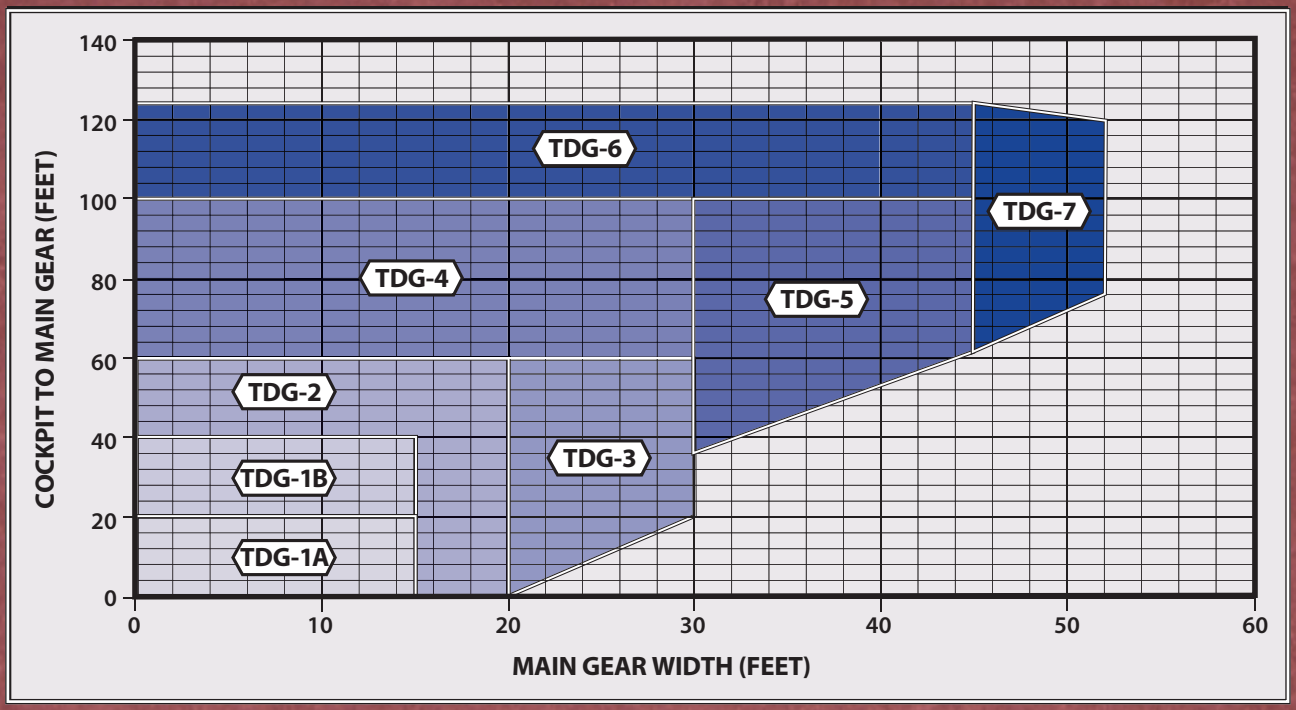
AIRCRAFT APPROACH CATEGORY (AAC)	
Category	**Approach Speed**
A	less than 91 knots
B	91 knots or more but less than 121 knots
C	121 knots or more but less than 141 knots
D	141 knots or more but less than 166 knots
E	166 knots or more

AIRPLANE DESIGN GROUP (ADG)		
Group #	**Tail Height (ft)**	**Wingspan (ft)**
I	<20	<49
II	20-<30	49-<79
III	30-<45	70-<118
IV	45-<60	118-<171
V	60-<66	171-<214
VI	66-<80	214-<262

VISIBILITY MINIMUMS	
RVR* (ft)	**Flight Visibility Category (statute miles)**
VIS	3-mile or greater visibility minimums
5,000	Not lower than 1-mile
4,000	Lower than 1-mile but not lower than ¾-mile
2,400	Lower than ¾-mile but not lower than ½-mile
1,600	Lower than ½-mile but not lower than ¼-mile
1,200	Lower than ¼-mile

***RVR**: Runway Visual Range

TAXIWAY DESIGN GROUP (TDG)



FLY MONTEREY

Exhibit 2S
AIRCRAFT CLASSIFICATION PARAMETERS

Source: FAA AC 150/5300-13A, Airport Design

characteristics), whichever is most restrictive. The third component relates to the visibility minimums expressed by RVR values in feet of 1,200 (⅛-mile), 1,600 (¼-mile), 2,400 (½-mile), 4,000 (¾-mile), and 5,000 (1-mile). The RVR values approximate standard visibility minimums for instrument approaches to the runways. The third component should read "VIS" for runways designed for visual approach use only.

Approach Reference Code (APRC): A code signifying the current operational capabilities of a runway and associated parallel taxiway with regard to landing operations. Like the RDC, the APRC is composed of the same three components: the AAC, ADG, and RVR. The APRC describes the current operational capabilities of a runway under particular meteorological conditions where no special operating procedures are necessary, as opposed to the RDC which is based upon planned development with no operational component. The APRC for a runway is established based upon the minimum runway to taxiway centerline separation.

Departure Reference Code (DPRC): A code signifying the current operational capabilities of a runway and associated parallel taxiway with regard to takeoff operations. The DPRC represents those aircraft that can takeoff from a runway while any aircraft are present on adjacent taxiways, under particular meteorological conditions with no special operating conditions. The DPRC is similar to the APRC, but is composed of two components, ACC and ADG. A runway may have more than one DPRC depending on the parallel taxiway separation distance.

CRITICAL DESIGN AIRCRAFT

The selection of appropriate FAA design standards for the development and location of airport facilities is based primarily upon the characteristics of the aircraft which are currently using or are expected to use an airport. The critical design aircraft is used to define the design parameters for an airport. The design aircraft may be a single aircraft or a composite aircraft representing a collection of aircraft classified by the three parameters: AAC, ADG, and TDG. In the case of an airport with multiple runways, a design aircraft is selected for each runway.

The first consideration is the safe operation of aircraft likely to use an airport. Any operation of an aircraft that exceeds design criteria of an airport may result in either an unsafe operation or a lesser safety margin; however, it is not the usual practice to base the airport design on an aircraft that uses the airport infrequently.

The design aircraft is defined as the most demanding category of aircraft, or family of aircraft, which conducts at least 500 itinerant operations per year at an airport or the most demanding aircraft in regularly scheduled commercial service. Planning for future aircraft use is of particular importance since the design standards are used to plan separation distances between facilities. These future standards must be considered now to ensure that short term development does not preclude the reasonable long range potential needs of the airport.

TURBINE AIRCRAFT CLASSIFICATION

AIRCRAFT	AAC	ADG	TDG
Eclipse 500	A	I	1
Premier 390	B	I	1
Beechjet 400, T-1, Hawker 400	B	I	1
Cessna 500, 501, Citation I, SP	B	I	1
Cessna Mustang 510	B	I	1
Cessna 525, 526, CitationJet, CJ1	B	I	1
Embraer Phenom 100	B	I	1
Falcon 10	B	I	1

Cessna 525A (CJ2)	B	II	2
Cessna 525B (CJ3)	B	II	2
Cessna Citation II Bravo 550, SP	B	II	2
Cessna Citation V, Ultra, Encore 560	B	II	2
Cessna 560 XLS	B	II	2
Cessna Citation III, VI, VII, 650	B	II	2
Cessna Citation Sovereign 680	B	II	3
Falcon 20, **50,** 900, 2000	B	II	2
Embraer Phenom 300	B	II	2

BAe HS 125-1, 2, 3, 400, 600	C	I	2
BAe HS 125, 700, 800, Hawker 800	C	I	2
Learjet 23, 24, 25, 28	C	I	1
Learjet 31 A/B	C	I	1
Learjet 35, 36, **45**, 55	C	I	2
Lear 60	C	I	4
IAI Westwind	C	I	2

IAI Astra 1125	C	II	2
Cessna Citation 750 (X)	C	II	3
Challenger 300	C	II	3
Challenger 600, 601, 604	C	II	3
Lockheed 1329 Jetstar	C	II	3
Gulfstream III, G300, G-1159	C	II	3
Hawker 800XP, 1000, 4000	C	II	3
Falcon 900EX, F-Series	C	II	3
Embraer ERJ 135, 140, 145	C	II	3
Canadair CRJ 200, 700, 900	C	II	3

AIRCRAFT	AAC	ADG	TDG
Gulfstream G150	D	II	3
Gulfstream II, G200	D	II	3
Gulfstream IV, G400	D	II	3
IAI Galaxy, Gulfstream G200	D	II	3

Global Express, 5000	C	III	3
Gulfstream V, 550, 650	C	III	3
Falcon 7FX	C	III	3
B727-200	C	III	5
B-737-100, 200, 300, 400, 500, 600, 700	C	III	3
MD-81, 82, 87, 90	C	III	4
A318, A319, A320	C	III	3
A321	C	III	5
Embraer 170, 175, 190, 195	C	III	3
B-737-800, 900	D	III	3
MD-83, 88	D	III	4

B-707	C	IV	5
B-757-200	C	IV	5
B-767-200, 300	C	IV	5
B-787 -800	C	IV	5
B-777-200	C	V	6
A330-200F	C	V	5
A330-200, 300	C	V	6

MD-11	D	IV	6
DC-10	D	IV	5
B-747-100,200,300,400	D	V	6
B-757-300	D	IV	5
B-777-300	D	V	6
A340-200,300,500,600	D	V	6
A350-900	D	V	6

B-747 -8, F	D	VI	6
B-767-200ER, 300ER, 400	D	VI	5
A380-800	D	VI	7

KEY: **AAC** - Aircraft Approach Category (based on approach speed); **ADG** - Airplane Design Group (based on wingspan); **TDG** - Taxiway Design Group (based on width/length of landing gear)
Note: Plane pictured is in bolded text.

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According to FAA AC 150/5300-13A, *Airport Design*, "airport designs based only on existing aircraft can severely limit the ability to expand the airport to meet future requirements for larger, more demanding aircraft. Airport designs that are based on large aircraft never likely to be served by the airport are not economical." Selection of the current and future critical design aircraft must be realistic in nature and supported by current data and realistic projections.

AIRPORT DESIGN AIRCRAFT

The Airport experiences frequent activity by both commercial service and business jets. The largest commercial service jet currently in service at the Airport is the Boeing MD88 as operated by Allegiant Air. The Airport experiences activity by the largest business jets including the Gulfstream V and Bombardier Global Express.

The FAA maintains the Traffic Flow Management System Count (TFMSC) database which documents certain aircraft operations at certain airports. Information is added to the TFMSC database when pilots file flight plans and/or when flights are detected by the National Airspace System, usually via radar. It includes documentation of commercial traffic (air carrier and air taxi), general aviation, and military aircraft. Due to factors such as incomplete flight plans and limited radar coverage, TFMSC data does not account for all aircraft activity at an airport by a given aircraft type. Therefore, it is likely that there are more operations (touch and go's, for example) at the airport than are captured by this methodology. TFMSC data is available for activity at Monterey Regional Airport and was utilized in this analysis.

Exhibit 2U presents the TFMSC activity for the calendar year 2013 at the Airport. Aircraft in AAC D accounted for 770 operations and aircraft in ADG III accounted for 1,684 operations. Both of these categories exceed the 500 operations threshold. Aircraft classified in C-IV do occasionally operate at the Airport, but total operations by these aircraft have not reached the FAA's critical aircraft threshold in the recent past. The current design aircraft for the Airport is those falling in AAC/ADG D-III. A representative aircraft would be the Boeing MD88. The TDG of this aircraft is 4. **Therefore, the current design aircraft for the airport is best described as D-III-4.** Where practicable, planning should not preclude the future capability of the Airport to accommodate ARC D-IV.

As the airline fleet mix transitions away from the 50-seat regional jets towards 70-plus seat regional jets, the Airport's share of ARC C-III (e.g., Embraer 170 & 190) and D-II (e.g., CRJ 900) classified aircraft are projected to grow. Additionally, with continued operational growth of larger business jets, operations in the ARC D-III category are expected to increase through the planning period as well.

RUNWAY DESIGN AIRCRAFT

Each runway is assigned an RDC. The RDC relates to specific FAA design standards that should be met in relation to each runway.

OPERATIONS FLEET MIX

AAC/ADG	Representative Aircraft	2013	2018	2023	2033
A-I	Cessna 172 Cessna Mustang Jet Cirrus SR-20	23,443	25,430	28,070	36,250
A-II	Gulfstream Commander DeHavilland Twin Otter	2,000	2,200	2,400	3,000
B-I	Cessna Citation I Beechjet 400 Embraer Phenom 100 Falcon 10 King Air 90	4,866	5,200	6,000	7,000
B-II	Cessna 208 Caravan Embraer Brasilia 120 Cessna Citation (CJ3) Cessna Citation 560 XLS Cessna Citation V, Ultra, Encore 560 Cessna Citation Sovereign 650 Falcon 20, 50, 900, 2000 Embraer Phenom 300 Super King Air 200	9,896	10,200	11,000	13,000
C-I	Bae HS 125/700-800/Hawker 800 Lear 31, 35, 45, 55, 60 IAI Westwind	1,504	1,600	1,700	1,900
C-II	Bombardier CRJ-200, 700, 900 Embraer 135/140/145 Cessna Citation X 750 Challenger 300 Challenger 604 Gulfstream III, G300, G280 Falcon 900EX, 7X IAI Astra	9,910	11,000	12,500	16,000
C-III	Bombardier Q-400 Airbus A319/320 Boeing 737-700 Embraer 170, 190 Global Express/5000 Gulfstream 500, 550, 650	1,428	1,600	1,900	2,400
C-IV	Lockheed C-30 Boeing 757-200	10	20	30	50
D-II	Gulfstream II, IV (G200, G400)	514	550	600	700
D-III	Boeing 737-800, 900 Boeing MD83, MD88	256	300	400	600
TOTAL		53,827	58,100	64,600	80,900

OPERATIONS BY AAC AND ADG

Aircraft Approach Category				
A	25,443	27,630	30,470	39,250
B	14,762	15,400	17,000	20,000
C	12,852	14,220	16,130	20,350
D	770	850	1,000	1,300
Airplane Design Group				
I	29,813	32,230	35,770	45,150
II	22,320	23,950	26,500	32,700
III	1,684	1,900	2,300	3,000
IV	10	20	30	50

KEY: AAC - Aircraft Approach Category; **ADG** - Airplane Design Group

FLY MONTEREY

Exhibit 2U
OPERATIONS FORECAST BY FLEET MIX

Source: 2013 figures interpolated from calendar year as reported by the FAA's Traffic Flow Management System Counts (TFMSC) database to match ATCT operational counts as reported by the FAA.

Runway 10R-28L Design Aircraft

Runway 10R-28L is the primary runway and should be designed to accommodate the critical design aircraft. This runway is currently 7,603 feet long (7,175 upon completion of the runway safety area project currently underway) and has an instrument landing system providing ½-mile visibility minimums for instrument approaches to Runway 10R. **Therefore, the applicable RDC is D-III-2400**. This RDC determination is supported by current activity levels as determined previously, and it corresponds to the airport reference code identified on the previous airport layout plan (ALP).

Runway 10L-28R Design Aircraft

Runway 10L-28R is the shorter parallel runway measuring 3,504 feet long and 60 feet wide. This runway is utilized by operators of small aircraft, those under 12,500 pounds. Instrument approaches with visibility minimums of 1¼-mile are available to both runway ends. **The RDC for Runway 10L-28R is A/B-I-5000 (small aircraft exclusively).**

FUTURE DESIGN AIRCRAFT

As documented previously, operations are forecast to grow over the 20-year planning horizon; however, the mix of aircraft types is anticipated to remain largely unchanged. The airport will continue to be utilized by all sectors of aviation including air carrier, air taxi, general aviation, and military. The frequency of these operations may increase somewhat, but the category of the design aircraft for the Airport and each runway is not anticipated to change. **Therefore, the overall design aircraft for the airport will remain D-III-4 as represented by the Boeing MD88 aircraft.**

The AAC and ADG design components for each Runway RDC are anticipated to remain unchanged. The RVR (visibility component) may change based on analysis and recommendations regarding potential instrument approach capability.

SUMMARY

This chapter has presented aviation demand forecasts as projected over the next 20 years for the Airport. Following input from the Planning Advisory Committee, the forecasts will be provided to FAA for their review. The next step in the master plan is to reassess the capacity of the existing facilities and determine what facilities will be necessary to meet both existing and future demands. The Facility Requirements chapter will be developed utilizing the forecasts of aviation demand.

MONTEREY
REGIONAL AIRPORT

Appendix C

MONTEREY REGIONAL AIRPORT TAXIWAY "A" RELOCATION RISK ASSESSMENT

November 4, 2015

Mr. Mark Bautista, AAE
Deputy General Manager
MONTEREY PENINSULA AIRPORT DISTRICT
Planning and Development
200 Fred Kane Drive, Suite 200
Monterey, CA 93940

RE: Monterey Regional Airport – Taxiway "A" Relocation Risk Assessment

Dear Mark,

The purpose of this letter is to present the results of a risk assessment for the relocation of a portion of parallel Taxiway "A" which is located south of Runway 10R-28L at the Monterey Regional Airport (MRY). This risk assessment was requested during a June 16, 2015 MRY Airport Master Plan briefing meeting with the Airports Division Manager of the Federal Aviation Administration's (FAA's) Western-Pacific Region and his staff. As outlined below, increasing the runway centerline to taxiway centerline distance from 275 feet to 327.5 feet reduces the risk to less than 1.E-07 (1 accident per 10,000,000 landings) and would be considered acceptable to the FAA for purposes of issuing a Modification of Airfield Separation Standards.

Background

As part of the ongoing Airport Master Plan for the Monterey Regional Airport, one of the major issues that needed to be addressed is the 275 foot centerline-to-centerline separation distance between Runway 10R-28L and a ±2,800 foot portion of Taxiway "A" between exit Taxiways "E" and "K". Because this portion of Taxiway "A" is only 275 feet from the runway centerline, the wingtips of aircraft with wingspans greater than 50 feet operating on Taxiway "A" penetrate the Runway Safety Area (RSA) of Runway 10R-28L. In addition, the Hold Line locations for Taxiways "F", "G", "J", and "K" are located at 200 feet from the centerline of Runway 10R-28L, and are inside the RSA.

According to FAA Advisory Circular (AC) 150/5300-13A (Change 1), the runway centerline to parallel taxiway centerline separation should be 400 feet. However, during the evaluation of alternatives for the Airport Master Plan, it was determined that is was not practicable, or feasible, to relocate Taxiway "A" to the 400 foot separation distance due to various engineering and environmental issues. As a result, the recommendation was to relocate the ±2,800 foot section of

Taxiway "A" to 327.5 feet which would then be consistent with the separation distance of the balance of Taxiway "A". Moving the ±2,800 foot section of Taxiway "A" to 327.5 feet would ensure that Airplane Design Group (ADG) III aircraft (wingspans less than 118 feet) could taxi the full length of Taxiway "A" and their wingtips would not penetrate the RSA. In addition, the Hold Line locations for Taxiways "F", "G", "J", and "K" could be moved to 250 feet and remain outside of the RSA. Correcting the RSA issue by relocating a portion of Taxiway "A", however, would limit the apron space available for parking and maneuvering of commercial passenger aircraft directly in front of the existing Passenger Terminal Building. The limited apron space as well as the age (60 plus years) and condition of the Terminal Building resulted in the additional master plan recommendation to construct a new Terminal Building in a new and better location.

Methodology

Because the 327.5 foot runway centerline-taxiway centerline distance does not meet the 400 foot separation distance recommended by FAA's AC, a Modification of Standards (MOS) will need to be approved by the FAA. During a recent meeting between the FAA and the Monterey Peninsula Airport District staff to discuss this issue, FAA requested that the Airport District analyze the reduction of risk associated with moving the ±2,800 portion Taxiway "A" to the 327.5 distance. Because FAA does not provide any specific guidance on how to quantify the risk associated with the separation between a runway centerline and a parallel taxiway centerline, it was decided that the use of Airport Cooperative Research Program (ACRP) Report 51 (***Risk Assessment Method to Support Modification of Airfield Separation Standards***) would provide the appropriate guidance. According to ACRP Report 51:

"*The Risk Assessment Method to Support Modification of Airfield Separation Standards provides a methodology that airports can use to support their request for modification of standards. It is intended to be used in those circumstances where the design criteria for separations between taxiways/taxilanes and (1) other taxiways/taxilanes and (2) fixed or movable objects as well as separations between taxiways and runways cannot be met. This risk-based methodology will be useful to airport staff and their consultants as they assess the risks associated with non-standard separations at existing constrained airports where the standards can't be practicably met.*"

ACRP Report 51 further states:

"What is the risk if larger aircraft are allowed to operate at these airports with non-standard separations? Currently, there are no risk-based methodologies for assessing such risks, and each situation is treated as a unique case. The FAA may allow operations at airports that do not comply with minimum separation distances by evaluating an MOS submitted by the airport operator. The objective is to keep the airport/aircraft operations at a level of safety equivalent to that achieved by standard separations."

The objective of ACRP Report 51 research effort was to develop a simple and practical methodology for assessing the risk of aircraft collisions associated with non-standard airfield separations. The tool which was developed for analysis is intended to support MOS requests for non-standard separations. The methodology is based on the probability of lateral and vertical deviations from the intended path during landing, takeoff, and taxiing operations. A series of risk

plots based on centerline or wingtip separations is provided for each Aircraft Design Group (ADG), and step-by-step procedures are described for each type of separation involved in the analysis, such as runway and taxiway, and taxiway and taxiway. The methodology was validated using actual MOS cases approved by the FAA that covered a spectrum of scenarios, airports, and FAA regions. Relevant information was gathered by the ACRP consultant for each case to characterize the non-standard situation and was analyzed using the methodology developed in this study. Risk criteria were suggested based on the risk matrix used by the FAA in safety management systems, on the evidence of accident and incident rates, and the consequences gathered in this research effort.

Risk Assessment Results

Based on the guidance provided in ACRP Report 51, two (2) risk assessment scenarios for Monterey Regional Airport were evaluated. The first scenario (Scenario #1) provided an assessment of the risk associated with keeping the centerline of the ±2,800 foot segment of parallel Taxiway "A" in its present location which is 275 feet from the centerline of Runway 10R-28L. The second scenario (Scenario #2) provides an assessment of the risk associated with relocating the same segment of parallel Taxiway "A" to 327.5 feet. According to the ACRP Report 51, two segments of the aircraft's flight should be evaluated: the segment associated with the airborne (approach) phase, and the ground phase associated with the landing rollout of the aircraft. The takeoff phase is not evaluated because the highest risk condition is for landing. Figure AA-33 of the ACRP Report was used to estimate the risk of collision for the approach phase for Aircraft Design Group III aircraft utilizing a Category I Instrument Landing System (ILS). Figure AA-43 of the ACRP Report was used to estimate the risk of collision for the landing roll-out phase for Aircraft Design Group III aircraft.

Scenario #1 (275 foot separation)

- Probability of an accident during the airborne (approach) phase: 1 accident per 588,235,294 landings (1.7E-9)
- Probability of an accident during the ground (landing rollout) phase: 1 accident per 7,692,307 landings (1.3E-7).

Scenario #2 (327.5 foot separation)

- Probability of an accident during the airborne (approach) phase: 1 accident per 1,333,333,333 landings (7.5E-10).
- Probability of an accident during the ground (landing rollout) phase: 1 accident per 12,048,192 landings (8.3E-8).

According to the ACRP Report, FAA's acceptable level of risk is considered to be less than 1 accident per 10,000,000 landings (1.E-07). As outlined above, the risk associated with the approach phase for both Scenarios is less than 1.E-07. The existing risk for the landing rollout phase is greater than 1.E-07 for Scenario #1 (275 foot separation) and is considered by FAA to be unacceptable. However, increasing the separation to 327.5 feet reduces the risk to less than

1.E-07 and would be considered acceptable to the FAA for purposes of issuing a Modification of Standards.

Conclusions

Increasing the separation distance from the centerline Runway 10R-28L to the centerline of Taxiway "A" from 275 feet to 327.5 feet reduces the probability of an accident during the airborne (approach) phase by approximately 127 percent. In both cases, the level of risk is less than 1 accident per 10,000,000 landings. However, for the landing rollout phase, the increase in separation distance reduces the probability of an accident by approximately 57 percent and the level of risk is reduced from greater than 1 accident per 10,000,000 landings (**unacceptable**) to less than 1 accident per 10,000,000 landings (**acceptable**). As a result, based on the significant increase in safety resulting from the change in separation distances, the FAA should support a Modification of Airfield Separation Standards for the increase of runway to parallel taxiway centerline separation distance of 327.5 feet.

If you have any questions regarding this evaluation, or if you need additional information, please don't hesitate to give me a call.

Sincerely,

James M. Harris
President

MONTEREY
REGIONAL AIRPORT

Appendix D

FAA TAXIWAY SEPARATION WAIVER (MONTEREY REGIONAL AIRPORT)

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

DATE: AUG 4 1976

IN REPLY REFER TO: SFO-621: MRY-04C

SAN FRANCISCO AIRPORT DISTRICT OFFICE
831 Mitten Road
Burlingame, California 94010

SUBJECT: Monterey (California) Peninsula Airport; Waiver of Standards for Runway - Taxiway Centerline Separation

FROM: SFO-600

TO: Mr. O. N. Ford
District Manager
Monterey Peninsula Airport District
P.O. Box 550
Monterey, California 93940

This is in response to your letter (C. B. Neill, May 19, 1976) regarding the proposed alignment of the south parallel taxiway extension to the west end of Runway 10. The proposed alignment as shown on the preliminary plans submitted on June 8, 1976 is approved.

This waiver of standard taxiway - runway separation requirements is subject to the development of satisfactory procedures to prevent large aircraft (B-737 and larger) from using the segment of taxiway with 277.5 ft. separation when another large aircraft is operating on Runway 10/28. If serious operational problems develop because of the reduced separation, realignment of the taxiway to a greater separation will be necessary. Also, general aviation parking in front of Del Monte Aviation must be controlled to provide adequate wingtip clearance for taxiing large aircraft.

FREDERICK M. ISAAC
Chief, Airport District Office, SFO-600

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

Airport District Office
831 Mitten Road
Burlingame, Calif. 94010

1 ONF
2 JM
file Project

JUN 19 1978

Mr. O.N. Ford
District Manager
Monterey Peninsula Airport District
P.O. Box 550
Monterey, CA 93940

Subject: Monterey (California) Peninsula Airport; Waiver of Standards for Runway-Taxiway Centerline Separation

Dear Mr. Ford:

The proposed alignment of the south parallel taxiway extension as shown on your plans for ADAP Project No. 6-06-0159-06, dated June, 1978 is approved.

This waiver of runway-taxiway centerline separation standards is subject to the same conditions as those presently governing operations on the existing reduced separation taxiway segment.

That is, large aircraft (B-737 and larger) cannot use the segment of taxiway with 277.5 feet separation when another large aircraft is operating on Runway 10/28.

Sincerely,

LES HOPKINS
Chief, Planning Section

FREDERICK M. ISAAC
Chief, Airport District Office

MONTEREY
REGIONAL AIRPORT

Appendix E

AIR POLLUTANT AND GREENHOUSE GAS EMISSIONS MODELING REPORTS

APPENDIX E
AIR POLLUTANT AND GREENHOUSE GAS EMISSIONS MODELING REPORTS

Introduction

This appendix includes the California Emissions Estimator Model (CalEEMod) Version 2016.3.2 and the Federal Aviation Administration (FAA) Aviation Environmental Design Tool (AEDT) air pollutant emissions and greenhouse gas modeling summary reports.

CalEEMod

The CalEEMod software model, published by the California Air Pollution Officers Association (CAPCOA) in collaboration with various California air districts, estimates on-road vehicle emissions, such as those from dump trucks or light-duty work trucks, and off-road vehicle emissions, such as heavy construction equipment. The modeling results also include emissions resulting from earthmoving (e.g., grading and site preparation), structure demolition, and building construction. CalEEMod inputs for worker trips, haul trips, equipment activity, disturbed ground surface area, and material quantities are based on engineering estimates for each component of the project and its construction schedule. CalEEMod includes emissions factors that are adjusted to local climatic conditions in the area overseen by Monterey Bay Air Resources District (MBARD).

CalEEMod reports are provided for construction of new buildings associated with the Proposed Project and Alternative 1. CalEEMod reports are also provided for operation of existing and future buildings associated with the Proposed Project and Alternative 1. Modeling input assumptions are also included in the output reports following this introduction.

It should be noted that airport land uses are not included in CalEEMod. Therefore, similar land uses were selected to represent the existing facilities. Specifically, the approximate 70,000-square foot (sf) existing terminal is represented by 11,200 sf of light industrial space and 58,800 sf of government office space in CalEEMod. For the ARFF, a public facility land use, with 8,400 sf of building space, was selected. The southeast hangar areas were modeled using light industrial land uses totally approximately 126,000 sf. The model year for the calculations is 2015.

For the Proposed Project and Alternative 1, 30,000 sf of industrial development was selected to represent the hangars for the purposes of this analysis. Additionally, aircraft terminals are not a default land use included in the CalEEMod model. Therefore, for purposes of this analysis, the 100,000 sf terminal was represented by 16,000 sf of light industrial space and 84,000 sf of government office space. For the relocated ARFF, a building size of 13,400 sf was used, and a public facility was selected. Beginning in approximately 2022, additional trips could occur on the north side following construction of seven hangars. CalEEMod was used to estimate air pollutant emissions related to operation of these hangars. Because aircraft storage hangars are not a default land use included in the CalEEMod model, a user-input value of 10 vehicle trips per day associated with the entire hangar development was used based on

information provided in the *Monterey Regional Airport Environmental Impact Report Traffic Analysis* (**Appendix M**).

AEDT

Aircraft operational air pollutant emissions associated with the cumulative growth forecast approved by FAA for planning purposes and related indirect vehicle air pollutant emissions are also included in this appendix. The standard methodology for analyzing air emissions conditions at airports involves the use of a computer simulation model. FAA has approved the AEDT for calculating aircraft operational emissions for environmental documentation.

AEDT air pollutant and GHG emissions outputs are based on the inputs described in **Appendix K**. Emissions estimates for the 2015, 2025, and 2035 are included in this appendix.

CalEEMod

Construction Emissions Modeling Output Reports

Monterey ModelingID 1

North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2020
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	196.00
tblConstructionPhase	NumDays	0.00	10.00
tblGrading	MaterialExported	0.00	3,700.00
tblOffRoadEquipment	HorsePower	231.00	89.00
tblOffRoadEquipment	HorsePower	63.00	231.00
tblOffRoadEquipment	HorsePower	78.00	89.00
tblOffRoadEquipment	HorsePower	81.00	97.00
tblOffRoadEquipment	HorsePower	158.00	187.00
tblOffRoadEquipment	HorsePower	84.00	130.00
tblOffRoadEquipment	HorsePower	172.00	8.00
tblOffRoadEquipment	HorsePower	8.00	64.00
tblOffRoadEquipment	HorsePower	100.00	97.00
tblOffRoadEquipment	HorsePower	65.00	64.00
tblOffRoadEquipment	LoadFactor	0.29	0.20
tblOffRoadEquipment	LoadFactor	0.31	0.29
tblOffRoadEquipment	LoadFactor	0.48	0.20
tblOffRoadEquipment	LoadFactor	0.73	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.41
tblOffRoadEquipment	LoadFactor	0.74	0.42
tblOffRoadEquipment	LoadFactor	0.42	0.43
tblOffRoadEquipment	LoadFactor	0.43	0.46
tblOffRoadEquipment	LoadFactor	0.40	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.46
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	1.20
tblOffRoadEquipment	UsageHours	8.00	1.20
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	366.00	0.00

tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	2.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.5250	13.0027	13.1430	0.0214	0.9375	0.7887	1.7262	0.4628	0.7460	1.2088	0.0000	2,053.2379	2,053.2379	0.4065	0.0000	2,063.3993
Maximum	**1.5250**	**13.0027**	**13.1430**	**0.0214**	**0.9375**	**0.7887**	**1.7262**	**0.4628**	**0.7460**	**1.2088**	**0.0000**	**2,053.2379**	**2,053.2379**	**0.4065**	**0.0000**	**2,063.3993**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.5250	13.0027	13.1430	0.0214	0.9375	0.7887	1.7262	0.4628	0.7460	1.2088	0.0000	2,053.2379	2,053.2379	0.4065	0.0000	2,063.3993
Maximum	**1.5250**	**13.0027**	**13.1430**	**0.0214**	**0.9375**	**0.7887**	**1.7262**	**0.4628**	**0.7460**	**1.2088**	**0.0000**	**2,053.2379**	**2,053.2379**	**0.4065**	**0.0000**	**2,063.3993**

Monterey ModelingID 2

North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2020
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Demolition -

Grading -

Sequestration - test

Trips and VMT - Engineer estimates.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	261.00
tblOffRoadEquipment	HorsePower	63.00	78.00
tblOffRoadEquipment	HorsePower	212.00	89.00
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	LoadFactor	0.31	0.48
tblOffRoadEquipment	LoadFactor	0.43	0.20
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Pavers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	9.00
tblOffRoadEquipment	UsageHours	4.00	3.70
tblOffRoadEquipment	UsageHours	6.00	3.70
tblOffRoadEquipment	UsageHours	8.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	3,020.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	9.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	73.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.8714	43.1136	38.1686	0.1113	4.4335	1.6585	6.0920	1.1919	1.5417	2.7336	0.0000	11,236.5292	11,236.5292	1.2416	0.0000	11,267.5684
Maximum	**4.8714**	**43.1136**	**38.1686**	**0.1113**	**4.4335**	**1.6585**	**6.0920**	**1.1919**	**1.5417**	**2.7336**	**0.0000**	**11,236.5292**	**11,236.5292**	**1.2416**	**0.0000**	**11,267.5684**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.8714	43.1136	38.1686	0.1113	4.4335	1.6585	6.0920	1.1919	1.5417	2.7336	0.0000	11,236.5292	11,236.5292	1.2416	0.0000	11,267.5684
Maximum	**4.8714**	**43.1136**	**38.1686**	**0.1113**	**4.4335**	**1.6585**	**6.0920**	**1.1919**	**1.5417**	**2.7336**	**0.0000**	**11,236.5292**	**11,236.5292**	**1.2416**	**0.0000**	**11,267.5684**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Monterey ModelingID 3
North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	161.00
tblOffRoadEquipment	HorsePower	187.00	97.00
tblOffRoadEquipment	HorsePower	130.00	187.00
tblOffRoadEquipment	HorsePower	80.00	130.00
tblOffRoadEquipment	HorsePower	367.00	65.00
tblOffRoadEquipment	HorsePower	203.00	64.00
tblOffRoadEquipment	LoadFactor	0.41	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.42
tblOffRoadEquipment	LoadFactor	0.48	0.37
tblOffRoadEquipment	LoadFactor	0.36	0.46
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType	Rubber Tired Loaders	Scrapers
tblOffRoadEquipment	OffRoadEquipmentType	Surfacing Equipment	Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	788.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	11.40
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	5.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	0.8009	11.7920	6.0811	0.0399	1.1167	0.2859	1.4025	0.3125	0.2643	0.5768	0.0000	4,130.0706	4,130.0706	0.2727	0.0000	4,136.8873
Maximum	**0.8009**	**11.7920**	**6.0811**	**0.0399**	**1.1167**	**0.2859**	**1.4025**	**0.3125**	**0.2643**	**0.5768**	**0.0000**	**4,130.0706**	**4,130.0706**	**0.2727**	**0.0000**	**4,136.8873**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	0.8009	11.7920	6.0811	0.0399	1.1167	0.2859	1.4025	0.3125	0.2643	0.5768	0.0000	4,130.0706	4,130.0706	0.2727	0.0000	4,136.8873
Maximum	**0.8009**	**11.7920**	**6.0811**	**0.0399**	**1.1167**	**0.2859**	**1.4025**	**0.3125**	**0.2643**	**0.5768**	**0.0000**	**4,130.0706**	**4,130.0706**	**0.2727**	**0.0000**	**4,136.8873**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

Monterey ModelingID 4

North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2023
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	174.00
tblOffRoadEquipment	HorsePower	89.00	97.00
tblOffRoadEquipment	HorsePower	63.00	89.00
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	HorsePower	172.00	130.00
tblOffRoadEquipment	HorsePower	100.00	64.00
tblOffRoadEquipment	HorsePower	203.00	97.00
tblOffRoadEquipment	LoadFactor	0.20	0.37
tblOffRoadEquipment	LoadFactor	0.31	0.20
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.40	0.46
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	LoadFactor	0.31	0.31
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType	Crawler Tractors	Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType	Pavers	Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType	Rollers	Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType	Scrapers	Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	1.20
tblOffRoadEquipment	UsageHours	4.00	1.20
tblOffRoadEquipment	UsageHours	8.00	1.20
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	66.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	5.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	0.9968	9.2835	11.1851	0.0221	0.3033	0.3922	0.6955	0.0818	0.3696	0.4515	0.0000	2,142.2223	2,142.2223	0.4211	0.0000	2,152.7498
Maximum	**0.9968**	**9.2835**	**11.1851**	**0.0221**	**0.3033**	**0.3922**	**0.6955**	**0.0818**	**0.3696**	**0.4515**	**0.0000**	**2,142.2223**	**2,142.2223**	**0.4211**	**0.0000**	**2,152.7498**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Year	lb/day										lb/day					
2023	0.9968	9.2835	11.1851	0.0221	0.3033	0.3922	0.6955	0.0818	0.3696	0.4515	0.0000	2,142.2223	2,142.2223	0.4211	0.0000	2,152.7498
Maximum	**0.9968**	**9.2835**	**11.1851**	**0.0221**	**0.3033**	**0.3922**	**0.6955**	**0.0818**	**0.3696**	**0.4515**	**0.0000**	**2,142.2223**	**2,142.2223**	**0.4211**	**0.0000**	**2,152.7498**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Monterey ModelingID 5

North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2023
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	262.00
tblOffRoadEquipment	HorsePower	89.00	97.00
tblOffRoadEquipment	HorsePower	63.00	89.00
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	HorsePower	172.00	130.00
tblOffRoadEquipment	HorsePower	100.00	64.00
tblOffRoadEquipment	HorsePower	203.00	97.00
tblOffRoadEquipment	LoadFactor	0.20	0.37
tblOffRoadEquipment	LoadFactor	0.31	0.20
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.40	0.46
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	1.20
tblOffRoadEquipment	UsageHours	6.00	1.20
tblOffRoadEquipment	UsageHours	8.00	1.20
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	4.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	0.8719	7.6777	9.5549	0.0170	0.1824	0.3398	0.5222	0.0484	0.3202	0.3685	0.0000	1,630.1152	1,630.1152	0.3514	0.0000	1,638.9012
Maximum	**0.8719**	**7.6777**	**9.5549**	**0.0170**	**0.1824**	**0.3398**	**0.5222**	**0.0484**	**0.3202**	**0.3685**	**0.0000**	**1,630.1152**	**1,630.1152**	**0.3514**	**0.0000**	**1,638.9012**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	0.8719	7.6777	9.5549	0.0170	0.1824	0.3398	0.5222	0.0484	0.3202	0.3685	0.0000	1,630.1152	1,630.1152	0.3514	0.0000	1,638.9012
Maximum	**0.8719**	**7.6777**	**9.5549**	**0.0170**	**0.1824**	**0.3398**	**0.5222**	**0.0484**	**0.3202**	**0.3685**	**0.0000**	**1,630.1152**	**1,630.1152**	**0.3514**	**0.0000**	**1,638.9012**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Monterey ModelingID 6

North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2025
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	86.00
tblOffRoadEquipment	HorsePower	89.00	97.00
tblOffRoadEquipment	HorsePower	63.00	89.00
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	HorsePower	172.00	130.00
tblOffRoadEquipment	HorsePower	100.00	64.00
tblOffRoadEquipment	HorsePower	203.00	97.00
tblOffRoadEquipment	LoadFactor	0.20	0.37
tblOffRoadEquipment	LoadFactor	0.31	0.20
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.40	0.46
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	1.20
tblOffRoadEquipment	UsageHours	6.00	1.20
tblOffRoadEquipment	UsageHours	8.00	1.20
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	4.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	0.8071	7.0173	9.4602	0.0170	0.1824	0.2903	0.4727	0.0484	0.2735	0.3218	0.0000	1,623.3778	1,623.3778	0.3491	0.0000	1,632.1054
Maximum	**0.8071**	**7.0173**	**9.4602**	**0.0170**	**0.1824**	**0.2903**	**0.4727**	**0.0484**	**0.2735**	**0.3218**	**0.0000**	**1,623.3778**	**1,623.3778**	**0.3491**	**0.0000**	**1,632.1054**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	0.8071	7.0173	9.4602	0.0170	0.1824	0.2903	0.4727	0.0484	0.2735	0.3218	0.0000	1,623.3778	1,623.3778	0.3491	0.0000	1,632.1054
Maximum	**0.8071**	**7.0173**	**9.4602**	**0.0170**	**0.1824**	**0.2903**	**0.4727**	**0.0484**	**0.2735**	**0.3218**	**0.0000**	**1,623.3778**	**1,623.3778**	**0.3491**	**0.0000**	**1,632.1054**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Monterey ModelingID 7

North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2022
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Off-road Equipment - Based on engineer's estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	260.00
tblConstructionPhase	NumDays	0.00	85.00
tblConstructionPhase	NumDays	0.00	85.00
tblGrading	MaterialExported	0.00	170,000.00
tblOffRoadEquipment	HorsePower	212.00	89.00
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	HorsePower	402.00	187.00
tblOffRoadEquipment	LoadFactor	0.43	0.20
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.41
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	13.00
tblOffRoadEquipment	UsageHours	8.00	0.70
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	21,250.00	0.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	14.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	35.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	5.3946	49.6341	47.6232	0.1259	4.6849	2.1354	6.8203	1.3272	1.9898	3.3170	0.0000	12,452.0967	12,452.0967	2.2803	0.0000	12,509.1037
Maximum	**5.3946**	**49.6341**	**47.6232**	**0.1259**	**4.6849**	**2.1354**	**6.8203**	**1.3272**	**1.9898**	**3.3170**	**0.0000**	**12,452.0967**	**12,452.0967**	**2.2803**	**0.0000**	**12,509.1037**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	5.3946	49.6341	47.6232	0.1259	4.6849	2.1354	6.8203	1.3272	1.9898	3.3170	0.0000	12,452.0967	12,452.0967	2.2803	0.0000	12,509.1037
Maximum	**5.3946**	**49.6341**	**47.6232**	**0.1259**	**4.6849**	**2.1354**	**6.8203**	**1.3272**	**1.9898**	**3.3170**	**0.0000**	**12,452.0967**	**12,452.0967**	**2.2803**	**0.0000**	**12,509.1037**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Monterey ModelingID 8

North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2023
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	260.00
tblConstructionPhase	NumDays	0.00	109.00
tblGrading	MaterialExported	0.00	107,500.00
tblOffRoadEquipment	HorsePower	212.00	89.00
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	HorsePower	402.00	172.00
tblOffRoadEquipment	HorsePower	172.00	130.00
tblOffRoadEquipment	HorsePower	130.00	8.00
tblOffRoadEquipment	HorsePower	132.00	80.00
tblOffRoadEquipment	HorsePower	8.00	367.00
tblOffRoadEquipment	HorsePower	80.00	64.00
tblOffRoadEquipment	HorsePower	367.00	97.00
tblOffRoadEquipment	HorsePower	65.00	46.00
tblOffRoadEquipment	LoadFactor	0.43	0.20
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.42
tblOffRoadEquipment	LoadFactor	0.42	0.43
tblOffRoadEquipment	LoadFactor	0.36	0.38
tblOffRoadEquipment	LoadFactor	0.43	0.48
tblOffRoadEquipment	LoadFactor	0.38	0.46
tblOffRoadEquipment	LoadFactor	0.48	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.45
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	12.00
tblOffRoadEquipment	UsageHours	6.00	0.70
tblOffRoadEquipment	UsageHours	8.00	0.60
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	13,438.00	0.00

tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	11.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	43.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	4.1760	32.7646	45.7903	0.0966	3.5695	1.6063	5.1758	1.1569	1.4885	2.6454	0.0000	9,561.0537	9,561.0537	1.7333	0.0000	9,604.3860
Maximum	**4.1760**	**32.7646**	**45.7903**	**0.0966**	**3.5695**	**1.6063**	**5.1758**	**1.1569**	**1.4885**	**2.6454**	**0.0000**	**9,561.0537**	**9,561.0537**	**1.7333**	**0.0000**	**9,604.3860**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	4.1760	32.7646	45.7903	0.0966	3.5695	1.6063	5.1758	1.1569	1.4885	2.6454	0.0000	9,561.0537	9,561.0537	1.7333	0.0000	9,604.3860
Maximum	**4.1760**	**32.7646**	**45.7903**	**0.0966**	**3.5695**	**1.6063**	**5.1758**	**1.1569**	**1.4885**	**2.6454**	**0.0000**	**9,561.0537**	**9,561.0537**	**1.7333**	**0.0000**	**9,604.3860**

Monterey ModelingID 9

North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2024
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	23.00
tblOffRoadEquipment	HorsePower	130.00	8.00
tblOffRoadEquipment	HorsePower	80.00	64.00
tblOffRoadEquipment	LoadFactor	0.42	0.43
tblOffRoadEquipment	LoadFactor	0.38	0.46
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	UsageHours	8.00	0.70
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	198.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	8.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	0.7350	8.7087	6.8679	0.0331	0.9268	0.2579	1.1848	0.2522	0.2377	0.4899	0.0000	3,395.6430	3,395.6430	0.3225	0.0000	3,403.7059
Maximum	**0.7350**	**8.7087**	**6.8679**	**0.0331**	**0.9268**	**0.2579**	**1.1848**	**0.2522**	**0.2377**	**0.4899**	**0.0000**	**3,395.6430**	**3,395.6430**	**0.3225**	**0.0000**	**3,403.7059**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	0.7350	8.7087	6.8679	0.0331	0.9268	0.2579	1.1848	0.2522	0.2377	0.4899	0.0000	3,395.6430	3,395.6430	0.3225	0.0000	3,403.7059
Maximum	**0.7350**	**8.7087**	**6.8679**	**0.0331**	**0.9268**	**0.2579**	**1.1848**	**0.2522**	**0.2377**	**0.4899**	**0.0000**	**3,395.6430**	**3,395.6430**	**0.3225**	**0.0000**	**3,403.7059**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Monterey ModelingID 10
North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	74.00
tblOffRoadEquipment	HorsePower	187.00	97.00
tblOffRoadEquipment	HorsePower	130.00	187.00
tblOffRoadEquipment	HorsePower	80.00	130.00
tblOffRoadEquipment	HorsePower	203.00	65.00
tblOffRoadEquipment	HorsePower	263.00	64.00
tblOffRoadEquipment	LoadFactor	0.41	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.42
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	LoadFactor	0.30	0.46
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	3.50
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,262.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	1.90
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	8.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	1.0148	12.5047	10.2062	0.0535	1.3640	0.3490	1.7130	0.3719	0.3218	0.6937	0.0000	5,520.6191	5,520.6191	0.4736	0.0000	5,532.4586
Maximum	**1.0148**	**12.5047**	**10.2062**	**0.0535**	**1.3640**	**0.3490**	**1.7130**	**0.3719**	**0.3218**	**0.6937**	**0.0000**	**5,520.6191**	**5,520.6191**	**0.4736**	**0.0000**	**5,532.4586**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	1.0148	12.5047	10.2062	0.0535	1.3640	0.3490	1.7130	0.3719	0.3218	0.6937	0.0000	5,520.6191	5,520.6191	0.4736	0.0000	5,532.4586
Maximum	**1.0148**	**12.5047**	**10.2062**	**0.0535**	**1.3640**	**0.3490**	**1.7130**	**0.3719**	**0.3218**	**0.6937**	**0.0000**	**5,520.6191**	**5,520.6191**	**0.4736**	**0.0000**	**5,532.4586**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Monterey ModelingID 11

North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	172.00
tblOffRoadEquipment	HorsePower	9.00	89.00
tblOffRoadEquipment	HorsePower	89.00	97.00
tblOffRoadEquipment	HorsePower	84.00	187.00
tblOffRoadEquipment	HorsePower	172.00	130.00
tblOffRoadEquipment	HorsePower	84.00	8.00
tblOffRoadEquipment	HorsePower	100.00	64.00
tblOffRoadEquipment	HorsePower	203.00	97.00
tblOffRoadEquipment	LoadFactor	0.56	0.20
tblOffRoadEquipment	LoadFactor	0.20	0.37
tblOffRoadEquipment	LoadFactor	0.74	0.41
tblOffRoadEquipment	LoadFactor	0.74	0.43
tblOffRoadEquipment	LoadFactor	0.40	0.46
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	OffRoadEquipmentType	Aerial Lifts	Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType	Graders	Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType	Plate Compactors	Pumps
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	0.75
tblOffRoadEquipment	UsageHours	8.00	0.75
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	22.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	0.38
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	3.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2026	0.4574	4.0437	4.2807	0.0105	0.1646	0.1813	0.3459	0.0442	0.1682	0.2123	0.0000	1,026.7286	1,026.7286	0.2091	0.0000	1,031.9549
Maximum	**0.4574**	**4.0437**	**4.2807**	**0.0105**	**0.1646**	**0.1813**	**0.3459**	**0.0442**	**0.1682**	**0.2123**	**0.0000**	**1,026.7286**	**1,026.7286**	**0.2091**	**0.0000**	**1,031.9549**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2026	0.4574	4.0437	4.2807	0.0105	0.1646	0.1813	0.3459	0.0442	0.1682	0.2123	0.0000	1,026.7286	1,026.7286	0.2091	0.0000	1,031.9549
Maximum	**0.4574**	**4.0437**	**4.2807**	**0.0105**	**0.1646**	**0.1813**	**0.3459**	**0.0442**	**0.1682**	**0.2123**	**0.0000**	**1,026.7286**	**1,026.7286**	**0.2091**	**0.0000**	**1,031.9549**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Monterey ModelingID 12
North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	63.00
tblOffRoadEquipment	HorsePower	187.00	97.00
tblOffRoadEquipment	HorsePower	130.00	187.00
tblOffRoadEquipment	HorsePower	80.00	130.00
tblOffRoadEquipment	HorsePower	263.00	64.00
tblOffRoadEquipment	HorsePower	203.00	65.00
tblOffRoadEquipment	LoadFactor	0.41	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.42
tblOffRoadEquipment	LoadFactor	0.30	0.46
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	OffRoadEquipmentType	Forklifts	Graders
tblOffRoadEquipment	OffRoadEquipmentType	Generator Sets	Pavers
tblOffRoadEquipment	OffRoadEquipmentType	Other Construction Equipment	Rollers
tblOffRoadEquipment	OffRoadEquipmentType	Rough Terrain Forklifts	Surfacing Equipment
tblOffRoadEquipment	OffRoadEquipmentType	Skid Steer Loaders	Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	0.76
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	117.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	0.65
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	5.10

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	0.4998	4.6990	4.7657	0.0141	0.3659	0.1983	0.5642	0.0987	0.1825	0.2812	0.0000	1,414.4913	1,414.4913	0.2403	0.0000	1,420.4993
Maximum	**0.4998**	**4.6990**	**4.7657**	**0.0141**	**0.3659**	**0.1983**	**0.5642**	**0.0987**	**0.1825**	**0.2812**	**0.0000**	**1,414.4913**	**1,414.4913**	**0.2403**	**0.0000**	**1,420.4993**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	0.4998	4.6990	4.7657	0.0141	0.3659	0.1983	0.5642	0.0987	0.1825	0.2812	0.0000	1,414.4913	1,414.4913	0.2403	0.0000	1,420.4993
Maximum	**0.4998**	**4.6990**	**4.7657**	**0.0141**	**0.3659**	**0.1983**	**0.5642**	**0.0987**	**0.1825**	**0.2812**	**0.0000**	**1,414.4913**	**1,414.4913**	**0.2403**	**0.0000**	**1,420.4993**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

Monterey ModelingID 13

North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	63.00
tblConstructionPhase	NumDays	0.00	23.00
tblGrading	MaterialExported	0.00	12,000.00
tblOffRoadEquipment	HorsePower	187.00	97.00
tblOffRoadEquipment	HorsePower	130.00	187.00
tblOffRoadEquipment	HorsePower	80.00	130.00
tblOffRoadEquipment	HorsePower	203.00	65.00
tblOffRoadEquipment	HorsePower	263.00	64.00
tblOffRoadEquipment	LoadFactor	0.41	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.42
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	LoadFactor	0.30	0.46
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	0.80
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	1,500.00	0.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	5.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	1.0886	9.3060	12.2512	0.0238	1.2105	0.4083	1.6188	0.5272	0.3831	0.9103	0.0000	2,308.4085	2,308.4085	0.4417	0.0000	2,319.4501
Maximum	**1.0886**	**9.3060**	**12.2512**	**0.0238**	**1.2105**	**0.4083**	**1.6188**	**0.5272**	**0.3831**	**0.9103**	**0.0000**	**2,308.4085**	**2,308.4085**	**0.4417**	**0.0000**	**2,319.4501**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	1.0886	9.3060	12.2512	0.0238	1.2105	0.4083	1.6188	0.5272	0.3831	0.9103	0.0000	2,308.4085	2,308.4085	0.4417	0.0000	2,319.4501
Maximum	**1.0886**	**9.3060**	**12.2512**	**0.0238**	**1.2105**	**0.4083**	**1.6188**	**0.5272**	**0.3831**	**0.9103**	**0.0000**	**2,308.4085**	**2,308.4085**	**0.4417**	**0.0000**	**2,319.4501**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Monterey ModelingID 14
North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	29.00
tblOffRoadEquipment	HorsePower	187.00	97.00
tblOffRoadEquipment	HorsePower	130.00	187.00
tblOffRoadEquipment	HorsePower	80.00	130.00
tblOffRoadEquipment	HorsePower	203.00	65.00
tblOffRoadEquipment	HorsePower	263.00	64.00
tblOffRoadEquipment	LoadFactor	0.41	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.42
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	LoadFactor	0.30	0.46
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	3.90
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	150.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	8.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Year	lb/day										lb/day					
2025	0.8042	7.9220	8.2805	0.0269	0.6913	0.3125	1.0038	0.1869	0.2877	0.4747	0.0000	2,722.8478	2,722.8478	0.3941	0.0000	2,732.6994
Maximum	**0.8042**	**7.9220**	**8.2805**	**0.0269**	**0.6913**	**0.3125**	**1.0038**	**0.1869**	**0.2877**	**0.4747**	**0.0000**	**2,722.8478**	**2,722.8478**	**0.3941**	**0.0000**	**2,732.6994**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	0.8042	7.9220	8.2805	0.0269	0.6913	0.3125	1.0038	0.1869	0.2877	0.4747	0.0000	2,722.8478	2,722.8478	0.3941	0.0000	2,732.6994
Maximum	**0.8042**	**7.9220**	**8.2805**	**0.0269**	**0.6913**	**0.3125**	**1.0038**	**0.1869**	**0.2877**	**0.4747**	**0.0000**	**2,722.8478**	**2,722.8478**	**0.3941**	**0.0000**	**2,732.6994**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Monterey ModelingID 16

North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Off-road Equipment - Based on engineer's estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	173.00
tblConstructionPhase	NumDays	0.00	74.00
tblOffRoadEquipment	HorsePower	212.00	89.00
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	HorsePower	172.00	130.00
tblOffRoadEquipment	HorsePower	130.00	8.00
tblOffRoadEquipment	HorsePower	80.00	64.00
tblOffRoadEquipment	HorsePower	367.00	97.00
tblOffRoadEquipment	LoadFactor	0.43	0.20
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.43
tblOffRoadEquipment	LoadFactor	0.38	0.46
tblOffRoadEquipment	LoadFactor	0.48	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	10.00
tblOffRoadEquipment	UsageHours	8.00	7.20
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	11.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	33.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2026	5.4023	50.0816	68.9630	0.1272	3.2177	2.3258	5.5435	0.7611	2.1475	2.9086	0.0000	12,530.5886	12,530.5886	2.7654	0.0000	12,599.7228
Maximum	**5.4023**	**50.0816**	**68.9630**	**0.1272**	**3.2177**	**2.3258**	**5.5435**	**0.7611**	**2.1475**	**2.9086**	**0.0000**	**12,530.5886**	**12,530.5886**	**2.7654**	**0.0000**	**12,599.7228**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2026	5.4023	50.0816	68.9630	0.1272	3.2177	2.3258	5.5435	0.7611	2.1475	2.9086	0.0000	12,530.5886	12,530.5886	2.7654	0.0000	12,599.7228
Maximum	**5.4023**	**50.0816**	**68.9630**	**0.1272**	**3.2177**	**2.3258**	**5.5435**	**0.7611**	**2.1475**	**2.9086**	**0.0000**	**12,530.5886**	**12,530.5886**	**2.7654**	**0.0000**	**12,599.7228**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Monterey ModelingID 17
North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	7.00
tblOffRoadEquipment	HorsePower	212.00	89.00
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	HorsePower	130.00	8.00
tblOffRoadEquipment	HorsePower	80.00	64.00
tblOffRoadEquipment	HorsePower	367.00	97.00
tblOffRoadEquipment	LoadFactor	0.43	0.20
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.43
tblOffRoadEquipment	LoadFactor	0.38	0.46
tblOffRoadEquipment	LoadFactor	0.48	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	9.00
tblOffRoadEquipment	UsageHours	8.00	7.70
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	204.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	11.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					

2026	5.7485	64.2232	67.0137	0.1688	2.1376	2.8321	4.9697	0.5940	2.6069	3.2009	0.0000	17,024.1754	17,024.1754	2.9878	0.0000	17,098.8697
Maximum	**5.7485**	**64.2232**	**67.0137**	**0.1688**	**2.1376**	**2.8321**	**4.9697**	**0.5940**	**2.6069**	**3.2009**	**0.0000**	**17,024.1754**	**17,024.1754**	**2.9878**	**0.0000**	**17,098.8697**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2026	5.7485	64.2232	67.0137	0.1688	2.1376	2.8321	4.9697	0.5940	2.6069	3.2009	0.0000	17,024.1754	17,024.1754	2.9878	0.0000	17,098.8697
Maximum	**5.7485**	**64.2232**	**67.0137**	**0.1688**	**2.1376**	**2.8321**	**4.9697**	**0.5940**	**2.6069**	**3.2009**	**0.0000**	**17,024.1754**	**17,024.1754**	**2.9878**	**0.0000**	**17,098.8697**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Monterey ModelingID 18

North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Off-road Equipment - Based on engineer's estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	74.00
tblConstructionPhase	NumDays	0.00	74.00
tblConstructionPhase	PhaseEndDate	2/28/2018	6/12/2018
tblOffRoadEquipment	HorsePower	212.00	89.00
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	LoadFactor	0.43	0.20
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	10.00
tblOffRoadEquipment	UsageHours	8.00	2.90
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	11.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.8625	49.3177	34.4383	0.0696	1.7129	3.0182	4.7311	0.3621	2.8026	3.1647	0.0000	7,068.3387	7,068.3387	1.3046	0.0000	7,100.9524
Maximum	**4.8625**	**49.3177**	**34.4383**	**0.0696**	**1.7129**	**3.0182**	**4.7311**	**0.3621**	**2.8026**	**3.1647**	**0.0000**	**7,068.3387**	**7,068.3387**	**1.3046**	**0.0000**	**7,100.9524**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.8625	49.3177	34.4383	0.0696	1.7129	3.0182	4.7311	0.3621	2.8026	3.1647	0.0000	7,068.3387	7,068.3387	1.3046	0.0000	7,100.9524
Maximum	**4.8625**	**49.3177**	**34.4383**	**0.0696**	**1.7129**	**3.0182**	**4.7311**	**0.3621**	**2.8026**	**3.1647**	**0.0000**	**7,068.3387**	**7,068.3387**	**1.3046**	**0.0000**	**7,100.9524**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Monterey ModelingID 19

North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	260.00
tblOffRoadEquipment	HorsePower	187.00	97.00
tblOffRoadEquipment	HorsePower	130.00	187.00
tblOffRoadEquipment	HorsePower	80.00	130.00
tblOffRoadEquipment	HorsePower	203.00	65.00
tblOffRoadEquipment	HorsePower	263.00	64.00
tblOffRoadEquipment	LoadFactor	0.41	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.42
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	LoadFactor	0.30	0.46
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	2.90
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,501.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	0.90
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	2.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Year	lb/day										lb/day					
2027	0.6074	6.7331	6.3761	0.0235	0.4437	0.2419	0.6856	0.1214	0.2228	0.3442	0.0000	2,396.9531	2,396.9531	0.3305	0.0000	2,405.2150
Maximum	**0.6074**	**6.7331**	**6.3761**	**0.0235**	**0.4437**	**0.2419**	**0.6856**	**0.1214**	**0.2228**	**0.3442**	**0.0000**	**2,396.9531**	**2,396.9531**	**0.3305**	**0.0000**	**2,405.2150**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2027	0.6074	6.7331	6.3761	0.0235	0.4437	0.2419	0.6856	0.1214	0.2228	0.3442	0.0000	2,396.9531	2,396.9531	0.3305	0.0000	2,405.2150
Maximum	**0.6074**	**6.7331**	**6.3761**	**0.0235**	**0.4437**	**0.2419**	**0.6856**	**0.1214**	**0.2228**	**0.3442**	**0.0000**	**2,396.9531**	**2,396.9531**	**0.3305**	**0.0000**	**2,405.2150**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Monterey ModelingID 20

North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	260.00
tblOffRoadEquipment	HorsePower	187.00	97.00
tblOffRoadEquipment	HorsePower	130.00	187.00
tblOffRoadEquipment	HorsePower	80.00	130.00
tblOffRoadEquipment	HorsePower	203.00	65.00
tblOffRoadEquipment	HorsePower	263.00	64.00
tblOffRoadEquipment	LoadFactor	0.41	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.42
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	LoadFactor	0.30	0.46
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	5.70
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,737.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	0.81
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	2.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2028	1.0836	10.9900	12.2666	0.0375	0.4863	0.4447	0.9310	0.1331	0.4094	0.5425	0.0000	3,757.8216	3,757.8216	0.7198	0.0000	3,775.8156
Maximum	**1.0836**	**10.9900**	**12.2666**	**0.0375**	**0.4863**	**0.4447**	**0.9310**	**0.1331**	**0.4094**	**0.5425**	**0.0000**	**3,757.8216**	**3,757.8216**	**0.7198**	**0.0000**	**3,775.8156**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2028	1.0836	10.9900	12.2666	0.0375	0.4863	0.4447	0.9310	0.1331	0.4094	0.5425	0.0000	3,757.8216	3,757.8216	0.7198	0.0000	3,775.8156
Maximum	**1.0836**	**10.9900**	**12.2666**	**0.0375**	**0.4863**	**0.4447**	**0.9310**	**0.1331**	**0.4094**	**0.5425**	**0.0000**	**3,757.8216**	**3,757.8216**	**0.7198**	**0.0000**	**3,775.8156**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Monterey ModelingID 21
North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2027
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -
Land Use -
Construction Phase - Engineer estimates.
Off-road Equipment -
Off-road Equipment - Engineer estimate.
Trips and VMT - Engineer estimates.
Demolition -
Grading -
Sequestration - test

tblVehicleEF	UBUS	17.87	18.83
tblVehicleEF	UBUS	1,913.65	1,933.62
tblVehicleEF	UBUS	143.39	142.69
tblVehicleEF	UBUS	5.49	6.23
tblVehicleEF	UBUS	13.30	13.42
tblVehicleEF	UBUS	0.50	0.50
tblVehicleEF	UBUS	0.08	0.09
tblVehicleEF	UBUS	1.2270e-003	1.2240e-003
tblVehicleEF	UBUS	0.21	0.22
tblVehicleEF	UBUS	0.07	0.08
tblVehicleEF	UBUS	1.1280e-003	1.1260e-003
tblVehicleEF	UBUS	2.1480e-003	2.2200e-003
tblVehicleEF	UBUS	0.10	0.11
tblVehicleEF	UBUS	1.4650e-003	1.4970e-003
tblVehicleEF	UBUS	0.38	0.46
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	1.34	1.38
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	1.7560e-003	1.7650e-003
tblVehicleEF	UBUS	2.1480e-003	2.2200e-003
tblVehicleEF	UBUS	0.10	0.11
tblVehicleEF	UBUS	1.4650e-003	1.4970e-003
tblVehicleEF	UBUS	1.03	1.14
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	1.47	1.51

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2027	0.4686	4.0923	4.4309	0.0102	0.1435	0.1885	0.3320	0.0381	0.1748	0.2129	0.0000	988.0357	988.0357	0.2154	0.0000	993.4216
Maximum	**0.4686**	**4.0923**	**4.4309**	**0.0102**	**0.1435**	**0.1885**	**0.3320**	**0.0381**	**0.1748**	**0.2129**	**0.0000**	**988.0357**	**988.0357**	**0.2154**	**0.0000**	**993.4216**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2027	0.4686	4.0923	4.4309	0.0102	0.1435	0.1885	0.3320	0.0381	0.1748	0.2129	0.0000	988.0357	988.0357	0.2154	0.0000	993.4216
Maximum	**0.4686**	**4.0923**	**4.4309**	**0.0102**	**0.1435**	**0.1885**	**0.3320**	**0.0381**	**0.1748**	**0.2129**	**0.0000**	**988.0357**	**988.0357**	**0.2154**	**0.0000**	**993.4216**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

Monterey ModelingID 22

North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	53.00
tblOffRoadEquipment	HorsePower	187.00	97.00
tblOffRoadEquipment	HorsePower	130.00	187.00
tblOffRoadEquipment	HorsePower	80.00	130.00
tblOffRoadEquipment	HorsePower	203.00	65.00
tblOffRoadEquipment	LoadFactor	0.41	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.42
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	2.10
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	288.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	0.51
tblTripsAndVMT	WorkerTripLength	12.30	60.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2028	0.6851	7.3427	6.8377	0.0223	0.3131	0.3067	0.6198	0.0862	0.2823	0.3685	0.0000	2,265.1835	2,265.1835	0.3551	0.0000	2,274.0607
Maximum	**0.6851**	**7.3427**	**6.8377**	**0.0223**	**0.3131**	**0.3067**	**0.6198**	**0.0862**	**0.2823**	**0.3685**	**0.0000**	**2,265.1835**	**2,265.1835**	**0.3551**	**0.0000**	**2,274.0607**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2028	0.6851	7.3427	6.8377	0.0223	0.3131	0.3067	0.6198	0.0862	0.2823	0.3685	0.0000	2,265.1835	2,265.1835	0.3551	0.0000	2,274.0607
Maximum	**0.6851**	**7.3427**	**6.8377**	**0.0223**	**0.3131**	**0.3067**	**0.6198**	**0.0862**	**0.2823**	**0.3685**	**0.0000**	**2,265.1835**	**2,265.1835**	**0.3551**	**0.0000**	**2,274.0607**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Monterey ModelingID 23

North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	183.00
tblOffRoadEquipment	HorsePower	187.00	97.00
tblOffRoadEquipment	HorsePower	130.00	187.00
tblOffRoadEquipment	HorsePower	80.00	130.00
tblOffRoadEquipment	HorsePower	203.00	65.00
tblOffRoadEquipment	HorsePower	263.00	64.00
tblOffRoadEquipment	LoadFactor	0.41	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.42
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	LoadFactor	0.30	0.46
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	2.90
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,031.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	0.80
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	2.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Year	lb/day										lb/day					
2029	0.7103	7.4667	7.3933	0.0244	0.4309	0.3024	0.7332	0.1179	0.2784	0.3962	0.0000	2,473.6659	2,473.6659	0.3741	0.0000	2,483.0174
Maximum	**0.7103**	**7.4667**	**7.3933**	**0.0244**	**0.4309**	**0.3024**	**0.7332**	**0.1179**	**0.2784**	**0.3962**	**0.0000**	**2,473.6659**	**2,473.6659**	**0.3741**	**0.0000**	**2,483.0174**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2029	0.7103	7.4667	7.3933	0.0244	0.4309	0.3024	0.7332	0.1179	0.2784	0.3962	0.0000	2,473.6659	2,473.6659	0.3741	0.0000	2,483.0174
Maximum	**0.7103**	**7.4667**	**7.3933**	**0.0244**	**0.4309**	**0.3024**	**0.7332**	**0.1179**	**0.2784**	**0.3962**	**0.0000**	**2,473.6659**	**2,473.6659**	**0.3741**	**0.0000**	**2,483.0174**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Monterey ModelingID 1

North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2020
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	196.00
tblConstructionPhase	NumDays	0.00	10.00
tblGrading	MaterialExported	0.00	3,700.00
tblOffRoadEquipment	HorsePower	231.00	89.00
tblOffRoadEquipment	HorsePower	63.00	231.00
tblOffRoadEquipment	HorsePower	78.00	89.00
tblOffRoadEquipment	HorsePower	81.00	97.00
tblOffRoadEquipment	HorsePower	158.00	187.00
tblOffRoadEquipment	HorsePower	84.00	130.00
tblOffRoadEquipment	HorsePower	172.00	8.00
tblOffRoadEquipment	HorsePower	8.00	64.00
tblOffRoadEquipment	HorsePower	100.00	97.00
tblOffRoadEquipment	HorsePower	65.00	64.00
tblOffRoadEquipment	LoadFactor	0.29	0.20
tblOffRoadEquipment	LoadFactor	0.31	0.29
tblOffRoadEquipment	LoadFactor	0.48	0.20
tblOffRoadEquipment	LoadFactor	0.73	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.41
tblOffRoadEquipment	LoadFactor	0.74	0.42
tblOffRoadEquipment	LoadFactor	0.42	0.43
tblOffRoadEquipment	LoadFactor	0.43	0.46
tblOffRoadEquipment	LoadFactor	0.40	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.46
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	1.20
tblOffRoadEquipment	UsageHours	8.00	1.20
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	366.00	0.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	2.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0645	0.5390	0.5371	8.8000e-004	0.0129	0.0338	0.0466	4.4900e-003	0.0316	0.0361	0.0000	76.9947	76.9947	0.0175	0.0000	77.4315
Maximum	**0.0645**	**0.5390**	**0.5371**	**8.8000e-004**	**0.0129**	**0.0338**	**0.0466**	**4.4900e-003**	**0.0316**	**0.0361**	**0.0000**	**76.9947**	**76.9947**	**0.0175**	**0.0000**	**77.4315**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0645	0.5390	0.5371	8.8000e-004	0.0129	0.0338	0.0466	4.4900e-003	0.0316	0.0361	0.0000	76.9946	76.9946	0.0175	0.0000	77.4315
Maximum	**0.0645**	**0.5390**	**0.5371**	**8.8000e-004**	**0.0129**	**0.0338**	**0.0466**	**4.4900e-003**	**0.0316**	**0.0361**	**0.0000**	**76.9946**	**76.9946**	**0.0175**	**0.0000**	**77.4315**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
8	12-1-2019	2-29-2020	0.1667	0.1667
9	3-1-2020	5-31-2020	0.1875	0.1875
10	6-1-2020	8-31-2020	0.1873	0.1873
11	9-1-2020	9-30-2020	0.0611	0.0611
		Highest	0.1875	0.1875

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Operational

Monterey ModelingID 2

North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2020
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	261.00
tblOffRoadEquipment	HorsePower	63.00	78.00
tblOffRoadEquipment	HorsePower	212.00	89.00
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	LoadFactor	0.31	0.48
tblOffRoadEquipment	LoadFactor	0.43	0.20
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	9.00
tblOffRoadEquipment	UsageHours	4.00	3.70
tblOffRoadEquipment	UsageHours	6.00	3.70
tblOffRoadEquipment	UsageHours	8.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	3,020.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	9.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	73.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.6442	5.7110	4.8155	0.0142	0.5610	0.2165	0.7775	0.1512	0.2012	0.3525	0.0000	1,305.1719	1,305.1719	0.1461	0.0000	1,308.8240
Maximum	**0.6442**	**5.7110**	**4.8155**	**0.0142**	**0.5610**	**0.2165**	**0.7775**	**0.1512**	**0.2012**	**0.3525**	**0.0000**	**1,305.1719**	**1,305.1719**	**0.1461**	**0.0000**	**1,308.8240**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.6442	5.7110	4.8155	0.0142	0.5610	0.2165	0.7775	0.1512	0.2012	0.3525	0.0000	1,305.1715	1,305.1715	0.1461	0.0000	1,308.8235
Maximum	**0.6442**	**5.7110**	**4.8155**	**0.0142**	**0.5610**	**0.2165**	**0.7775**	**0.1512**	**0.2012**	**0.3525**	**0.0000**	**1,305.1715**	**1,305.1715**	**0.1461**	**0.0000**	**1,308.8235**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
4	**12-1-2018**	**2-28-2019**	1.0370	1.0370
5	**3-1-2019**	**5-31-2019**	1.5902	1.5902
6	**6-1-2019**	**8-31-2019**	1.5767	1.5767
7	**9-1-2019**	**9-30-2019**	0.5141	0.5141
		Highest	1.5902	1.5902

2.2 Overall Operational

Unmitigated Operational

Monterey ModelingID 3
North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	161.00
tblOffRoadEquipment	HorsePower	187.00	97.00
tblOffRoadEquipment	HorsePower	130.00	187.00
tblOffRoadEquipment	HorsePower	80.00	130.00
tblOffRoadEquipment	HorsePower	367.00	65.00
tblOffRoadEquipment	HorsePower	203.00	64.00
tblOffRoadEquipment	LoadFactor	0.41	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.42
tblOffRoadEquipment	LoadFactor	0.48	0.37
tblOffRoadEquipment	LoadFactor	0.36	0.46
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType	Rubber Tired Loaders	Scrapers
tblOffRoadEquipment	OffRoadEquipmentType	Surfacing Equipment	Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	788.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	11.40
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	5.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0649	0.9683	0.4850	3.1900e-003	0.0874	0.0230	0.1105	0.0246	0.0213	0.0458	0.0000	300.0963	300.0963	0.0200	0.0000	300.5956
Maximum	**0.0649**	**0.9683**	**0.4850**	**3.1900e-003**	**0.0874**	**0.0230**	**0.1105**	**0.0246**	**0.0213**	**0.0458**	**0.0000**	**300.0963**	**300.0963**	**0.0200**	**0.0000**	**300.5956**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0649	0.9683	0.4850	3.1900e-003	0.0874	0.0230	0.1105	0.0246	0.0213	0.0458	0.0000	300.0963	300.0963	0.0200	0.0000	300.5955
Maximum	**0.0649**	**0.9683**	**0.4850**	**3.1900e-003**	**0.0874**	**0.0230**	**0.1105**	**0.0246**	**0.0213**	**0.0458**	**0.0000**	**300.0963**	**300.0963**	**0.0200**	**0.0000**	**300.5955**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
16	**12-1-2021**	**2-28-2022**	0.2724	0.2724
17	**3-1-2022**	**5-31-2022**	0.4175	0.4175
18	**6-1-2022**	**8-31-2022**	0.3418	0.3418
		Highest	0.4175	0.4175

Monterey ModelingID 4
North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2023
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -
Land Use -
Construction Phase - Engineer estimates.
Off-road Equipment -
Off-road Equipment - Engineer estimate.
Trips and VMT - Engineer estimates.
Demolition -
Grading -
Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	174.00
tblOffRoadEquipment	HorsePower	89.00	97.00
tblOffRoadEquipment	HorsePower	63.00	89.00
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	HorsePower	172.00	130.00
tblOffRoadEquipment	HorsePower	100.00	64.00
tblOffRoadEquipment	HorsePower	203.00	97.00
tblOffRoadEquipment	LoadFactor	0.20	0.37
tblOffRoadEquipment	LoadFactor	0.31	0.20
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.40	0.46
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	LoadFactor	0.31	0.31
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType	Crawler Tractors	Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType	Pavers	Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType	Rollers	Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType	Scrapers	Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	1.20
tblOffRoadEquipment	UsageHours	4.00	1.20
tblOffRoadEquipment	UsageHours	8.00	1.20
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	66.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	5.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0870	0.8096	0.9675	1.9100e-003	0.0256	0.0341	0.0597	6.9200e-003	0.0322	0.0391	0.0000	168.0779	168.0779	0.0332	0.0000	168.9081
Maximum	**0.0870**	**0.8096**	**0.9675**	**1.9100e-003**	**0.0256**	**0.0341**	**0.0597**	**6.9200e-003**	**0.0322**	**0.0391**	**0.0000**	**168.0779**	**168.0779**	**0.0332**	**0.0000**	**168.9081**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Year	tons/yr										MT/yr					
2023	0.0870	0.8096	0.9675	1.9100e-003	0.0256	0.0341	0.0597	6.9200e-003	0.0322	0.0391	0.0000	168.0778	168.0778	0.0332	0.0000	168.9079
Maximum	**0.0870**	**0.8096**	**0.9675**	**1.9100e-003**	**0.0256**	**0.0341**	**0.0597**	**6.9200e-003**	**0.0322**	**0.0391**	**0.0000**	**168.0778**	**168.0778**	**0.0332**	**0.0000**	**168.9079**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
20	**12-1-2022**	**2-28-2023**	0.2176	0.2176
21	**3-1-2023**	**5-31-2023**	0.3383	0.3383
22	**6-1-2023**	**8-31-2023**	0.3378	0.3378
		Highest	0.3383	0.3383

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Monterey ModelingID 5

North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2023
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	262.00
tblOffRoadEquipment	HorsePower	89.00	97.00
tblOffRoadEquipment	HorsePower	63.00	89.00
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	HorsePower	172.00	130.00
tblOffRoadEquipment	HorsePower	100.00	64.00
tblOffRoadEquipment	HorsePower	203.00	97.00
tblOffRoadEquipment	LoadFactor	0.20	0.37
tblOffRoadEquipment	LoadFactor	0.31	0.20
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.40	0.46
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	1.20
tblOffRoadEquipment	UsageHours	6.00	1.20
tblOffRoadEquipment	UsageHours	8.00	1.20
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	4.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.1146	1.0066	1.2453	2.2200e-003	0.0231	0.0445	0.0677	6.1500e-003	0.0419	0.0481	0.0000	192.6326	192.6326	0.0417	0.0000	193.6757
Maximum	**0.1146**	**1.0066**	**1.2453**	**2.2200e-003**	**0.0231**	**0.0445**	**0.0677**	**6.1500e-003**	**0.0419**	**0.0481**	**0.0000**	**192.6326**	**192.6326**	**0.0417**	**0.0000**	**193.6757**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.1146	1.0066	1.2453	2.2200e-003	0.0231	0.0445	0.0677	6.1500e-003	0.0419	0.0481	0.0000	192.6324	192.6324	0.0417	0.0000	193.6755
Maximum	**0.1146**	**1.0066**	**1.2453**	**2.2200e-003**	**0.0231**	**0.0445**	**0.0677**	**6.1500e-003**	**0.0419**	**0.0481**	**0.0000**	**192.6324**	**192.6324**	**0.0417**	**0.0000**	**193.6755**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
24	**12-1-2023**	**2-29-2024**	0.1837	0.1837
25	**3-1-2024**	**5-31-2024**	0.2812	0.2812
26	**6-1-2024**	**8-31-2024**	0.2809	0.2809
27	**9-1-2024**	**9-30-2024**	0.0916	0.0916
		Highest	0.2812	0.2812

Monterey ModelingID 6
North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2025
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	86.00
tblOffRoadEquipment	HorsePower	89.00	97.00
tblOffRoadEquipment	HorsePower	63.00	89.00
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	HorsePower	172.00	130.00
tblOffRoadEquipment	HorsePower	100.00	64.00
tblOffRoadEquipment	HorsePower	203.00	97.00
tblOffRoadEquipment	LoadFactor	0.20	0.37
tblOffRoadEquipment	LoadFactor	0.31	0.20
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.40	0.46
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	1.20
tblOffRoadEquipment	UsageHours	6.00	1.20
tblOffRoadEquipment	UsageHours	8.00	1.20
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	4.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.0348	0.3020	0.4048	7.3000e-004	7.5900e-003	0.0125	0.0201	2.0200e-003	0.0118	0.0138	0.0000	62.9820	62.9820	0.0136	0.0000	63.3222
Maximum	**0.0348**	**0.3020**	**0.4048**	**7.3000e-004**	**7.5900e-003**	**0.0125**	**0.0201**	**2.0200e-003**	**0.0118**	**0.0138**	**0.0000**	**62.9820**	**62.9820**	**0.0136**	**0.0000**	**63.3222**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.0348	0.3020	0.4048	7.3000e-004	7.5900e-003	0.0125	0.0201	2.0200e-003	0.0118	0.0138	0.0000	62.9819	62.9819	0.0136	0.0000	63.3221
Maximum	**0.0348**	**0.3020**	**0.4048**	**7.3000e-004**	**7.5900e-003**	**0.0125**	**0.0201**	**2.0200e-003**	**0.0118**	**0.0138**	**0.0000**	**62.9819**	**62.9819**	**0.0136**	**0.0000**	**63.3221**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
28	**12-1-2024**	**2-28-2025**	0.1653	0.1653
29	**3-1-2025**	**5-31-2025**	0.1707	0.1707
		Highest	0.1707	0.1707

2.2 Overall Operational

Unmitigated Operational

Monterey ModelingID 7

North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2022
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Off-road Equipment - Based on engineer's estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	260.00
tblConstructionPhase	NumDays	0.00	85.00
tblConstructionPhase	NumDays	0.00	85.00
tblGrading	MaterialExported	0.00	170,000.00
tblOffRoadEquipment	HorsePower	212.00	89.00
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	HorsePower	402.00	187.00
tblOffRoadEquipment	LoadFactor	0.43	0.20
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.41
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	13.00
tblOffRoadEquipment	UsageHours	8.00	0.70
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	21,250.00	0.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	14.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	35.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.5707	5.2644	4.7414	0.0137	0.3972	0.2181	0.6153	0.1106	0.2018	0.3124	0.0000	1,230.5169	1,230.5169	0.2333	0.0000	1,236.3500
Maximum	**0.5707**	**5.2644**	**4.7414**	**0.0137**	**0.3972**	**0.2181**	**0.6153**	**0.1106**	**0.2018**	**0.3124**	**0.0000**	**1,230.5169**	**1,230.5169**	**0.2333**	**0.0000**	**1,236.3500**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.5707	5.2644	4.7414	0.0137	0.3972	0.2181	0.6153	0.1106	0.2018	0.3124	0.0000	1,230.5160	1,230.5160	0.2333	0.0000	1,236.3492
Maximum	**0.5707**	**5.2644**	**4.7414**	**0.0137**	**0.3972**	**0.2181**	**0.6153**	**0.1106**	**0.2018**	**0.3124**	**0.0000**	**1,230.5160**	**1,230.5160**	**0.2333**	**0.0000**	**1,236.3492**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
16	**12-1-2021**	**2-28-2022**	1.1706	1.1706
17	**3-1-2022**	**5-31-2022**	1.6478	1.6478
18	**6-1-2022**	**8-31-2022**	1.2987	1.2987
19	**9-1-2022**	**9-30-2022**	0.4235	0.4235
		Highest	1.6478	1.6478

2.2 Overall Operational

Unmitigated Operational

Monterey ModelingID 8
North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2023
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	260.00
tblConstructionPhase	NumDays	0.00	109.00
tblGrading	MaterialExported	0.00	107,500.00
tblOffRoadEquipment	HorsePower	212.00	89.00
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	HorsePower	402.00	172.00
tblOffRoadEquipment	HorsePower	172.00	130.00
tblOffRoadEquipment	HorsePower	130.00	8.00
tblOffRoadEquipment	HorsePower	132.00	80.00
tblOffRoadEquipment	HorsePower	8.00	367.00
tblOffRoadEquipment	HorsePower	80.00	64.00
tblOffRoadEquipment	HorsePower	367.00	97.00
tblOffRoadEquipment	HorsePower	65.00	46.00
tblOffRoadEquipment	LoadFactor	0.43	0.20
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.42
tblOffRoadEquipment	LoadFactor	0.42	0.43
tblOffRoadEquipment	LoadFactor	0.36	0.38
tblOffRoadEquipment	LoadFactor	0.43	0.48
tblOffRoadEquipment	LoadFactor	0.38	0.46
tblOffRoadEquipment	LoadFactor	0.48	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.45
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	12.00
tblOffRoadEquipment	UsageHours	6.00	0.70
tblOffRoadEquipment	UsageHours	8.00	0.60
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	13,438.00	0.00

tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	11.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	43.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.4953	3.8446	5.2970	0.0115	0.3784	0.1875	0.5658	0.1130	0.1731	0.2861	0.0000	1,030.0081	1,030.0081	0.1895	0.0000	1,034.7455
Maximum	**0.4953**	**3.8446**	**5.2970**	**0.0115**	**0.3784**	**0.1875**	**0.5658**	**0.1130**	**0.1731**	**0.2861**	**0.0000**	**1,030.0081**	**1,030.0081**	**0.1895**	**0.0000**	**1,034.7455**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.4953	3.8446	5.2970	0.0115	0.3784	0.1875	0.5658	0.1130	0.1731	0.2861	0.0000	1,030.0074	1,030.0074	0.1895	0.0000	1,034.7448
Maximum	**0.4953**	**3.8446**	**5.2970**	**0.0115**	**0.3784**	**0.1875**	**0.5658**	**0.1130**	**0.1731**	**0.2861**	**0.0000**	**1,030.0074**	**1,030.0074**	**0.1895**	**0.0000**	**1,034.7448**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
20	**12-1-2022**	**2-28-2023**	0.7871	0.7871
21	**3-1-2023**	**5-31-2023**	1.2183	1.2183
22	**6-1-2023**	**8-31-2023**	1.0028	1.0028
23	**9-1-2023**	**9-30-2023**	0.3262	0.3262
		Highest	1.2183	1.2183

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Operational

Monterey ModelingID 9
North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2024
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	23.00
tblOffRoadEquipment	HorsePower	130.00	8.00
tblOffRoadEquipment	HorsePower	80.00	64.00
tblOffRoadEquipment	LoadFactor	0.42	0.43
tblOffRoadEquipment	LoadFactor	0.38	0.46
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	UsageHours	8.00	0.70
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	198.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	8.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	8.5200e-003	0.1014	0.0779	3.8000e-004	0.0104	2.9700e-003	0.0133	2.8200e-003	2.7300e-003	5.5600e-003	0.0000	35.1581	35.1581	3.3700e-003	0.0000	35.2423
Maximum	**8.5200e-003**	**0.1014**	**0.0779**	**3.8000e-004**	**0.0104**	**2.9700e-003**	**0.0133**	**2.8200e-003**	**2.7300e-003**	**5.5600e-003**	**0.0000**	**35.1581**	**35.1581**	**3.3700e-003**	**0.0000**	**35.2423**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	8.5200e-003	0.1014	0.0779	3.8000e-004	0.0104	2.9700e-003	0.0133	2.8200e-003	2.7300e-003	5.5600e-003	0.0000	35.1581	35.1581	3.3700e-003	0.0000	35.2422
Maximum	**8.5200e-003**	**0.1014**	**0.0779**	**3.8000e-004**	**0.0104**	**2.9700e-003**	**0.0133**	**2.8200e-003**	**2.7300e-003**	**5.5600e-003**	**0.0000**	**35.1581**	**35.1581**	**3.3700e-003**	**0.0000**	**35.2422**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
24	**12-1-2023**	**2-29-2024**	0.1065	0.1065
		Highest	0.1065	0.1065

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Monterey ModelingID 10

North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	74.00
tblOffRoadEquipment	HorsePower	187.00	97.00
tblOffRoadEquipment	HorsePower	130.00	187.00
tblOffRoadEquipment	HorsePower	80.00	130.00
tblOffRoadEquipment	HorsePower	203.00	65.00
tblOffRoadEquipment	HorsePower	263.00	64.00
tblOffRoadEquipment	LoadFactor	0.41	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.42
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	LoadFactor	0.30	0.46
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	3.50
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,262.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	1.90
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	8.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.0378	0.4693	0.3748	1.9700e-003	0.0490	0.0129	0.0620	0.0134	0.0119	0.0253	0.0000	184.2641	184.2641	0.0159	0.0000	184.6625
Maximum	**0.0378**	**0.4693**	**0.3748**	**1.9700e-003**	**0.0490**	**0.0129**	**0.0620**	**0.0134**	**0.0119**	**0.0253**	**0.0000**	**184.2641**	**184.2641**	**0.0159**	**0.0000**	**184.6625**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.0378	0.4693	0.3748	1.9700e-003	0.0490	0.0129	0.0620	0.0134	0.0119	0.0253	0.0000	184.2641	184.2641	0.0159	0.0000	184.6625
Maximum	**0.0378**	**0.4693**	**0.3748**	**1.9700e-003**	**0.0490**	**0.0129**	**0.0620**	**0.0134**	**0.0119**	**0.0253**	**0.0000**	**184.2641**	**184.2641**	**0.0159**	**0.0000**	**184.6625**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
28	**12-1-2024**	**2-28-2025**	0.2903	0.2903
29	**3-1-2025**	**5-31-2025**	0.2201	0.2201
		Highest	0.2903	0.2903

2.2 Overall Operational

Unmitigated Operational

Monterey ModelingID 11
North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	172.00
tblOffRoadEquipment	HorsePower	9.00	89.00
tblOffRoadEquipment	HorsePower	89.00	97.00
tblOffRoadEquipment	HorsePower	84.00	187.00
tblOffRoadEquipment	HorsePower	172.00	130.00
tblOffRoadEquipment	HorsePower	84.00	8.00
tblOffRoadEquipment	HorsePower	100.00	64.00
tblOffRoadEquipment	HorsePower	203.00	97.00
tblOffRoadEquipment	LoadFactor	0.56	0.20
tblOffRoadEquipment	LoadFactor	0.20	0.37
tblOffRoadEquipment	LoadFactor	0.74	0.41
tblOffRoadEquipment	LoadFactor	0.74	0.43
tblOffRoadEquipment	LoadFactor	0.40	0.46
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	OffRoadEquipmentType	Aerial Lifts	Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType	Graders	Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType	Plate Compactors	Pumps
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	0.75
tblOffRoadEquipment	UsageHours	8.00	0.75
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	22.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	0.38
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	3.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2026	0.0395	0.3485	0.3654	9.0000e-004	0.0137	0.0156	0.0293	3.6900e-003	0.0145	0.0182	0.0000	79.5890	79.5890	0.0163	0.0000	79.9964
Maximum	**0.0395**	**0.3485**	**0.3654**	**9.0000e-004**	**0.0137**	**0.0156**	**0.0293**	**3.6900e-003**	**0.0145**	**0.0182**	**0.0000**	**79.5890**	**79.5890**	**0.0163**	**0.0000**	**79.9964**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2026	0.0395	0.3485	0.3654	9.0000e-004	0.0137	0.0156	0.0293	3.6900e-003	0.0145	0.0182	0.0000	79.5889	79.5889	0.0163	0.0000	79.9963
Maximum	**0.0395**	**0.3485**	**0.3654**	**9.0000e-004**	**0.0137**	**0.0156**	**0.0293**	**3.6900e-003**	**0.0145**	**0.0182**	**0.0000**	**79.5889**	**79.5889**	**0.0163**	**0.0000**	**79.9963**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
32	**12-1-2025**	**2-28-2026**	0.0953	0.0953
33	**3-1-2026**	**5-31-2026**	0.1481	0.1481
34	**6-1-2026**	**8-31-2026**	0.1447	0.1447
		Highest	0.1481	0.1481

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Monterey ModelingID 12

North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	63.00
tblOffRoadEquipment	HorsePower	187.00	97.00
tblOffRoadEquipment	HorsePower	130.00	187.00
tblOffRoadEquipment	HorsePower	80.00	130.00
tblOffRoadEquipment	HorsePower	263.00	64.00
tblOffRoadEquipment	HorsePower	203.00	65.00
tblOffRoadEquipment	LoadFactor	0.41	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.42
tblOffRoadEquipment	LoadFactor	0.30	0.46
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	OffRoadEquipmentType	Forklifts	Graders
tblOffRoadEquipment	OffRoadEquipmentType	Generator Sets	Pavers
tblOffRoadEquipment	OffRoadEquipmentType	Other Construction Equipment	Rollers
tblOffRoadEquipment	OffRoadEquipmentType	Rough Terrain Forklifts	Surfacing Equipment
tblOffRoadEquipment	OffRoadEquipmentType	Skid Steer Loaders	Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	0.76
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	117.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	0.65
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	5.10

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.0159	0.1489	0.1483	4.4000e-004	0.0112	6.2500e-003	0.0174	3.0200e-003	5.7500e-003	8.7700e-003	0.0000	40.0531	40.0531	6.8600e-003	0.0000	40.2247
Maximum	**0.0159**	**0.1489**	**0.1483**	**4.4000e-004**	**0.0112**	**6.2500e-003**	**0.0174**	**3.0200e-003**	**5.7500e-003**	**8.7700e-003**	**0.0000**	**40.0531**	**40.0531**	**0.00686**	**0.0000**	**40.2247**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.0159	0.1489	0.1483	4.4000e-004	0.0112	6.2500e-003	0.0174	3.0200e-003	5.7500e-003	8.7700e-003	0.0000	40.0531	40.0531	6.8600e-003	0.0000	40.2246
Maximum	**0.0159**	**0.1489**	**0.1483**	**4.4000e-004**	**0.0112**	**6.2500e-003**	**0.0174**	**3.0200e-003**	**5.7500e-003**	**8.7700e-003**	**0.0000**	**40.0531**	**40.0531**	**6.8600e-003**	**0.0000**	**40.2246**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
28	**12-1-2024**	**2-28-2025**	0.1107	0.1107
29	**3-1-2025**	**5-31-2025**	0.0525	0.0525
		Highest	0.1107	0.1107

Monterey ModelingID 13

North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	63.00
tblConstructionPhase	NumDays	0.00	23.00
tblGrading	MaterialExported	0.00	12,000.00
tblOffRoadEquipment	HorsePower	187.00	97.00
tblOffRoadEquipment	HorsePower	130.00	187.00
tblOffRoadEquipment	HorsePower	80.00	130.00
tblOffRoadEquipment	HorsePower	203.00	65.00
tblOffRoadEquipment	HorsePower	263.00	64.00
tblOffRoadEquipment	LoadFactor	0.41	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.42
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	LoadFactor	0.30	0.46
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	0.80
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	1,500.00	0.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	5.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.0222	0.1912	0.2313	4.9000e-004	0.0193	8.6400e-003	0.0279	7.5200e-003	8.0400e-003	0.0156	0.0000	43.2673	43.2673	8.8300e-003	0.0000	43.4880
Maximum	**0.0222**	**0.1912**	**0.2313**	**4.9000e-004**	**0.0193**	**8.6400e-003**	**0.0279**	**7.5200e-003**	**8.0400e-003**	**0.0156**	**0.0000**	**43.2673**	**43.2673**	**8.8300e-003**	**0.0000**	**43.4880**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.0222	0.1912	0.2313	4.9000e-004	0.0193	8.6400e-003	0.0279	7.5200e-003	8.0400e-003	0.0156	0.0000	43.2672	43.2672	8.8300e-003	0.0000	43.4880
Maximum	**0.0222**	**0.1912**	**0.2313**	**4.9000e-004**	**0.0193**	**8.6400e-003**	**0.0279**	**7.5200e-003**	**8.0400e-003**	**0.0156**	**0.0000**	**43.2672**	**43.2672**	**8.8300e-003**	**0.0000**	**43.4880**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
28	**12-1-2024**	**2-28-2025**	0.1626	0.1626
29	**3-1-2025**	**5-31-2025**	0.0470	0.0470
		Highest	0.1626	0.1626

2.2 Overall Operational

Unmitigated Operational

Monterey ModelingID 14
North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	29.00
tblOffRoadEquipment	HorsePower	187.00	97.00
tblOffRoadEquipment	HorsePower	130.00	187.00
tblOffRoadEquipment	HorsePower	80.00	130.00
tblOffRoadEquipment	HorsePower	203.00	65.00
tblOffRoadEquipment	HorsePower	263.00	64.00
tblOffRoadEquipment	LoadFactor	0.41	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.42
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	LoadFactor	0.30	0.46
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	3.90
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	150.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	8.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Year	tons/yr										MT/yr					
2025	0.0117	0.1158	0.1188	3.9000e-004	9.7300e-003	4.5300e-003	0.0143	2.6400e-003	4.1700e-003	6.8100e-003	0.0000	35.5293	35.5293	5.1800e-003	0.0000	35.6589
Maximum	**0.0117**	**0.1158**	**0.1188**	**3.9000e-004**	**9.7300e-003**	**4.5300e-003**	**0.0143**	**2.6400e-003**	**4.1700e-003**	**6.8100e-003**	**0.0000**	**35.5293**	**35.5293**	**5.1800e-003**	**0.0000**	**35.6589**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.0117	0.1158	0.1188	3.9000e-004	9.7300e-003	4.5300e-003	0.0143	2.6400e-003	4.1700e-003	6.8100e-003	0.0000	35.5293	35.5293	5.1800e-003	0.0000	35.6589
Maximum	**0.0117**	**0.1158**	**0.1188**	**3.9000e-004**	**9.7300e-003**	**4.5300e-003**	**0.0143**	**2.6400e-003**	**4.1700e-003**	**6.8100e-003**	**0.0000**	**35.5293**	**35.5293**	**0.00518**	**0.0000**	**35.6589**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
28	**12-1-2024**	**2-28-2025**	0.1294	0.1294
		Highest	0.1294	0.1294

2.2 Overall Operational

Unmitigated Operational

Monterey ModelingID 16

North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Off-road Equipment - Based on engineer's estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	173.00
tblConstructionPhase	NumDays	0.00	74.00
tblOffRoadEquipment	HorsePower	212.00	89.00
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	HorsePower	172.00	130.00
tblOffRoadEquipment	HorsePower	130.00	8.00
tblOffRoadEquipment	HorsePower	80.00	64.00
tblOffRoadEquipment	HorsePower	367.00	97.00
tblOffRoadEquipment	LoadFactor	0.43	0.20
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.43
tblOffRoadEquipment	LoadFactor	0.38	0.46
tblOffRoadEquipment	LoadFactor	0.48	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	10.00
tblOffRoadEquipment	UsageHours	8.00	7.20
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	11.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	33.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2026	0.4383	4.0560	5.5506	0.0101	0.2181	0.1907	0.4087	0.0552	0.1757	0.2309	0.0000	906.8500	906.8500	0.2070	0.0000	912.0261
Maximum	**0.4383**	**4.0560**	**5.5506**	**0.0101**	**0.2181**	**0.1907**	**0.4087**	**0.0552**	**0.1757**	**0.2309**	**0.0000**	**906.8500**	**906.8500**	**0.2070**	**0.0000**	**912.0261**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2026	0.4383	4.0560	5.5506	0.0101	0.2181	0.1907	0.4087	0.0552	0.1757	0.2309	0.0000	906.8493	906.8493	0.2070	0.0000	912.0253
Maximum	**0.4383**	**4.0560**	**5.5506**	**0.0101**	**0.2181**	**0.1907**	**0.4087**	**0.0552**	**0.1757**	**0.2309**	**0.0000**	**906.8493**	**906.8493**	**0.2070**	**0.0000**	**912.0253**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
32	**12-1-2025**	**2-28-2026**	1.1754	1.1754
33	**3-1-2026**	**5-31-2026**	1.7182	1.7182
34	**6-1-2026**	**8-31-2026**	1.6114	1.6114
		Highest	1.7182	1.7182

2.2 Overall Operational

Monterey ModelingID 17
North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	7.00
tblOffRoadEquipment	HorsePower	212.00	89.00
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	HorsePower	130.00	8.00
tblOffRoadEquipment	HorsePower	80.00	64.00
tblOffRoadEquipment	HorsePower	367.00	97.00
tblOffRoadEquipment	LoadFactor	0.43	0.20
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.43
tblOffRoadEquipment	LoadFactor	0.38	0.46
tblOffRoadEquipment	LoadFactor	0.48	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	9.00
tblOffRoadEquipment	UsageHours	8.00	7.70
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	204.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	11.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					

2026	0.0201	0.2260	0.2346	5.9000e-004	7.2800e-003	9.9100e-003	0.0172	2.0300e-003	9.1200e-003	0.0112	0.0000	53.9733	53.9733	9.5000e-003	0.0000	54.2107
Maximum	**0.0201**	**0.2260**	**0.2346**	**5.9000e-004**	**7.2800e-003**	**9.9100e-003**	**0.0172**	**2.0300e-003**	**9.1200e-003**	**0.0112**	**0.0000**	**53.9733**	**53.9733**	**9.5000e-003**	**0.0000**	**54.2107**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2026	0.0201	0.2260	0.2346	5.9000e-004	7.2800e-003	9.9100e-003	0.0172	2.0300e-003	9.1200e-003	0.0112	0.0000	53.9733	53.9733	9.5000e-003	0.0000	54.2107
Maximum	**0.0201**	**0.2260**	**0.2346**	**5.9000e-004**	**7.2800e-003**	**9.9100e-003**	**0.0172**	**2.0300e-003**	**9.1200e-003**	**0.0112**	**0.0000**	**53.9733**	**53.9733**	**9.5000e-003**	**0.0000**	**54.2107**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
32	**12-1-2025**	**2-28-2026**	0.2263	0.2263
		Highest	0.2263	0.2263

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Monterey ModelingID 18

North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Off-road Equipment - Based on engineer's estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	74.00
tblConstructionPhase	NumDays	0.00	74.00
tblConstructionPhase	PhaseEndDate	2/28/2018	6/12/2018
tblOffRoadEquipment	HorsePower	212.00	89.00
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	LoadFactor	0.43	0.20
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	10.00
tblOffRoadEquipment	UsageHours	8.00	2.90
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	11.00
tblTripsAndVMT	WorkerTripLength	12.30	60.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.1800	1.8357	1.2741	2.5700e-003	0.0626	0.1117	0.1743	0.0132	0.1037	0.1169	0.0000	236.8106	236.8106	0.0438	0.0000	237.9060
Maximum	**0.1800**	**1.8357**	**1.2741**	**2.5700e-003**	**0.0626**	**0.1117**	**0.1743**	**0.0132**	**0.1037**	**0.1169**	**0.0000**	**236.8106**	**236.8106**	**0.0438**	**0.0000**	**237.9060**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.1800	1.8357	1.2741	2.5700e-003	0.0626	0.1117	0.1743	0.0132	0.1037	0.1169	0.0000	236.8105	236.8105	0.0438	0.0000	237.9058
Maximum	**0.1800**	**1.8357**	**1.2741**	**2.5700e-003**	**0.0626**	**0.1117**	**0.1743**	**0.0132**	**0.1037**	**0.1169**	**0.0000**	**236.8105**	**236.8105**	**0.0438**	**0.0000**	**237.9058**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**3-1-2018**	**5-31-2018**	1.7847	1.7847
2	**6-1-2018**	**8-31-2018**	0.2322	0.2322
		Highest	1.7847	1.7847

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	260.00
tblOffRoadEquipment	HorsePower	187.00	97.00
tblOffRoadEquipment	HorsePower	130.00	187.00
tblOffRoadEquipment	HorsePower	80.00	130.00
tblOffRoadEquipment	HorsePower	203.00	65.00
tblOffRoadEquipment	HorsePower	263.00	64.00
tblOffRoadEquipment	LoadFactor	0.41	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.42
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	LoadFactor	0.30	0.46
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	2.90
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,501.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	0.90
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	2.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Year	tons/yr										MT/yr					
2027	0.0792	0.8825	0.8269	3.0500e-003	0.0561	0.0315	0.0875	0.0154	0.0290	0.0444	0.0000	281.6649	281.6649	0.0390	0.0000	282.6406
Maximum	**0.0792**	**0.8825**	**0.8269**	**3.0500e-003**	**0.0561**	**0.0315**	**0.0875**	**0.0154**	**0.0290**	**0.0444**	**0.0000**	**281.6649**	**281.6649**	**0.0390**	**0.0000**	**282.6406**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2027	0.0792	0.8825	0.8269	3.0500e-003	0.0561	0.0315	0.0875	0.0154	0.0290	0.0444	0.0000	281.6647	281.6647	0.0390	0.0000	282.6405
Maximum	**0.0792**	**0.8825**	**0.8269**	**3.0500e-003**	**0.0561**	**0.0315**	**0.0875**	**0.0154**	**0.0290**	**0.0444**	**0.0000**	**281.6647**	**281.6647**	**0.0390**	**0.0000**	**282.6405**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
36	**12-1-2026**	**2-28-2027**	0.1563	0.1563
37	**3-1-2027**	**5-31-2027**	0.2420	0.2420
38	**6-1-2027**	**8-31-2027**	0.2412	0.2412
39	**9-1-2027**	**9-30-2027**	0.0786	0.0786
		Highest	0.2420	0.2420

2.2 Overall Operational

Unmitigated Operational

Monterey ModelingID 20

North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	260.00
tblOffRoadEquipment	HorsePower	187.00	97.00
tblOffRoadEquipment	HorsePower	130.00	187.00
tblOffRoadEquipment	HorsePower	80.00	130.00
tblOffRoadEquipment	HorsePower	203.00	65.00
tblOffRoadEquipment	HorsePower	263.00	64.00
tblOffRoadEquipment	LoadFactor	0.41	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.42
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	LoadFactor	0.30	0.46
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	5.70
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,737.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	0.81
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	2.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2028	0.1411	1.4364	1.5929	4.8600e-003	0.0614	0.0578	0.1193	0.0169	0.0532	0.0701	0.0000	442.1027	442.1027	0.0850	0.0000	444.2265
Maximum	**0.1411**	**1.4364**	**1.5929**	**4.8600e-003**	**0.0614**	**0.0578**	**0.1193**	**0.0169**	**0.0532**	**0.0701**	**0.0000**	**442.1027**	**442.1027**	**0.0850**	**0.0000**	**444.2265**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2028	0.1411	1.4364	1.5929	4.8600e-003	0.0614	0.0578	0.1193	0.0169	0.0532	0.0701	0.0000	442.1024	442.1024	0.0850	0.0000	444.2262
Maximum	**0.1411**	**1.4364**	**1.5929**	**4.8600e-003**	**0.0614**	**0.0578**	**0.1193**	**0.0169**	**0.0532**	**0.0701**	**0.0000**	**442.1024**	**442.1024**	**0.0850**	**0.0000**	**444.2262**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
40	**12-1-2027**	**2-29-2028**	0.2605	0.2605
41	**3-1-2028**	**5-31-2028**	0.3976	0.3976
42	**6-1-2028**	**8-31-2028**	0.3967	0.3967
43	**9-1-2028**	**9-30-2028**	0.1294	0.1294
		Highest	0.3976	0.3976

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North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2027
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -
Land Use -
Construction Phase - Engineer estimates.
Off-road Equipment -
Off-road Equipment - Engineer estimate.
Trips and VMT - Engineer estimates.
Demolition -
Grading -
Sequestration - test

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2027	0.0402	0.3503	0.3763	8.7000e-004	0.0119	0.0161	0.0280	3.1600e-003	0.0150	0.0181	0.0000	76.1528	76.1528	0.0167	0.0000	76.5702
Maximum	**0.0402**	**0.3503**	**0.3763**	**8.7000e-004**	**0.0119**	**0.0161**	**0.0280**	**3.1600e-003**	**0.0150**	**0.0181**	**0.0000**	**76.1528**	**76.1528**	**0.0167**	**0.0000**	**76.5702**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2027	0.0402	0.3503	0.3763	8.7000e-004	0.0119	0.0161	0.0280	3.1600e-003	0.0150	0.0181	0.0000	76.1527	76.1527	0.0167	0.0000	76.5701
Maximum	**0.0402**	**0.3503**	**0.3763**	**8.7000e-004**	**0.0119**	**0.0161**	**0.0280**	**3.1600e-003**	**0.0150**	**0.0181**	**0.0000**	**76.1527**	**76.1527**	**0.0167**	**0.0000**	**76.5701**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
36	**12-1-2026**	**2-28-2027**	0.0964	0.0964
37	**3-1-2027**	**5-31-2027**	0.1500	0.1500
38	**6-1-2027**	**8-31-2027**	0.1466	0.1466
		Highest	0.1500	0.1500

Monterey ModelingID 22
North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -
Land Use -
Construction Phase - Engineer estimates.
Off-road Equipment -
Off-road Equipment - Engineer estimate.
Trips and VMT - Engineer estimates.
Demolition -
Grading -
Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	53.00
tblOffRoadEquipment	HorsePower	187.00	97.00
tblOffRoadEquipment	HorsePower	130.00	187.00
tblOffRoadEquipment	HorsePower	80.00	130.00
tblOffRoadEquipment	HorsePower	203.00	65.00
tblOffRoadEquipment	LoadFactor	0.41	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.42
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	2.10
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	288.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	0.51
tblTripsAndVMT	WorkerTripLength	12.30	60.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2028	0.0182	0.1958	0.1813	5.9000e-004	8.0700e-003	8.1300e-003	0.0162	2.2300e-003	7.4800e-003	9.7100e-003	0.0000	54.3571	54.3571	8.5500e-003	0.0000	54.5708

Maximum	**0.0182**	**0.1958**	**0.1813**	**5.9000e-004**	**8.0700e-003**	**8.1300e-003**	**0.0162**	**2.2300e-003**	**7.4800e-003**	**9.7100e-003**	**0.0000**	**54.3571**	**54.3571**	**8.5500e-003**	**0.0000**	**54.5708**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2028	0.0182	0.1958	0.1813	5.9000e-004	8.0700e-003	8.1300e-003	0.0162	2.2300e-003	7.4800e-003	9.7100e-003	0.0000	54.3570	54.3570	8.5500e-003	0.0000	54.5708
Maximum	**0.0182**	**0.1958**	**0.1813**	**5.9000e-004**	**8.0700e-003**	**8.1300e-003**	**0.0162**	**2.2300e-003**	**7.4800e-003**	**9.7100e-003**	**0.0000**	**54.3570**	**54.3570**	**8.5500e-003**	**0.0000**	**54.5708**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
40	**12-1-2027**	**2-29-2028**	0.1733	0.1733
41	**3-1-2028**	**5-31-2028**	0.0433	0.0433
		Highest	0.1733	0.1733

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Monterey ModelingID 23

North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2026
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Engineer estimates.

Off-road Equipment -

Off-road Equipment - Engineer estimate.

Trips and VMT - Engineer estimates.

Demolition -

Grading -

Sequestration - test

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	183.00
tblOffRoadEquipment	HorsePower	187.00	97.00
tblOffRoadEquipment	HorsePower	130.00	187.00
tblOffRoadEquipment	HorsePower	80.00	130.00
tblOffRoadEquipment	HorsePower	203.00	65.00
tblOffRoadEquipment	HorsePower	263.00	64.00
tblOffRoadEquipment	LoadFactor	0.41	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.42
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	LoadFactor	0.30	0.46
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	2.90
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,031.00
tblTripsAndVMT	VendorTripLength	7.30	60.00
tblTripsAndVMT	VendorTripNumber	0.00	0.80
tblTripsAndVMT	WorkerTripLength	12.30	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	2.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Year	tons/yr										MT/yr					
2029	0.0651	0.6877	0.6753	2.2200e-003	0.0383	0.0277	0.0660	0.0105	0.0255	0.0360	0.0000	204.6521	204.6521	0.0311	0.0000	205.4293
Maximum	**0.0651**	**0.6877**	**0.6753**	**2.2200e-003**	**0.0383**	**0.0277**	**0.0660**	**0.0105**	**0.0255**	**0.0360**	**0.0000**	**204.6521**	**204.6521**	**0.0311**	**0.0000**	**205.4293**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2029	0.0651	0.6877	0.6753	2.2200e-003	0.0383	0.0277	0.0660	0.0105	0.0255	0.0360	0.0000	204.6520	204.6520	0.0311	0.0000	205.4292
Maximum	**0.0651**	**0.6877**	**0.6753**	**2.2200e-003**	**0.0383**	**0.0277**	**0.0660**	**0.0105**	**0.0255**	**0.0360**	**0.0000**	**204.6520**	**204.6520**	**0.0311**	**0.0000**	**205.4292**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
44	**12-1-2028**	**2-28-2029**	0.1737	0.1737
45	**3-1-2029**	**5-31-2029**	0.2694	0.2694
46	**6-1-2029**	**8-31-2029**	0.2687	0.2687
47	**9-1-2029**	**9-30-2029**	0.0350	0.0350
		Highest	0.2694	0.2694

2.2 Overall Operational

Unmitigated Operational

CalEEMod

Building Operational Emissions Modeling Output Reports

Monterey Operational Existing ARFF
North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	8.60		0.20	8,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2015
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Planning estimates.

Vehicle Trips - Planning assumptions.

Energy Use -

Table Name	Column Name	Default Value	New Value

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	24.2211	11.1950	8.3041	0.0131	0.8463	0.7104	1.4699	0.4386	0.6536	1.0337	0.0000	1,273.2321	1,273.2321	0.3608	0.0000	1,278.9984
Maximum	**24.2211**	**11.1950**	**8.3041**	**0.0131**	**0.8463**	**0.7104**	**1.4699**	**0.4386**	**0.6536**	**1.0337**	**0.0000**	**1,273.2321**	**1,273.2321**	**0.3608**	**0.0000**	**1,278.9984**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	24.2211	11.1950	8.3041	0.0131	0.8463	0.7104	1.4699	0.4386	0.6536	1.0337	0.0000	1,273.2321	1,273.2321	0.3608	0.0000	1,278.9984
Maximum	**24.2211**	**11.1950**	**8.3041**	**0.0131**	**0.8463**	**0.7104**	**1.4699**	**0.4386**	**0.6536**	**1.0337**	**0.0000**	**1,273.2321**	**1,273.2321**	**0.3608**	**0.0000**	**1,278.9984**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2169	1.0000e-005	9.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8800e-003	1.8800e-003	1.0000e-005		2.0200e-003
Energy	4.6900e-003	0.0426	0.0358	2.6000e-004		3.2400e-003	3.2400e-003		3.2400e-003	3.2400e-003		51.1149	51.1149	9.8000e-004	9.4000e-004	51.4187
Total	**0.2216**	**0.0426**	**0.0367**	**2.6000e-004**		**3.2400e-003**	**3.2400e-003**		**3.2400e-003**	**3.2400e-003**		**51.1168**	**51.1168**	**9.9000e-004**	**9.4000e-004**	**51.4207**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2169	1.0000e-005	9.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8800e-003	1.8800e-003	1.0000e-005		2.0200e-003
Energy	4.6900e-003	0.0426	0.0358	2.6000e-004		3.2400e-003	3.2400e-003		3.2400e-003	3.2400e-003		51.1149	51.1149	9.8000e-004	9.4000e-004	51.4187
Total	**0.2216**	**0.0426**	**0.0367**	**2.6000e-004**		**3.2400e-003**	**3.2400e-003**		**3.2400e-003**	**3.2400e-003**		**51.1168**	**51.1168**	**9.9000e-004**	**9.4000e-004**	**51.4207**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Monterey Operational SE Hangars
North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	126.00	1000sqft	2.89	126,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2015
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Planning estimates.

Vehicle Trips - Planning assumptions.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblVehicleTrips	ST_TR	1.68	0.49
tblVehicleTrips	SU_TR	1.68	0.49
tblVehicleTrips	WD_TR	1.68	0.49

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	3.3562	24.4293	19.3372	0.0367	6.6459	1.4375	7.8150	3.3923	1.3439	4.4679	0.0000	3,526.5518	3,526.5518	0.7726	0.0000	3,540.7171
2019	175.5273	21.9825	18.4539	0.0365	0.6380	1.1171	1.7551	0.1724	1.0706	1.2430	0.0000	3,490.6027	3,490.6027	0.5487	0.0000	3,504.1190
Maximum	**175.5273**	**24.4293**	**19.3372**	**0.0367**	**6.6459**	**1.4375**	**7.8150**	**3.3923**	**1.3439**	**4.4679**	**0.0000**	**3,526.5518**	**3,526.5518**	**0.7726**	**0.0000**	**3,540.7171**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	3.3562	24.4293	19.3372	0.0367	6.6459	1.4375	7.8150	3.3923	1.3439	4.4679	0.0000	3,526.5518	3,526.5518	0.7726	0.0000	3,540.7171
2019	175.5273	21.9825	18.4539	0.0365	0.6380	1.1171	1.7551	0.1724	1.0706	1.2430	0.0000	3,490.6027	3,490.6027	0.5487	0.0000	3,504.1190
Maximum	**175.5273**	**24.4293**	**19.3372**	**0.0367**	**6.6459**	**1.4375**	**7.8150**	**3.3923**	**1.3439**	**4.4679**	**0.0000**	**3,526.5518**	**3,526.5518**	**0.7726**	**0.0000**	**3,540.7171**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.1777	1.3000e-004	0.0133	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0276	0.0276	8.0000e-005		0.0296
Energy	0.0129	0.1174	0.0987	7.0000e-004		8.9300e-003	8.9300e-003		8.9300e-003	8.9300e-003		140.9251	140.9251	2.7000e-003	2.5800e-003	141.7625
Mobile	0.2849	1.1636	3.3315	5.9700e-003	0.3852	0.0146	0.3999	0.1034	0.0139	0.1173		600.1003	600.1003	0.0454		601.2356
Total	**3.4756**	**1.2812**	**3.4435**	**6.6700e-003**	**0.3852**	**0.0236**	**0.4088**	**0.1034**	**0.0229**	**0.1263**		**741.0529**	**741.0529**	**0.0482**	**2.5800e-003**	**743.0277**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.1777	1.3000e-004	0.0133	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0276	0.0276	8.0000e-005		0.0296
Energy	0.0129	0.1174	0.0987	7.0000e-004		8.9300e-003	8.9300e-003		8.9300e-003	8.9300e-003		140.9251	140.9251	2.7000e-003	2.5800e-003	141.7625
Mobile	0.2849	1.1636	3.3315	5.9700e-003	0.3852	0.0146	0.3999	0.1034	0.0139	0.1173		600.1003	600.1003	0.0454		601.2356
Total	**3.4756**	**1.2812**	**3.4435**	**6.6700e-003**	**0.3852**	**0.0236**	**0.4088**	**0.1034**	**0.0229**	**0.1263**		**741.0529**	**741.0529**	**0.0482**	**2.5800e-003**	**743.0277**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Monterey Terminal

North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	11.20	1000sqft	0.26	11,200.00	0
Government (Civic Center)	58.80	1000sqft	1.35	58,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2015
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Planning estimates.

Energy Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	2.8021	24.4293	15.7969	0.0278	5.8744	1.4375	6.8273	2.9736	1.3439	3.8502	0.0000	2,618.6421	2,618.6421	0.6126	0.0000	2,629.6611
2019	97.6277	17.5729	14.9872	0.0277	0.2990	0.9297	1.2286	0.0810	0.8977	0.9787	0.0000	2,597.3380	2,597.3380	0.4175	0.0000	2,607.7745
Maximum	**97.6277**	**24.4293**	**15.7969**	**0.0278**	**5.8744**	**1.4375**	**6.8273**	**2.9736**	**1.3439**	**3.8502**	**0.0000**	**2,618.6421**	**2,618.6421**	**0.6126**	**0.0000**	**2,629.6611**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	2.8021	24.4293	15.7969	0.0278	5.8744	1.4375	6.8273	2.9736	1.3439	3.8502	0.0000	2,618.6421	2,618.6421	0.6126	0.0000	2,629.6611
2019	97.6277	17.5729	14.9872	0.0277	0.2990	0.9297	1.2286	0.0810	0.8977	0.9787	0.0000	2,597.3380	2,597.3380	0.4175	0.0000	2,607.7745
Maximum	**97.6277**	**24.4293**	**15.7969**	**0.0278**	**5.8744**	**1.4375**	**6.8273**	**2.9736**	**1.3439**	**3.8502**	**0.0000**	**2,618.6421**	**2,618.6421**	**0.6126**	**0.0000**	**2,629.6611**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.7654	7.0000e-005	7.3900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0153	0.0153	4.0000e-005		0.0164
Energy	0.0372	0.3379	0.2838	2.0300e-003		0.0257	0.0257		0.0257	0.0257		405.4833	405.4833	7.7700e-003	7.4300e-003	407.8929
Mobile	6.7226	24.9224	68.0993	0.1149	7.1940	0.2848	7.4788	1.9305	0.2704	2.2009		11,547.9800	11,547.9800	0.9432		11,571.5604
Total	**8.5252**	**25.2604**	**68.3905**	**0.1169**	**7.1940**	**0.3105**	**7.5045**	**1.9305**	**0.2961**	**2.2266**		**11,953.4786**	**11,953.4786**	**0.9510**	**7.4300e-003**	**11,979.4697**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.7654	7.0000e-005	7.3900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0153	0.0153	4.0000e-005		0.0164
Energy	0.0372	0.3379	0.2838	2.0300e-003		0.0257	0.0257		0.0257	0.0257		405.4833	405.4833	7.7700e-003	7.4300e-003	407.8929
Mobile	6.7226	24.9224	68.0993	0.1149	7.1940	0.2848	7.4788	1.9305	0.2704	2.2009		11,547.9800	11,547.9800	0.9432		11,571.5604
Total	**8.5252**	**25.2604**	**68.3905**	**0.1169**	**7.1940**	**0.3105**	**7.5045**	**1.9305**	**0.2961**	**2.2266**		**11,953.4786**	**11,953.4786**	**0.9510**	**7.4300e-003**	**11,979.4697**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Monterey Operational Future ARFF

North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	13.40	1000sqft	0.31	13,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2022
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Planning estimates.

Vehicle Trips - Planning assumptions.

Energy Use -

Table Name	Column Name	Default Value	New Value

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	37.5699	11.3483	8.3041	0.0131	0.8463	0.7119	1.4699	0.4386	0.6550	1.0337	0.0000	1,273.2321	1,273.2321	0.3636	0.0000	1,279.4943
Maximum	**37.5699**	**11.3483**	**8.3041**	**0.0131**	**0.8463**	**0.7119**	**1.4699**	**0.4386**	**0.6550**	**1.0337**	**0.0000**	**1,273.2321**	**1,273.2321**	**0.3636**	**0.0000**	**1,279.4943**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	37.5699	11.3483	8.3041	0.0131	0.8463	0.7119	1.4699	0.4386	0.6550	1.0337	0.0000	1,273.2321	1,273.2321	0.3636	0.0000	1,279.4943
Maximum	**37.5699**	**11.3483**	**8.3041**	**0.0131**	**0.8463**	**0.7119**	**1.4699**	**0.4386**	**0.6550**	**1.0337**	**0.0000**	**1,273.2321**	**1,273.2321**	**0.3636**	**0.0000**	**1,279.4943**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3380	1.0000e-005	1.4200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		2.9300e-003	2.9300e-003	1.0000e-005		3.1400e-003
Energy	7.3000e-003	0.0664	0.0558	4.0000e-004		5.0400e-003	5.0400e-003		5.0400e-003	5.0400e-003		79.6442	79.6442	1.5300e-003	1.4600e-003	80.1174
Mobile	0.8458	3.2280	8.9515	0.0154	0.9743	0.0381	1.0123	0.2615	0.0361	0.2976		1,548.2415	1,548.2415	0.1234		1,551.3254
Total	**1.1911**	**3.2944**	**9.0086**	**0.0158**	**0.9743**	**0.0431**	**1.0174**	**0.2615**	**0.0412**	**0.3026**		**1,627.8886**	**1,627.8886**	**0.1249**	**1.4600e-003**	**1,631.4460**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3380	1.0000e-005	1.4200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		2.9300e-003	2.9300e-003	1.0000e-005		3.1400e-003
Energy	7.3000e-003	0.0664	0.0558	4.0000e-004		5.0400e-003	5.0400e-003		5.0400e-003	5.0400e-003		79.6442	79.6442	1.5300e-003	1.4600e-003	80.1174
Mobile	0.8458	3.2280	8.9515	0.0154	0.9743	0.0381	1.0123	0.2615	0.0361	0.2976		1,548.2415	1,548.2415	0.1234		1,551.3254
Total	**1.1911**	**3.2944**	**9.0086**	**0.0158**	**0.9743**	**0.0431**	**1.0174**	**0.2615**	**0.0412**	**0.3026**		**1,627.8886**	**1,627.8886**	**0.1249**	**1.4600e-003**	**1,631.4460**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Monterey Operational North Hangars
North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	178.40	1000sqft	4.10	178,398.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2022
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Planning estimates.

Vehicle Trips - Planning assumptions.

Energy Use -

Table Name	Column Name	Default Value	New Value

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.6682	48.2890	23.4264	0.0433	18.2346	2.5784	20.8130	9.9753	2.3721	12.3475	0.0000	4,292.4232	4,292.4232	1.2023	0.0000	4,310.7345
2019	138.1578	25.3294	21.6665	0.0430	0.8979	1.3273	2.2252	0.2426	1.2483	1.4909	0.0000	4,237.2383	4,237.2383	0.7145	0.0000	4,255.1017
Maximum	**138.1578**	**48.2890**	**23.4264**	**0.0433**	**18.2346**	**2.5784**	**20.8130**	**9.9753**	**2.3721**	**12.3475**	**0.0000**	**4,292.4232**	**4,292.4232**	**1.2023**	**0.0000**	**4,310.7345**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.6682	48.2890	23.4264	0.0433	18.2346	2.5784	20.8130	9.9753	2.3721	12.3475	0.0000	4,292.4232	4,292.4232	1.2023	0.0000	4,310.7345
2019	138.1578	25.3294	21.6665	0.0430	0.8979	1.3273	2.2252	0.2426	1.2483	1.4909	0.0000	4,237.2383	4,237.2383	0.7145	0.0000	4,255.1017
Maximum	**138.1578**	**48.2890**	**23.4264**	**0.0433**	**18.2346**	**2.5784**	**20.8130**	**9.9753**	**2.3721**	**12.3475**	**0.0000**	**4,292.4232**	**4,292.4232**	**1.2023**	**0.0000**	**4,310.7345**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.4990	1.6000e-004	0.0182	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0390	0.0390	1.0000e-004		0.0416
Energy	0.0183	0.1663	0.1397	1.0000e-003		0.0126	0.0126		0.0126	0.0126		199.5298	199.5298	3.8200e-003	3.6600e-003	200.7155
Mobile	0.5677	2.6750	6.2617	0.0227	1.8639	0.0178	1.8817	0.4991	0.0166	0.5156		2,306.9443	2,306.9443	0.0983		2,309.4021
Total	**5.0850**	**2.8414**	**6.4196**	**0.0237**	**1.8639**	**0.0305**	**1.8944**	**0.4991**	**0.0293**	**0.5283**		**2,506.5131**	**2,506.5131**	**0.1022**	**3.6600e-003**	**2,510.1591**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.4990	1.6000e-004	0.0182	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0390	0.0390	1.0000e-004		0.0416
Energy	0.0183	0.1663	0.1397	1.0000e-003		0.0126	0.0126		0.0126	0.0126		199.5298	199.5298	3.8200e-003	3.6600e-003	200.7155
Mobile	0.5677	2.6750	6.2617	0.0227	1.8639	0.0178	1.8817	0.4991	0.0166	0.5156		2,306.9443	2,306.9443	0.0983		2,309.4021
Total	**5.0850**	**2.8414**	**6.4196**	**0.0237**	**1.8639**	**0.0305**	**1.8944**	**0.4991**	**0.0293**	**0.5283**		**2,506.5131**	**2,506.5131**	**0.1022**	**3.6600e-003**	**2,510.1591**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Monterey Operational Long Term - North Side
North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	325.00	1000sqft	7.46	325,000.00	0
General Light Industry	400.00	1000sqft	9.18	400,000.00	0
User Defined Industrial	1.00	User Defined Unit	3.00	125.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2035
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Planning estimates.

Vehicle Trips - Planning assumptions.

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	0.00	125.00
tblLandUse	LotAcreage	0.00	3.00

tblVehicleTrips	CC_TTP	0.00	28.00
tblVehicleTrips	CNW_TTP	0.00	13.00
tblVehicleTrips	CW_TTP	0.00	59.00
tblVehicleTrips	DV_TP	0.00	5.00
tblVehicleTrips	PB_TP	0.00	3.00
tblVehicleTrips	PR_TP	0.00	92.00
tblVehicleTrips	ST_TR	0.00	149.00
tblVehicleTrips	SU_TR	0.00	149.00
tblVehicleTrips	WD_TR	0.00	149.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	5.2074	59.6221	36.5922	0.0903	18.2346	2.6354	20.8130	9.9753	2.4246	12.3475	0.0000	9,108.3329	9,108.3329	1.9545	0.0000	9,133.1843
2019	504.6940	38.3634	33.9704	0.0893	3.3500	1.4405	4.7905	0.9068	1.3561	2.2628	0.0000	8,983.5168	8,983.5168	0.9563	0.0000	9,007.4241
Maximum	**504.6940**	**59.6221**	**36.5922**	**0.0903**	**18.2346**	**2.6354**	**20.8130**	**9.9753**	**2.4246**	**12.3475**	**0.0000**	**9,108.3329**	**9,108.3329**	**1.9545**	**0.0000**	**9,133.1843**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	5.2074	59.6221	36.5922	0.0903	18.2346	2.6354	20.8130	9.9753	2.4246	12.3475	0.0000	9,108.3329	9,108.3329	1.9545	0.0000	9,133.1843
2019	504.6940	38.3634	33.9704	0.0893	3.3500	1.4405	4.7905	0.9068	1.3561	2.2628	0.0000	8,983.5168	8,983.5168	0.9563	0.0000	9,007.4241
Maximum	**504.6940**	**59.6221**	**36.5922**	**0.0903**	**18.2346**	**2.6354**	**20.8130**	**9.9753**	**2.4246**	**12.3475**	**0.0000**	**9,108.3329**	**9,108.3329**	**1.9545**	**0.0000**	**9,133.1843**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	18.2871	6.9000e-004	0.0746	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1589	0.1589	4.3000e-004		0.1695
Energy	0.5146	4.6780	3.9295	0.0281		0.3555	0.3555		0.3555	0.3555		5,613.5375	5,613.5375	0.1076	0.1029	5,646.8959
Mobile	17.8163	82.1957	197.0473	0.5360	38.1087	0.6289	38.7376	10.2102	0.5923	10.8025		54,155.1798	54,155.1798	2.9390		54,228.6554
Total	**36.6180**	**86.8743**	**201.0513**	**0.5641**	**38.1087**	**0.9847**	**39.0934**	**10.2102**	**0.9481**	**11.1583**		**59,768.8762**	**59,768.8762**	**3.0470**	**0.1029**	**59,875.7208**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Area	18.2871	6.9000e-004	0.0746	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1589	0.1589	4.3000e-004		0.1695
Energy	0.5146	4.6780	3.9295	0.0281		0.3555	0.3555		0.3555	0.3555		5,613.5375	5,613.5375	0.1076	0.1029	5,646.8959
Mobile	17.8163	82.1957	197.0473	0.5360	38.1087	0.6289	38.7376	10.2102	0.5923	10.8025		54,155.1798	54,155.1798	2.9390		54,228.6554
Total	**36.6180**	**86.8743**	**201.0513**	**0.5641**	**38.1087**	**0.9847**	**39.0934**	**10.2102**	**0.9481**	**11.1583**		**59,768.8762**	**59,768.8762**	**3.0470**	**0.1029**	**59,875.7208**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Monterey Operational Short Term - North Side

North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	30,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2035
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Planning estimates.

Vehicle Trips - Planning assumptions.

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	0.00	30,000.00
tblLandUse	LotAcreage	0.00	1.00
tblVehicleTrips	CC_TTP	0.00	28.00
tblVehicleTrips	CNW_TTP	0.00	13.00

tblVehicleTrips	CW_TTP	0.00	59.00
tblVehicleTrips	DV_TP	0.00	5.00
tblVehicleTrips	PB_TP	0.00	3.00
tblVehicleTrips	PR_TP	0.00	92.00
tblVehicleTrips	ST_TR	0.00	10.00
tblVehicleTrips	SU_TR	0.00	10.00
tblVehicleTrips	WD_TR	0.00	10.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	83.7462	24.4293	15.7969	0.0255	5.8744	1.4375	6.8273	2.9736	1.3439	3.8502	0.0000	2,526.2123	2,526.2123	0.6126	0.0000	2,541.5270
Maximum	**83.7462**	**24.4293**	**15.7969**	**0.0255**	**5.8744**	**1.4375**	**6.8273**	**2.9736**	**1.3439**	**3.8502**	**0.0000**	**2,526.2123**	**2,526.2123**	**0.6126**	**0.0000**	**2,541.5270**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	83.7462	24.4293	15.7969	0.0255	5.8744	1.4375	6.8273	2.9736	1.3439	3.8502	0.0000	2,526.2123	2,526.2123	0.6126	0.0000	2,541.5270
Maximum	**83.7462**	**24.4293**	**15.7969**	**0.0255**	**5.8744**	**1.4375**	**6.8273**	**2.9736**	**1.3439**	**3.8502**	**0.0000**	**2,526.2123**	**2,526.2123**	**0.6126**	**0.0000**	**2,541.5270**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.7563	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0277	0.1297	0.3166	8.7000e-004	0.0622	1.0200e-003	0.0633	0.0167	9.6000e-004	0.0176		87.8417	87.8417	4.6900e-003		87.9590
Total	**0.7840**	**0.1297**	**0.3167**	**8.7000e-004**	**0.0622**	**1.0200e-003**	**0.0633**	**0.0167**	**9.6000e-004**	**0.0176**		**87.8419**	**87.8419**	**4.6900e-003**	**0.0000**	**87.9592**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.7563	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mobile	0.0277	0.1297	0.3166	8.7000e-004	0.0622	1.0200e-003	0.0633	0.0167	9.6000e-004	0.0176		87.8417	87.8417	4.6900e-003		87.9590
Total	**0.7840**	**0.1297**	**0.3167**	**8.7000e-004**	**0.0622**	**1.0200e-003**	**0.0633**	**0.0167**	**9.6000e-004**	**0.0176**		**87.8419**	**87.8419**	**4.6900e-003**	**0.0000**	**87.9592**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Monterey Operational Long Term - South Side

North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	94.00	1000sqft	2.16	94,000.00	0
Medical Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	10.00	1000sqft	0.23	10,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2035
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Planning estimates.

Vehicle Trips - Planning assumptions.

Table Name	Column Name	Default Value	New Value

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.6682	48.2890	23.4264	0.0404	18.2346	2.5784	20.8130	9.9753	2.3721	12.3475	0.0000	4,027.5893	4,027.5893	1.2023	0.0000	4,054.4534
2019	115.4215	24.5390	20.2798	0.0389	0.6208	1.3198	1.9406	0.1683	1.2412	1.4095	0.0000	3,821.5900	3,821.5900	0.6942	0.0000	3,838.9444
Maximum	**115.4215**	**48.2890**	**23.4264**	**0.0404**	**18.2346**	**2.5784**	**20.8130**	**9.9753**	**2.3721**	**12.3475**	**0.0000**	**4,027.5893**	**4,027.5893**	**1.2023**	**0.0000**	**4,054.4534**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.6682	48.2890	23.4264	0.0404	18.2346	2.5784	20.8130	9.9753	2.3721	12.3475	0.0000	4,027.5893	4,027.5893	1.2023	0.0000	4,054.4534
2019	115.4215	24.5390	20.2798	0.0389	0.6208	1.3198	1.9406	0.1683	1.2412	1.4095	0.0000	3,821.5900	3,821.5900	0.6942	0.0000	3,838.9444
Maximum	**115.4215**	**48.2890**	**23.4264**	**0.0404**	**18.2346**	**2.5784**	**20.8130**	**9.9753**	**2.3721**	**12.3475**	**0.0000**	**4,027.5893**	**4,027.5893**	**1.2023**	**0.0000**	**4,054.4534**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.7577	1.4000e-004	0.0153	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0326	0.0326	9.0000e-005		0.0348
Energy	0.1287	1.1696	0.9824	7.0200e-003		0.0889	0.0889		0.0889	0.0889		1,403.4585	1,403.4585	0.0269	0.0257	1,411.7986
Mobile	9.8201	42.1592	91.4563	0.2348	15.9829	0.2771	16.2599	4.2822	0.2609	4.5430		23,735.6757	23,735.6757	1.4137		23,771.0173
Total	**13.7065**	**43.3288**	**92.4540**	**0.2418**	**15.9829**	**0.3660**	**16.3489**	**4.2822**	**0.3498**	**4.6320**		**25,139.1668**	**25,139.1668**	**1.4407**	**0.0257**	**25,182.8506**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.7577	1.4000e-004	0.0153	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0326	0.0326	9.0000e-005		0.0348
Energy	0.1287	1.1696	0.9824	7.0200e-003		0.0889	0.0889		0.0889	0.0889		1,403.4585	1,403.4585	0.0269	0.0257	1,411.7986
Mobile	9.8201	42.1592	91.4563	0.2348	15.9829	0.2771	16.2599	4.2822	0.2609	4.5430		23,735.6757	23,735.6757	1.4137		23,771.0173
Total	**13.7065**	**43.3288**	**92.4540**	**0.2418**	**15.9829**	**0.3660**	**16.3489**	**4.2822**	**0.3498**	**4.6320**		**25,139.1668**	**25,139.1668**	**1.4407**	**0.0257**	**25,182.8506**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Monterey Terminal Future
North Central Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government Office Building	84.00	1000sqft	1.93	84,000.00	0
General Light Industry	16.00	1000sqft	0.37	16,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2035
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Energy Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	3.2132	24.4293	18.1388	0.0333	6.6459	1.4375	7.8150	3.3923	1.3439	4.4679	0.0000	3,175.3186	3,175.3186	0.7726	0.0000	3,189.0152
2019	139.3533	21.2229	17.3941	0.0331	0.4264	1.1102	1.5366	0.1155	1.0640	1.1795	0.0000	3,145.6103	3,145.6103	0.5487	0.0000	3,158.6980
Maximum	**139.3533**	**24.4293**	**18.1388**	**0.0333**	**6.6459**	**1.4375**	**7.8150**	**3.3923**	**1.3439**	**4.4679**	**0.0000**	**3,175.3186**	**3,175.3186**	**0.7726**	**0.0000**	**3,189.0152**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	3.2132	24.4293	18.1388	0.0333	6.6459	1.4375	7.8150	3.3923	1.3439	4.4679	0.0000	3,175.3186	3,175.3186	0.7726	0.0000	3,189.0152
2019	139.3533	21.2229	17.3941	0.0331	0.4264	1.1102	1.5366	0.1155	1.0640	1.1795	0.0000	3,145.6103	3,145.6103	0.5487	0.0000	3,158.6980
Maximum	**139.3533**	**24.4293**	**18.1388**	**0.0333**	**6.6459**	**1.4375**	**7.8150**	**3.3923**	**1.3439**	**4.4679**	**0.0000**	**3,175.3186**	**3,175.3186**	**0.7726**	**0.0000**	**3,189.0152**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.5219	9.0000e-005	0.0102	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0233
Energy	0.0531	0.4827	0.4055	2.9000e-003		0.0367	0.0367		0.0367	0.0367		579.2619	579.2619	0.0111	0.0106	582.7042
Mobile	9.3338	42.4862	82.2497	0.2828	21.8451	0.2218	22.0668	5.8489	0.2069	6.0557		28,721.1020	28,721.1020	1.3770		28,755.5265
Total	**11.9088**	**42.9690**	**82.6654**	**0.2857**	**21.8451**	**0.2585**	**22.1035**	**5.8489**	**0.2436**	**6.0925**		**29,300.3858**	**29,300.3858**	**1.3881**	**0.0106**	**29,338.2539**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.5219	9.0000e-005	0.0102	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0233
Energy	0.0531	0.4827	0.4055	2.9000e-003		0.0367	0.0367		0.0367	0.0367		579.2619	579.2619	0.0111	0.0106	582.7042
Mobile	9.3338	42.4862	82.2497	0.2828	21.8451	0.2218	22.0668	5.8489	0.2069	6.0557		28,721.1020	28,721.1020	1.3770		28,755.5265
Total	**11.9088**	**42.9690**	**82.6654**	**0.2857**	**21.8451**	**0.2585**	**22.1035**	**5.8489**	**0.2436**	**6.0925**		**29,300.3858**	**29,300.3858**	**1.3881**	**0.0106**	**29,338.2539**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Monterey Operational Existing ARFF

North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	8.60	1000sqft	0.20	8,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2015
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Planning estimates.

Vehicle Trips - Planning assumptions.

Energy Use -

Table Name	Column Name	Default Value	New Value

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.1260	0.6490	0.4768	7.3000e-004	4.1600e-003	0.0411	0.0453	1.2800e-003	0.0380	0.0393	0.0000	66.0186	66.0186	0.0185	0.0000	66.4817
Maximum	**0.1260**	**0.6490**	**0.4768**	**7.3000e-004**	**4.1600e-003**	**0.0411**	**0.0453**	**1.2800e-003**	**0.0380**	**0.0393**	**0.0000**	**66.0186**	**66.0186**	**0.0185**	**0.0000**	**66.4817**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.1260	0.6490	0.4768	7.3000e-004	4.1600e-003	0.0411	0.0453	1.2800e-003	0.0380	0.0393	0.0000	66.0185	66.0185	0.0185	0.0000	66.4816
Maximum	**0.1260**	**0.6490**	**0.4768**	**7.3000e-004**	**4.1600e-003**	**0.0411**	**0.0453**	**1.2800e-003**	**0.0380**	**0.0393**	**0.0000**	**66.0185**	**66.0185**	**0.0185**	**0.0000**	**66.4816**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-14-2018	9-13-2018	0.3929	0.3929
2	9-14-2018	9-30-2018	0.0747	0.0747
		Highest	0.3929	0.3929

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0396	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5000e-004	1.5000e-004	0.0000	0.0000	1.6000e-004
Energy	8.6000e-004	7.7700e-003	6.5300e-003	5.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	8.4627	8.4627	1.6000e-004	1.6000e-004	8.5129
Mobile	0.0672	0.2825	0.7530	1.2300e-003	0.0788	3.1900e-003	0.0820	0.0212	3.0300e-003	0.0242	0.0000	112.1499	112.1499	9.3300e-003	0.0000	112.3831
Waste						0.0000	0.0000		0.0000	0.0000	2.2694	0.0000	2.2694	0.1341	0.0000	5.6224
Water						0.0000	0.0000		0.0000	0.0000	0.0791	0.0000	0.0791	8.1300e-003	1.9000e-004	0.3394
Total	**0.1076**	**0.2903**	**0.7596**	**1.2800e-003**	**0.0788**	**3.7800e-003**	**0.0826**	**0.0212**	**3.6200e-003**	**0.0248**	**2.3486**	**120.6127**	**122.9612**	**0.1517**	**3.5000e-004**	**126.8580**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0396	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5000e-004	1.5000e-004	0.0000	0.0000	1.6000e-004
Energy	8.6000e-004	7.7700e-003	6.5300e-003	5.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	8.4627	8.4627	1.6000e-004	1.6000e-004	8.5129
Mobile	0.0672	0.2825	0.7530	1.2300e-003	0.0788	3.1900e-003	0.0820	0.0212	3.0300e-003	0.0242	0.0000	112.1499	112.1499	9.3300e-003	0.0000	112.3831
Waste						0.0000	0.0000		0.0000	0.0000	2.2694	0.0000	2.2694	0.1341	0.0000	5.6224
Water						0.0000	0.0000		0.0000	0.0000	0.0791	0.0000	0.0791	8.1300e-003	1.9000e-004	0.3394

Total	0.1076	0.2903	0.7596	1.2800e-003	0.0788	3.7800e-003	0.0826	0.0212	3.6200e-003	0.0248	2.3486	120.6127	122.9612	0.1517	3.5000e-004	126.8580

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Monterey Operational SE Hangars
North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	126.00	1000sqft	2.89	126,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2015
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Planning estimates.

Vehicle Trips - Planning assumptions.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblVehicleTrips	ST_TR	1.68	0.49
tblVehicleTrips	SU_TR	1.68	0.49
tblVehicleTrips	WD_TR	1.68	0.49

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.3258	2.4345	1.8766	3.5000e-003	0.0771	0.1309	0.2080	0.0253	0.1249	0.1502	0.0000	305.9235	305.9235	0.0529	0.0000	307.2454
2019	0.9537	0.5909	0.5063	9.7000e-004	0.0157	0.0306	0.0463	4.2500e-003	0.0292	0.0334	0.0000	83.9236	83.9236	0.0142	0.0000	84.2774
Maximum	**0.9537**	**2.4345**	**1.8766**	**3.5000e-003**	**0.0771**	**0.1309**	**0.2080**	**0.0253**	**0.1249**	**0.1502**	**0.0000**	**305.9235**	**305.9235**	**0.0529**	**0.0000**	**307.2454**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.3258	2.4345	1.8766	3.5000e-003	0.0771	0.1309	0.2080	0.0253	0.1249	0.1502	0.0000	305.9232	305.9232	0.0529	0.0000	307.2451
2019	0.9537	0.5909	0.5063	9.7000e-004	0.0157	0.0306	0.0463	4.2500e-003	0.0292	0.0334	0.0000	83.9235	83.9235	0.0142	0.0000	84.2773
Maximum	**0.9537**	**2.4345**	**1.8766**	**3.5000e-003**	**0.0771**	**0.1309**	**0.2080**	**0.0253**	**0.1249**	**0.1502**	**0.0000**	**305.9232**	**305.9232**	**0.0529**	**0.0000**	**307.2451**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-23-2018	6-22-2018	0.8895	0.8895
2	6-23-2018	9-22-2018	0.8983	0.8983
3	9-23-2018	12-22-2018	0.8929	0.8929
4	12-23-2018	3-22-2019	0.8668	0.8668
5	3-23-2019	6-22-2019	0.7604	0.7604
		Highest	0.8983	0.8983

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5798	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.2500e-003	2.2500e-003	1.0000e-005	0.0000	2.4100e-003
Energy	2.3600e-003	0.0214	0.0180	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	23.3317	23.3317	4.5000e-004	4.3000e-004	23.4704
Mobile	0.0496	0.2230	0.6022	1.0400e-003	0.0680	2.6700e-003	0.0706	0.0183	2.5400e-003	0.0208	0.0000	94.8138	94.8138	7.4300e-003	0.0000	94.9996
Waste						0.0000	0.0000		0.0000	0.0000	24.0423	0.0000	24.0423	1.4209	0.0000	59.5637
Water						0.0000	0.0000		0.0000	0.0000	9.2440	0.0000	9.2440	0.9495	0.0224	39.6608
Total	**0.6318**	**0.2444**	**0.6214**	**1.1700e-003**	**0.0680**	**4.3000e-003**	**0.0723**	**0.0183**	**4.1700e-003**	**0.0225**	**33.2862**	**118.1478**	**151.4340**	**2.3782**	**0.0229**	**217.6968**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Area	0.5798	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.2500e-003	2.2500e-003	1.0000e-005	0.0000	2.4100e-003
Energy	2.3600e-003	0.0214	0.0180	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	23.3317	23.3317	4.5000e-004	4.3000e-004	23.4704
Mobile	0.0496	0.2230	0.6022	1.0400e-003	0.0680	2.6700e-003	0.0706	0.0183	2.5400e-003	0.0208	0.0000	94.8138	94.8138	7.4300e-003	0.0000	94.9996
Waste						0.0000	0.0000		0.0000	0.0000	24.0423	0.0000	24.0423	1.4209	0.0000	59.5637
Water						0.0000	0.0000		0.0000	0.0000	9.2440	0.0000	9.2440	0.9495	0.0224	39.6608
Total	**0.6318**	**0.2444**	**0.6214**	**1.1700e-003**	**0.0680**	**4.3000e-003**	**0.0723**	**0.0183**	**4.1700e-003**	**0.0225**	**33.2862**	**118.1478**	**151.4340**	**2.3782**	**0.0229**	**217.6968**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Monterey Terminal - North Central Coast Air Basin, Annual

Monterey Terminal

North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	11.20	1000sqft	0.26	11,200.00	0
Government (Civic Center)	58.80	1000sqft	1.35	58,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2015
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Planning estimates.

Energy Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.1946	1.4206	1.0899	1.9200e-003	0.0340	0.0798	0.1138	0.0130	0.0765	0.0895	0.0000	165.2244	165.2244	0.0303	0.0000	165.9810
2019	0.5951	0.7862	0.6785	1.2300e-003	0.0129	0.0419	0.0547	3.4900e-003	0.0403	0.0438	0.0000	105.1777	105.1777	0.0177	0.0000	105.6212
Maximum	**0.5951**	**1.4206**	**1.0899**	**1.9200e-003**	**0.0340**	**0.0798**	**0.1138**	**0.0130**	**0.0765**	**0.0895**	**0.0000**	**165.2244**	**165.2244**	**0.0303**	**0.0000**	**165.9810**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.1946	1.4205	1.0899	1.9200e-003	0.0340	0.0798	0.1138	0.0130	0.0765	0.0895	0.0000	165.2242	165.2242	0.0303	0.0000	165.9809
2019	0.5951	0.7862	0.6785	1.2300e-003	0.0129	0.0419	0.0547	3.4900e-003	0.0403	0.0438	0.0000	105.1776	105.1776	0.0177	0.0000	105.6211
Maximum	**0.5951**	**1.4205**	**1.0899**	**1.9200e-003**	**0.0340**	**0.0798**	**0.1138**	**0.0130**	**0.0765**	**0.0895**	**0.0000**	**165.2242**	**165.2242**	**0.0303**	**0.0000**	**165.9809**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**6-14-2018**	**9-13-2018**	0.7646	0.7646
2	**9-14-2018**	**12-13-2018**	0.7145	0.7145
3	**12-14-2018**	**3-13-2019**	0.6581	0.6581
4	**3-14-2019**	**6-13-2019**	0.8565	0.8565
		Highest	0.8565	0.8565

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3221	1.0000e-005	6.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2500e-003	1.2500e-003	0.0000	0.0000	1.3400e-003
Energy	6.7800e-003	0.0617	0.0518	3.7000e-004		4.6900e-003	4.6900e-003		4.6900e-003	4.6900e-003	0.0000	67.1323	67.1323	1.2900e-003	1.2300e-003	67.5312
Mobile	0.8328	3.4046	9.0196	0.0144	0.9099	0.0374	0.9473	0.2448	0.0355	0.2803	0.0000	1,308.3683	1,308.3683	0.1120	0.0000	1,311.1670
Waste						0.0000	0.0000		0.0000	0.0000	70.8540	0.0000	70.8540	4.1874	0.0000	175.5378
Water						0.0000	0.0000		0.0000	0.0000	4.5276	0.0000	4.5276	0.4650	0.0110	19.4254
Total	**1.1617**	**3.4663**	**9.0721**	**0.0147**	**0.9099**	**0.0421**	**0.9520**	**0.2448**	**0.0402**	**0.2850**	**75.3816**	**1,375.5018**	**1,450.8834**	**4.7656**	**0.0122**	**1,573.6627**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3221	1.0000e-005	6.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2500e-003	1.2500e-003	0.0000	0.0000	1.3400e-003
Energy	6.7800e-003	0.0617	0.0518	3.7000e-004		4.6900e-003	4.6900e-003		4.6900e-003	4.6900e-003	0.0000	67.1323	67.1323	1.2900e-003	1.2300e-003	67.5312
Mobile	0.8328	3.4046	9.0196	0.0144	0.9099	0.0374	0.9473	0.2448	0.0355	0.2803	0.0000	1,308.3683	1,308.3683	0.1120	0.0000	1,311.1670

Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	4.5276	0.0000	4.5276	0.4650	0.0110	19.4254
Total	**1.1617**	**3.4663**	**9.0721**	**0.0147**	**0.9099**	**0.0421**	**0.9520**	**0.2448**	**0.0402**	**0.2850**	**4.5276**	**1,375.5018**	**1,380.0294**	**0.5783**	**0.0122**	**1,398.1249**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**93.99**	**0.00**	**4.88**	**87.87**	**0.00**	**11.15**

Monterey Operational Future ARFF

North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	13.40	1000sqft	0.31	13,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2022
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Planning estimates.

Vehicle Trips - Planning assumptions.

Energy Use -

Table Name	Column Name	Default Value	New Value

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.1603	0.6568	0.4839	7.5000e-004	5.3900e-003	0.0412	0.0466	1.6200e-003	0.0381	0.0397	0.0000	68.2867	68.2867	0.0187	0.0000	68.7530
Maximum	**0.1603**	**0.6568**	**0.4839**	**7.5000e-004**	**5.3900e-003**	**0.0412**	**0.0466**	**1.6200e-003**	**0.0381**	**0.0397**	**0.0000**	**68.2867**	**68.2867**	**0.0187**	**0.0000**	**68.7530**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.1603	0.6568	0.4839	7.5000e-004	5.3900e-003	0.0412	0.0466	1.6200e-003	0.0381	0.0397	0.0000	68.2866	68.2866	0.0187	0.0000	68.7530
Maximum	**0.1603**	**0.6568**	**0.4839**	**7.5000e-004**	**5.3900e-003**	**0.0412**	**0.0466**	**1.6200e-003**	**0.0381**	**0.0397**	**0.0000**	**68.2866**	**68.2866**	**0.0187**	**0.0000**	**68.7530**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-23-2018	6-22-2018	0.3974	0.3974
2	6-23-2018	9-22-2018	0.4223	0.4223
		Highest	0.4223	0.4223

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0617	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4000e-004	2.4000e-004	0.0000	0.0000	2.6000e-004
Energy	1.3300e-003	0.0121	0.0102	7.0000e-005		9.2000e-004	9.2000e-004		9.2000e-004	9.2000e-004	0.0000	13.1860	13.1860	2.5000e-004	2.4000e-004	13.2643
Mobile	0.1047	0.4402	1.1732	1.9200e-003	0.1228	4.9700e-003	0.1277	0.0330	4.7200e-003	0.0378	0.0000	174.7451	174.7451	0.0145	0.0000	175.1085
Waste						0.0000	0.0000		0.0000	0.0000	3.5361	0.0000	3.5361	0.2090	0.0000	8.7605
Water						0.0000	0.0000		0.0000	0.0000	0.1233	0.0000	0.1233	0.0127	3.0000e-004	0.5289
Total	**0.1677**	**0.4523**	**1.1835**	**1.9900e-003**	**0.1228**	**5.8900e-003**	**0.1286**	**0.0330**	**5.6400e-003**	**0.0387**	**3.6594**	**187.9313**	**191.5907**	**0.2364**	**5.4000e-004**	**197.6625**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0617	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4000e-004	2.4000e-004	0.0000	0.0000	2.6000e-004
Energy	1.3300e-003	0.0121	0.0102	7.0000e-005		9.2000e-004	9.2000e-004		9.2000e-004	9.2000e-004	0.0000	13.1860	13.1860	2.5000e-004	2.4000e-004	13.2643
Mobile	0.1047	0.4402	1.1732	1.9200e-003	0.1228	4.9700e-003	0.1277	0.0330	4.7200e-003	0.0378	0.0000	174.7451	174.7451	0.0145	0.0000	175.1085
Waste						0.0000	0.0000		0.0000	0.0000	3.5361	0.0000	3.5361	0.2090	0.0000	8.7605
Water						0.0000	0.0000		0.0000	0.0000	0.1233	0.0000	0.1233	0.0127	3.0000e-004	0.5289

Total	0.1677	0.4523	1.1835	1.9900e-003	0.1228	5.8900e-003	0.1286	0.0330	5.6400e-003	0.0387	3.6594	187.9313	191.5907	0.2364	5.4000e-004	197.6625

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Monterey Operational North Hangars

North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	178.40	1000sqft	4.10	178,398.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2022
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Planning estimates.

Vehicle Trips - Planning assumptions.

Energy Use -

Table Name	Column Name	Default Value	New Value

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.3407	2.9969	2.2657	4.2400e-003	0.1473	0.1626	0.3099	0.0589	0.1525	0.2113	0.0000	381.7812	381.7812	0.0721	0.0000	383.5828
2019	1.3448	0.9085	0.7992	1.5200e-003	0.0294	0.0482	0.0776	7.9500e-003	0.0452	0.0532	0.0000	135.8259	135.8259	0.0247	0.0000	136.4444
Maximum	**1.3448**	**2.9969**	**2.2657**	**4.2400e-003**	**0.1473**	**0.1626**	**0.3099**	**0.0589**	**0.1525**	**0.2113**	**0.0000**	**381.7812**	**381.7812**	**0.0721**	**0.0000**	**383.5828**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.3407	2.9969	2.2657	4.2400e-003	0.1473	0.1626	0.3099	0.0589	0.1525	0.2113	0.0000	381.7809	381.7809	0.0721	0.0000	383.5825
2019	1.3448	0.9085	0.7992	1.5200e-003	0.0294	0.0482	0.0776	7.9500e-003	0.0452	0.0532	0.0000	135.8258	135.8258	0.0247	0.0000	136.4443
Maximum	**1.3448**	**2.9969**	**2.2657**	**4.2400e-003**	**0.1473**	**0.1626**	**0.3099**	**0.0589**	**0.1525**	**0.2113**	**0.0000**	**381.7809**	**381.7809**	**0.0721**	**0.0000**	**383.5825**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-23-2018	6-22-2018	1.2004	1.2004
2	6-23-2018	9-22-2018	1.0259	1.0259
3	9-23-2018	12-22-2018	1.0209	1.0209
4	12-23-2018	3-22-2019	0.9233	0.9233
5	3-23-2019	6-22-2019	1.4631	1.4631
		Highest	1.4631	1.4631

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8209	1.0000e-005	1.6400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.1900e-003	3.1900e-003	1.0000e-005	0.0000	3.4000e-003
Energy	3.3400e-003	0.0304	0.0255	1.8000e-004		2.3100e-003	2.3100e-003		2.3100e-003	2.3100e-003	0.0000	33.0344	33.0344	6.3000e-004	6.1000e-004	33.2307
Mobile	0.0956	0.5029	1.1166	3.9600e-003	0.3287	3.2400e-003	0.3320	0.0883	3.0200e-003	0.0913	0.0000	364.9551	364.9551	0.0162	0.0000	365.3610
Waste						0.0000	0.0000		0.0000	0.0000	34.0416	0.0000	34.0416	2.0118	0.0000	84.3366
Water						0.0000	0.0000		0.0000	0.0000	13.0883	0.0000	13.0883	1.3443	0.0317	56.1547
Total	**0.9198**	**0.5332**	**1.1437**	**4.1400e-003**	**0.3287**	**5.5600e-003**	**0.3343**	**0.0883**	**5.3400e-003**	**0.0936**	**47.1299**	**397.9927**	**445.1226**	**3.3730**	**0.0324**	**539.0864**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8209	1.0000e-005	1.6400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.1900e-003	3.1900e-003	1.0000e-005	0.0000	3.4000e-003
Energy	3.3400e-003	0.0304	0.0255	1.8000e-004		2.3100e-003	2.3100e-003		2.3100e-003	2.3100e-003	0.0000	33.0344	33.0344	6.3000e-004	6.1000e-004	33.2307
Mobile	0.0956	0.5029	1.1166	3.9600e-003	0.3287	3.2400e-003	0.3320	0.0883	3.0200e-003	0.0913	0.0000	364.9551	364.9551	0.0162	0.0000	365.3610

Waste						0.0000	0.0000		0.0000	0.0000	34.0416	0.0000	34.0416	2.0118	0.0000	84.3366
Water						0.0000	0.0000		0.0000	0.0000	13.0883	0.0000	13.0883	1.3443	0.0317	56.1547
Total	**0.9198**	**0.5332**	**1.1437**	**4.1400e-003**	**0.3287**	**5.5600e-003**	**0.3343**	**0.0883**	**5.3400e-003**	**0.0936**	**47.1299**	**397.9927**	**445.1226**	**3.3730**	**0.0324**	**539.0864**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Monterey Operational Long Term - North Side

North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	400.00	1000sqft	9.18	400,000.00	0
Office Park	325.00	1000sqft	7.46	325,000.00	0
User Defined Industrial	1.00	User Defined Unit	3.00	125.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2035
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Planning estimates.

Vehicle Trips - Planning assumptions.

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	0.00	125.00
tblLandUse	LotAcreage	0.00	3.00

tblVehicleTrips	CC_TTP	0.00	28.00
tblVehicleTrips	CNW_TTP	0.00	13.00
tblVehicleTrips	CW_TTP	0.00	59.00
tblVehicleTrips	DV_TP	0.00	5.00
tblVehicleTrips	PB_TP	0.00	3.00
tblVehicleTrips	PR_TP	0.00	92.00
tblVehicleTrips	ST_TR	0.00	149.00
tblVehicleTrips	SU_TR	0.00	149.00
tblVehicleTrips	WD_TR	0.00	149.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.4977	4.5199	3.4634	7.8300e-003	0.4560	0.1913	0.6473	0.1675	0.1788	0.3463	0.0000	715.8404	715.8404	0.1060	0.0000	718.4906
2019	5.4146	3.2356	2.8531	7.2200e-003	0.2629	0.1235	0.3864	0.0713	0.1161	0.1875	0.0000	658.4716	658.4716	0.0758	0.0000	660.3654
Maximum	**5.4146**	**4.5199**	**3.4634**	**7.8300e-003**	**0.4560**	**0.1913**	**0.6473**	**0.1675**	**0.1788**	**0.3463**	**0.0000**	**715.8404**	**715.8404**	**0.1060**	**0.0000**	**718.4906**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.4977	4.5199	3.4634	7.8300e-003	0.4560	0.1913	0.6473	0.1675	0.1788	0.3463	0.0000	715.8400	715.8400	0.1060	0.0000	718.4902
2019	5.4146	3.2356	2.8531	7.2200e-003	0.2629	0.1235	0.3864	0.0713	0.1161	0.1875	0.0000	658.4714	658.4714	0.0758	0.0000	660.3652
Maximum	**5.4146**	**4.5199**	**3.4634**	**7.8300e-003**	**0.4560**	**0.1913**	**0.6473**	**0.1675**	**0.1788**	**0.3463**	**0.0000**	**715.8400**	**715.8400**	**0.1060**	**0.0000**	**718.4902**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**3-23-2018**	**6-22-2018**	1.7932	1.7932
2	**6-23-2018**	**9-22-2018**	1.5388	1.5388
3	**9-23-2018**	**12-22-2018**	1.5453	1.5453
4	**12-23-2018**	**3-22-2019**	1.4110	1.4110
5	**3-23-2019**	**6-22-2019**	1.4087	1.4087
6	**6-23-2019**	**9-22-2019**	3.9638	3.9638
7	**9-23-2019**	**9-30-2019**	1.4479	1.4479
		Highest	3.9638	3.9638

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.3368	6.0000e-005	6.7100e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0130	0.0130	3.0000e-005	0.0000	0.0138
Energy	0.0939	0.8537	0.7171	5.1200e-003		0.0649	0.0649		0.0649	0.0649	0.0000	929.3841	929.3841	0.0178	0.0170	934.9070
Mobile	2.2914	11.7482	26.8590	0.0705	5.0781	0.0868	5.1650	1.3642	0.0818	1.4460	0.0000	6,462.1979	6,462.1979	0.3658	0.0000	6,471.3436

Waste						0.0000	0.0000		0.0000	0.0000	162.0375	0.0000	162.0375	9.5761	0.0000	401.4411
Water						0.0000	0.0000		0.0000	0.0000	47.6717	0.0000	47.6717	4.8963	0.1156	204.5328
Total	**5.7220**	**12.6020**	**27.5828**	**0.0756**	**5.0781**	**0.1517**	**5.2299**	**1.3642**	**0.1467**	**1.5109**	**209.7092**	**7,391.5950**	**7,601.3042**	**14.8562**	**0.1327**	**8,012.2383**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.3368	6.0000e-005	6.7100e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0130	0.0130	3.0000e-005	0.0000	0.0138
Energy	0.0939	0.8537	0.7171	5.1200e-003		0.0649	0.0649		0.0649	0.0649	0.0000	929.3841	929.3841	0.0178	0.0170	934.9070
Mobile	2.2914	11.7482	26.8590	0.0705	5.0781	0.0868	5.1650	1.3642	0.0818	1.4460	0.0000	6,462.1979	6,462.1979	0.3658	0.0000	6,471.3436
Waste						0.0000	0.0000		0.0000	0.0000	162.0375	0.0000	162.0375	9.5761	0.0000	401.4411
Water						0.0000	0.0000		0.0000	0.0000	47.6717	0.0000	47.6717	4.8963	0.1156	204.5328
Total	**5.7220**	**12.6020**	**27.5828**	**0.0756**	**5.0781**	**0.1517**	**5.2299**	**1.3642**	**0.1467**	**1.5109**	**209.7092**	**7,391.5950**	**7,601.3042**	**14.8562**	**0.1327**	**8,012.2383**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Monterey Operational Short Term - North Side
North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	30.00	1000sqft	2.89	30,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2035
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Planning estimates.

Vehicle Trips - Planning assumptions.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	3.00	1.00
tblConstructionPhase	NumDays	6.00	2.00
tblConstructionPhase	NumDays	220.00	100.00

tblConstructionPhase	NumDays	10.00	5.00
tblConstructionPhase	NumDays	10.00	5.00
tblFleetMix	HHD	0.04	0.00
tblFleetMix	LDA	0.53	0.00
tblFleetMix	LDT1	0.03	0.00
tblFleetMix	LDT2	0.20	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD2	5.8170e-003	0.00
tblFleetMix	MCY	7.2910e-003	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	1.0280e-003	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	3.0650e-003	0.00
tblFleetMix	SBUS	1.1100e-003	0.00
tblFleetMix	UBUS	2.8090e-003	0.00
tblGrading	AcresOfGrading	1.50	0.50
tblLandUse	LotAcreage	0.69	2.89
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	WorkerTripNumber	10.00	8.00
tblVehicleTrips	ST_TR	1.68	0.33
tblVehicleTrips	SU_TR	1.68	0.33
tblVehicleTrips	WD_TR	1.68	0.33

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.3630	1.0996	0.8608	1.4400e-003	0.0164	0.0639	0.0804	6.3300e-003	0.0614	0.0677	0.0000	123.1399	123.1399	0.0239	0.0000	123.7377
Maximum	**0.3630**	**1.0996**	**0.8608**	**1.4400e-003**	**0.0164**	**0.0639**	**0.0804**	**6.3300e-003**	**0.0614**	**0.0677**	**0.0000**	**123.1399**	**123.1399**	**0.0239**	**0.0000**	**123.7377**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.3630	1.0996	0.8608	1.4400e-003	0.0164	0.0639	0.0804	6.3300e-003	0.0614	0.0677	0.0000	123.1398	123.1398	0.0239	0.0000	123.7376
Maximum	**0.3630**	**1.0996**	**0.8608**	**1.4400e-003**	**0.0164**	**0.0639**	**0.0804**	**6.3300e-003**	**0.0614**	**0.0677**	**0.0000**	**123.1398**	**123.1398**	**0.0239**	**0.0000**	**123.7376**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e

Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-23-2018	6-22-2018	0.7204	0.7204
2	6-23-2018	9-22-2018	0.7438	0.7438
		Highest	0.7438	0.7438

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1381	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004
Energy	5.6000e-004	5.1000e-003	4.2900e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	5.5552	5.5552	1.1000e-004	1.0000e-004	5.5882
Mobile	0.0000	0.0000	0.0000	0.0000	9.2100e-003	0.0000	9.2100e-003	2.2600e-003	0.0000	2.2600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	5.7244	0.0000	5.7244	0.3383	0.0000	14.1818
Water						0.0000	0.0000		0.0000	0.0000	2.2010	0.0000	2.2010	0.2261	5.3400e-003	9.4431
Total	**0.1386**	**5.1000e-003**	**4.5700e-003**	**3.0000e-005**	**9.2100e-003**	**3.9000e-004**	**9.6000e-003**	**2.2600e-003**	**3.9000e-004**	**2.6500e-003**	**7.9253**	**5.5557**	**13.4810**	**0.5645**	**5.4400e-003**	**29.2136**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1381	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004
Energy	5.6000e-004	5.1000e-003	4.2900e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	5.5552	5.5552	1.1000e-004	1.0000e-004	5.5882
Mobile	0.0000	0.0000	0.0000	0.0000	9.2100e-003	0.0000	9.2100e-003	2.2600e-003	0.0000	2.2600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	5.7244	0.0000	5.7244	0.3383	0.0000	14.1818
Water						0.0000	0.0000		0.0000	0.0000	2.2010	0.0000	2.2010	0.2261	5.3400e-003	9.4431
Total	**0.1386**	**5.1000e-003**	**4.5700e-003**	**3.0000e-005**	**9.2100e-003**	**3.9000e-004**	**9.6000e-003**	**2.2600e-003**	**3.9000e-004**	**2.6500e-003**	**7.9253**	**5.5557**	**13.4810**	**0.5645**	**5.4400e-003**	**29.2136**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Monterey Operational Long Term - South Side
North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High Turnover (Sit Down Restaurant)	10.00	1000sqft	0.23	10,000.00	0
Medical Office Building	45.00	1000sqft	1.03	45,000.00	0
General Office Building	94.00	1000sqft	2.16	94,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2035
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Planning estimates.

Vehicle Trips - Planning assumptions.

Table Name	Column Name	Default Value	New Value

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.3250	2.9229	2.1373	3.9000e-003	0.1246	0.1619	0.2864	0.0528	0.1518	0.2045	0.0000	350.5851	350.5851	0.0704	0.0000	352.3441
2019	1.1351	0.8834	0.7563	1.4000e-003	0.0208	0.0479	0.0687	5.6500e-003	0.0450	0.0507	0.0000	124.3964	124.3964	0.0242	0.0000	125.0005
Maximum	**1.1351**	**2.9229**	**2.1373**	**3.9000e-003**	**0.1246**	**0.1619**	**0.2864**	**0.0528**	**0.1518**	**0.2045**	**0.0000**	**350.5851**	**350.5851**	**0.0704**	**0.0000**	**352.3441**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.3250	2.9229	2.1373	3.9000e-003	0.1246	0.1619	0.2864	0.0528	0.1518	0.2045	0.0000	350.5848	350.5848	0.0704	0.0000	352.3438
2019	1.1351	0.8834	0.7563	1.4000e-003	0.0208	0.0479	0.0687	5.6500e-003	0.0450	0.0507	0.0000	124.3963	124.3963	0.0242	0.0000	125.0004
Maximum	**1.1351**	**2.9229**	**2.1373**	**3.9000e-003**	**0.1246**	**0.1619**	**0.2864**	**0.0528**	**0.1518**	**0.2045**	**0.0000**	**350.5848**	**350.5848**	**0.0704**	**0.0000**	**352.3438**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-23-2018	6-22-2018	1.1838	1.1838
2	6-23-2018	9-22-2018	0.9921	0.9921

3	**9-23-2018**	**12-22-2018**	0.9856	0.9856
4	**12-23-2018**	**3-22-2019**	0.8906	0.8906
5	**3-23-2019**	**6-22-2019**	1.2503	1.2503
		Highest	1.2503	1.2503

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6856	1.0000e-005	1.3800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6600e-003	2.6600e-003	1.0000e-005	0.0000	2.8400e-003
Energy	0.0235	0.2134	0.1793	1.2800e-003		0.0162	0.0162		0.0162	0.0162	0.0000	232.3583	232.3583	4.4500e-003	4.2600e-003	233.7391
Mobile	1.2994	6.1927	13.2072	0.0318	2.1892	0.0395	2.2287	0.5881	0.0372	0.6253	0.0000	2,916.1787	2,916.1787	0.1842	0.0000	2,920.7835
Waste						0.0000	0.0000		0.0000	0.0000	140.5550	0.0000	140.5550	8.3066	0.0000	348.2191
Water						0.0000	0.0000		0.0000	0.0000	8.0547	0.0000	8.0547	0.8273	0.0195	34.5584
Total	**2.0085**	**6.4061**	**13.3879**	**0.0331**	**2.1892**	**0.0557**	**2.2449**	**0.5881**	**0.0534**	**0.6415**	**148.6097**	**3,148.5397**	**3,297.1494**	**9.3225**	**0.0238**	**3,537.3029**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6856	1.0000e-005	1.3800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6600e-003	2.6600e-003	1.0000e-005	0.0000	2.8400e-003
Energy	0.0235	0.2134	0.1793	1.2800e-003		0.0162	0.0162		0.0162	0.0162	0.0000	232.3583	232.3583	4.4500e-003	4.2600e-003	233.7391
Mobile	1.2994	6.1927	13.2072	0.0318	2.1892	0.0395	2.2287	0.5881	0.0372	0.6253	0.0000	2,916.1787	2,916.1787	0.1842	0.0000	2,920.7835
Waste						0.0000	0.0000		0.0000	0.0000	140.5550	0.0000	140.5550	8.3066	0.0000	348.2191
Water						0.0000	0.0000		0.0000	0.0000	8.0547	0.0000	8.0547	0.8273	0.0195	34.5584
Total	**2.0085**	**6.4061**	**13.3879**	**0.0331**	**2.1892**	**0.0557**	**2.2449**	**0.5881**	**0.0534**	**0.6415**	**148.6097**	**3,148.5397**	**3,297.1494**	**9.3225**	**0.0238**	**3,537.3029**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Monterey Terminal Future
North Central Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government Office Building	84.00	1000sqft	1.93	84,000.00	0
General Light Industry	16.00	1000sqft	0.37	16,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	4			**Operational Year**	2035
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Energy Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.2458	1.8744	1.3956	2.5200e-003	0.0507	0.1033	0.1540	0.0181	0.0984	0.1166	0.0000	219.3774	219.3774	0.0410	0.0000	220.4014
2019	0.8292	1.0192	0.8457	1.5800e-003	0.0194	0.0537	0.0731	5.2700e-003	0.0514	0.0566	0.0000	136.1076	136.1076	0.0238	0.0000	136.7017
Maximum	**0.8292**	**1.8744**	**1.3956**	**2.5200e-003**	**0.0507**	**0.1033**	**0.1540**	**0.0181**	**0.0984**	**0.1166**	**0.0000**	**219.3774**	**219.3774**	**0.0410**	**0.0000**	**220.4014**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.2458	1.8744	1.3956	2.5200e-003	0.0507	0.1033	0.1540	0.0181	0.0984	0.1166	0.0000	219.3772	219.3772	0.0410	0.0000	220.4012
2019	0.8292	1.0192	0.8457	1.5800e-003	0.0194	0.0537	0.0731	5.2700e-003	0.0514	0.0566	0.0000	136.1075	136.1075	0.0238	0.0000	136.7016
Maximum	**0.8292**	**1.8744**	**1.3956**	**2.5200e-003**	**0.0507**	**0.1033**	**0.1540**	**0.0181**	**0.0984**	**0.1166**	**0.0000**	**219.3772**	**219.3772**	**0.0410**	**0.0000**	**220.4012**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	5-22-2018	8-21-2018	0.8726	0.8726
2	8-22-2018	11-21-2018	0.8688	0.8688

3	11-22-2018	2-21-2019	0.8266	0.8266
4	2-22-2019	5-21-2019	0.8825	0.8825
5	5-22-2019	8-21-2019	0.5044	0.5044
		Highest	0.8825	0.8825

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4602	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7900e-003	1.7900e-003	0.0000	0.0000	1.9000e-003
Energy	9.6900e-003	0.0881	0.0740	5.3000e-004		6.7000e-003	6.7000e-003		6.7000e-003	6.7000e-003	0.0000	95.9033	95.9033	1.8400e-003	1.7600e-003	96.4732
Mobile	1.1092	5.6598	10.8091	0.0353	2.7570	0.0289	2.7859	0.7401	0.0270	0.7671	0.0000	3,250.1317	3,250.1317	0.1650	0.0000	3,254.2568
Waste						0.0000	0.0000		0.0000	0.0000	19.8850	0.0000	19.8850	1.1752	0.0000	49.2642
Water						0.0000	0.0000		0.0000	0.0000	6.4680	0.0000	6.4680	0.6643	0.0157	27.7506
Total	**1.5790**	**5.7479**	**10.8840**	**0.0358**	**2.7570**	**0.0356**	**2.7926**	**0.7401**	**0.0337**	**0.7738**	**26.3530**	**3,346.0368**	**3,372.3898**	**2.0063**	**0.0175**	**3,427.7467**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4602	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7900e-003	1.7900e-003	0.0000	0.0000	1.9000e-003
Energy	9.6900e-003	0.0881	0.0740	5.3000e-004		6.7000e-003	6.7000e-003		6.7000e-003	6.7000e-003	0.0000	95.9033	95.9033	1.8400e-003	1.7600e-003	96.4732
Mobile	1.1092	5.6598	10.8091	0.0353	2.7570	0.0289	2.7859	0.7401	0.0270	0.7671	0.0000	3,250.1317	3,250.1317	0.1650	0.0000	3,254.2568
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	6.4680	0.0000	6.4680	0.6643	0.0157	27.7506
Total	**1.5790**	**5.7479**	**10.8840**	**0.0358**	**2.7570**	**0.0356**	**2.7926**	**0.7401**	**0.0337**	**0.7738**	**6.4680**	**3,346.0368**	**3,352.5048**	**0.8312**	**0.0175**	**3,378.4825**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**75.46**	**0.00**	**0.59**	**58.57**	**0.00**	**1.44**

AEDT

Aviation Operational Emissions Modeling Output Reports

Aviation Environmental Design Tool (AEDT)
Emissions Modeling Output Report
Monterey Regional Airport

Operation Group	Mode	Fuel (lb)	Distance (mi)	Duration	CO (lb)	VOC (lb)	NOx (lb)	CO2 (lb)	SOx (lb)	PM 2·5 (lb)	PM 10 (lb)
casename 2015	Climb Taxi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
casename 2015	Climb Ground	1185.4	28.5	0.5	19.1	0.5	14.8	3740.0	1.5	0.3	0.3
casename 2015	Climb Below 1000	2319.5	278.5	1.5	230.8	3.1	27.3	7318.1	3.0	0.8	0.8
casename 2015	Climb Below Mixing Height	4543.2	501.9	3.2	347.9	4.6	53.7	14333.9	5.9	1.4	1.4
casename 2015	Climb Below 10000	10572.6	1443.0	8.8	829.3	10.3	123.7	33356.6	13.7	7.5	7.5
casename 2015	Above 10000	45.7	2.0	0.0	0.7	0.0	0.6	144.1	0.1	0.1	0.1
casename 2015	Descend Below 10000	5544.9	1377.4	11.0	728.4	32.1	32.9	17494.2	7.2	3.0	3.0
casename 2015	Descend Below Mixing Height	3790.8	743.1	6.8	452.8	19.7	23.5	11959.8	4.9	1.1	1.1
casename 2015	Descend Below 1000	1747.6	313.0	2.9	215.2	6.8	11.1	5513.5	2.3	0.5	0.5
casename 2015	Descend Ground	225.5	15.2	0.3	10.8	0.7	1.5	711.4	0.3	0.1	0.1
casename 2015	Descend Taxi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
casename 2015	Full Flight	16163.2	2822.4	19.8	1558.4	42.4	157.2	50994.9	20.9	10.5	10.5

Operation Group	Mode	Fuel (lb)	Distance (mi)	Duration	CO (lb)	VOC (lb)	NOx (lb)	CO2 (lb)	SOx (lb)	PM 2·5 (lb)	PM 10 (lb)
casename 2025	Climb Taxi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
casename 2025	Climb Ground	1705.2	30.9	0.4	17.2	0.5	25.5	5379.8	2.2	0.4	0.4
casename 2025	Climb Below 1000	3243.8	247.7	1.5	158.0	2.3	46.3	10234.1	4.2	0.9	0.9
casename 2025	Climb Below Mixing Height	6283.9	513.7	3.1	287.3	4.0	88.5	19825.8	8.1	1.7	1.7
casename 2025	Climb Below 10000	14939.5	1648.5	8.6	815.5	10.4	205.0	47134.1	19.3	10.6	10.6
casename 2025	Above 10000	43.3	1.9	0.0	0.7	0.0	0.6	136.7	0.1	0.1	0.1
casename 2025	Descend Below 10000	7651.4	1657.4	10.8	719.7	33.6	51.7	24140.0	9.9	3.9	3.9
casename 2025	Descend Below Mixing Height	5288.4	872.5	6.7	434.9	20.6	37.8	16684.8	6.8	1.3	1.3
casename 2025	Descend Below 1000	2452.8	345.7	2.8	186.0	6.9	18.1	7738.7	3.2	0.6	0.6
casename 2025	Descend Ground	318.0	18.2	0.3	10.5	0.8	2.4	1003.3	0.4	0.1	0.1
casename 2025	Descend Taxi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
casename 2025	Full Flight	22634.2	3307.8	19.4	1535.8	44.1	257.2	71410.8	29.2	14.5	14.5

Operation Group	Mode	Fuel (lb)	Distance (mi)	Duration	CO (lb)	VOC (lb)	NOx (lb)	CO2 (lb)	SOx (lb)	PM 2·5 (lb)	PM 10 (lb)
casename 2035	Climb Taxi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
casename 2035	Climb Ground	1960.5	37.3	0.4	27.4	0.6	29.1	6185.3	2.5	0.5	0.5
casename 2035	Climb Below 1000	3771.5	307.4	1.5	234.4	3.2	53.0	11899.2	4.9	1.1	1.1
casename 2035	Climb Below Mixing Height	7304.2	641.2	3.1	440.3	5.7	101.1	23044.9	9.4	2.1	2.1
casename 2035	Climb Below 10000	17224.1	2060.5	8.6	1286.4	15.0	231.6	54341.9	22.3	12.3	12.3
casename 2035	Above 10000	43.3	1.9	0.0	0.7	0.0	0.6	136.7	0.1	0.1	0.1
casename 2035	Descend Below 10000	9039.3	2052.4	10.8	1119.8	46.5	58.3	28518.9	11.7	4.7	4.7
casename 2035	Descend Below Mixing Height	6228.4	1080.2	6.7	671.2	28.3	42.7	19650.7	8.1	1.7	1.7
casename 2035	Descend Below 1000	2898.3	428.6	2.8	285.4	9.4	20.6	9144.3	3.7	0.7	0.7
casename 2035	Descend Ground	369.2	21.9	0.3	17.6	1.0	2.7	1164.8	0.5	0.1	0.1
casename 2035	Descend Taxi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
casename 2035	Full Flight	26306.6	4114.7	19.4	2406.8	61.6	290.5	82997.4	34.0	17.0	17.0

MONTEREY
REGIONAL AIRPORT

Appendix F

BIOLOGICAL RESOURCES SURVEY REPORT

Biological Resources Survey Report for the Monterey Regional Airport Master Plan and Associated Development Projects, Monterey County, California

JULY 2018

PREPARED FOR

Coffman Associates

PREPARED BY

SWCA Environmental Consultants

BIOLOGICAL RESOURCES SURVEY REPORT FOR THE MONTEREY REGIONAL AIRPORT MASTER PLAN AND ASSOCIATED DEVELOPMENT PROJECTS, MONTEREY COUNTY, CALIFORNIA

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SWCA Project No. 37212

July 2018

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1 INTRODUCTION

SWCA Environmental Consultants (SWCA) prepared this Biological Resources Survey Report (BRSR) at the request of Coffman Associates (Coffman). The intent of this BRSR is to provide a project-specific biological evaluation of the Monterey Peninsula Airport District's (Airport, Project Sponsor) short-term projects that are proposed by the master plan update (master plan) and a programmatic evaluation of the Airport's proposed master plan long-term projects. SWCA prepared this BRSR to facilitate the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) evaluations of the master plan and associated short-term projects. As such, this BRSR addresses potential impacts to biological resources that are considered sensitive under the California Fish and Game Code (CFGC), Native Plant Protection Act (NPPA), federal Endangered Species Act (FESA), and California Endangered Species Act (CESA), as well as local policies and ordinances. Where potential impacts have been identified, mitigation recommendations are included to avoid or minimize the impacts. This report includes the results of an in-depth literature review and surveys of the project study areas.

1.1 Project Location

The master plan and associated projects are located at the Monterey Regional Airport (airport) in Monterey, California (Figures 1 and 2). The airport is a commercial service aviation facility located immediately south of Fremont Street and between Highways 68 and 218.

1.2 Project Description

1.2.1 Proposed Project

The projects that are evaluated within the BRSR include the projects recommended in the Airport Master Plan's (AMP) capital improvement program, as well as the AMP's overall on-airport land use plan (which could include non-aviation development and redevelopment on the airport property). Proposed short-term development projects (occurring within 10 years) are evaluated within the project's Environmental Impact Report (EIR) at a project-specific level, while future long-term development projects (occurring within 20 years) are evaluated to the level of detail feasible based on available project information (i.e., at a programmatic level). Proposed long-term development projects would likely develop in phases over a long period of time, and future environmental analysis could be required prior to their approval and construction.

One primary aspect of the proposed AMP is a multi-component airport safety enhancement project. This project is known as the Airport Safety Enhancement Project for Taxiway "A" Relocation & Associated Building Relocations. Due to the need for federal funding and approval, a federal Environmental Assessment (EA) is also being prepared consistent with the requirements of NEPA. The Federal Aviation Administrative (FAA) is the lead agency for the EA.

Figure 1. Project vicinity map.

Figure 2. Project location map.

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The proposed Airport Safety Enhancement Project includes the following and would be phased over approximately 10 years (Table 1):

- Relocate 44 general aviation (GA) hangars and a fuel tank from the southeast side of the airport to the north side of the airport
- Add up to 7 new GA hangars on the north side of the airport
- Relocate the existing aircraft rescue and firefighting (ARFF) building and construct an ARFF service road
- Relocate the commercial terminal and necessary apron pavement (and associated parking and roadway improvements)
- Close Taxiway "K" at its connection with the new commercial terminal apron
- Implement a 52.5-foot southerly shift of 1,850 linear feet of Taxiway "A" and associated lighting, signage, and markings
- Remark hold lines on Taxiway "A" at Taxiway Connectors "G" and "J" to a 250-foot separation from the Runway 10L-28R centerline
- Install taxiway "islands" at Taxiway Connectors "G" and "J"
- Construct replacement vehicular parking along Fred Kane Drive

Other proposed short-term AMP projects include:

- Acquire a 5.5-acre private parcel near the proposed commercial terminal complex
- Construct a Highway 68 frontage road

Proposed long-term AMP projects include:

- Construct 106 new GA hangars on the north side of the airport
- Redevelop the existing GA (small aircraft) hangar area (no increase in use intensity)
- Redevelop the existing airport industrial area (no increase in use intensity)
- Construct non-aviation uses on the north side of the airport (north of Airport Road)
- Construct non-aviation uses on the south side of the airport (north of Highway 68)
- Upgrade the perimeter fence
- Construct a consolidated maintenance building
- Acquire runway protection zone (RPZ) land (20 acres)
- Acquire RPZ avigation easement (14 acres)
- Extend Taxiway "B" to the Runway 28L threshold and construct geometry improvements for Taxiways "K" and "L"

One additional AMP project is construction of a new "north side" road, which would extend from Del Rey Gardens Drive in Del Rey Oaks (off Highway 218) to the northeast side of the airport. Access to the north side of the airport is currently provided via Airport Road, which runs through the Casanova Oak Knoll (CONA) neighborhood, located northwest of the airport. The new "north side" road would provide additional access to the north side of the airport and would allow access through the CONA neighborhood for areas east of Gate 22 to be discontinued.

1.2.2 Comparison of Project Alternatives

There are two alternatives being considered in detail—the Proposed Project and Alternative 1. The major difference between the two projects is the location of the permanent ARFF building and the timing of the construction of the "north side" road. Under the Proposed Project, the existing ARFF building would be permanently relocated on the south side of the airport in the general location of the existing commercial terminal building. Since there would be up to a 6- or 7-year gap between when the existing ARFF building would be demolished and the permanent ARFF building would be constructed, a temporary ARFF building would be necessary. This temporary ARFF building would be installed on the north side GA apron. An on-airport ARFF service road would be constructed to maintain acceptable on-airport emergency response times. However, for off-airport calls, the ARFF emergency vehicles would use existing Airport Road west through the CONA neighborhood since the new "north side" road would not yet be constructed. This would create longer off-airport emergency response times than currently occur.

Under Alternative 1, the existing ARFF building would be permanently relocated to the north GA apron at the same time as the southeast GA hangars and fuel tank are relocated to the north side. The new "north side" road would be constructed, as well as an on-airport ARFF service road, to provide acceptable on- and off-airport emergency response times. Maps of the two alternatives are included in Appendix A. Table 1 compares the phasing of the Safety Enhancement Project between the two alternatives.

Table 1. Comparison of Phasing for the Safety Enhancement Project between the Two Alternatives

Construction Phases	Proposed Project	Alternative 1
Phase 1	Years 1–3: Construct the necessary pavement and infrastructure to relocate approximately 44 GA tenants from the southeast part of the airport to north of the airfield. Install a temporary ARFF facility on the Navy Flying Club apron.	Years 1–3: Construct the necessary pavement and infrastructure to relocate approximately 44 GA tenants from the southeast part of the airport to north of the airfield. Concurrent with site preparation for the north side GA area, construct a 24-foot-wide "north side" road that would go from the north GA area to Highway 218 via a connection with Del Rey Garden Drive. Construct a permanent ARFF building in the general location of the existing Navy Flying Club buildings.
Phase 2	Years 4–8: Demolish the existing ARFF building and demolish or relocate the southeast GA facilities. Construct a new commercial terminal complex (including apron, terminal loop road and roundabout, and vehicular parking lots and garage). Close Taxiway "K" between Runway 10R-28L and Taxiway "A."	Years 4–7: Demolish the existing ARFF building and demolish or relocate southeast GA facilities. Construct a new commercial terminal complex (including apron, terminal loop road and roundabout, and vehicular parking lots). Close Taxiway "K" between Runway 10R-28L and Taxiway "A."
Phase 3	Year 9: Demolish the existing terminal building. Construct a new ARFF building.	Year 8: Re-mark 1,850-linear-foot portion of Taxiway "A" to 327.5 feet from Runway 10R-28L and relocate taxiway signage and lighting. Re-mark hold lines on Taxiways "G" and "J" at 250 feet from the Runway 10R-28L centerline. Provide apron islands at Taxiways "G" and "J." Demolish the existing terminal building.
Phase 4	Year 10: Re-mark 1,850-linear-foot portion of Taxiway "A" to 327.5 feet from Runway 10R-28L and relocate taxiway signage and lighting. Re-mark hold lines on Taxiways "G" and "J" at 250 feet from the Runway 10R-28L centerline. Provide apron islands at Taxiways "G" and "J." Realign Fred Kane Drive and construct a second parking structure and surface parking lots, as needed.	Year 9: Construct replacement surface parking along Fred Kane Drive.

In addition to the new permanent ARFF building, the Proposed Project and Alternative 1 have differences in the type and amount of vehicular parking proposed for south of the new commercial terminal and along Fred Kane Drive. Under the Proposed Project, a net increase of 669 vehicular parking spaces for the commercial terminal complex in two parking garages and three surface lots is planned. Under Alternative 1, initially, a net increase of 321 vehicular parking spaces for the commercial terminal complex in three surface lots is proposed.

Finally, depending on the alternative, a proposed Highway 68 frontage road would also be changed. Under the Proposed Project, the frontage road is planned as a full loop, while under Alternative 1 it is planned as a cul-de-sac to avoid some of the rare plants located in the area. The proposed acquisition of a 5.5-acre parcel near the proposed commercial terminal complex would occur under either alternative as would all future long-term projects.

2 METHODOLOGY

2.1 Literature Review and Field Surveys

Prior to conducting a site visit, SWCA performed a literature review to gain familiarity with the project area and identify target species. The review consisted of a search of the California Natural Diversity Data Base (CNDDB) RareFind 5 (CNDDB 2018), administered by the California Department of Fish and Wildlife (CDFW), that focused on the Seaside (California) U.S. Geological Survey (USGS) quadrangle map and the surrounding quadrangles (i.e., Monterey, Marina, Salinas, Spreckels, Soberanes Point, Mt. Carmel, and Carmel Valley). Additionally, a Trust Resources Report was obtained from the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) database (USFWS 2018). These database queries are included as Appendix B. SWCA also reviewed several environmental documents prepared for other projects on the airport property.

SWCA biologists Travis Belt, Kristin Outten, Lauren Brown, Chad Jackson, and/or Chennie Castañon conducted botanical and wildlife surveys in the project areas on the following dates: April 18–19 and 25–26, May 19–20, July 14, August 4 and 24, and October 13, 2016; March 29–31, April 27–28, May 22–23, August 10–11, and September 27, 2017; and February 12, 2018. The biological surveys were conducted during the appropriate blooming period for all special-status plant species that have potential to occur on the airport property. To verify the blooming status of Monterey spineflower (*Chorizanthe pungens* var. *pungens*), Yadon's piperia (*Piperia yadonii*), and seaside bird's beak (*Cordylanthus rigidus* ssp. *littoralis*) in the vicinity of the study areas, the surveyors visited known populations of these species prior to each survey event. The seaside bird's beak reference population was visible and identifiable during every survey event; the Monterey spineflower reference population was visible and identifiable during the April, May, and July surveys; and the Yadon's piperia was visible and identifiable during the April and May surveys. SWCA also visited a known population of sand gilia (*Gilia tenuiflora* ssp. *arenaria*) on June 8, 2016. The sand gilia at the reference site was desiccated and had completed its flowering cycle in early June. This indicated that sand gilia in the Monterey area was likely identifiable during the April and May surveys.

The surveyors mapped biological resources with a Trimble® GeoXT Global Positioning System (GPS) Unit capable of sub-meter accuracy. In addition to the surveys conducted for this BRSR, SWCA has conducted numerous other biological surveys on the airport property since February 2009. The knowledge and data obtained in the previous survey efforts have been applied in this report. When necessary, the surveyors referred to *The Jepson Manual: Vascular Plants of California* (Baldwin et al. 2012) and *The Plants of Monterey County* (Matthews and Mitchell 2015) to identify plant species. Classification and mapping of the vegetative communities in the Biological Study Area (BSA) was conducted in accordance

with *A Manual of California Vegetation* (Sawyer et al. 2009). A complete list of species observed within the project study areas is included in Appendix C. Photos of the project study areas are included in Appendix D. An inventory of trees present in the study areas is included as Appendix E.

2.2 Short-Term Project Study Areas

The short-term projects include two alternatives with several related actions that would occur on different parts of the airport property. This BRSR and associated analysis segregates the various short-term projects into project study areas. The segregation provides a framework for discussing and analyzing the resources that occur within the footprint of each project element. Table 2 below lists the study areas and the alternative(s) with which the study areas are associated; Figure 3 is a map of the study areas.

Table 2. Short-Term Project Study Areas and their Associated Alternative

Study Area	Alternative Study Areas (Acres)	
	Proposed Project	**Alternative 1**
Highway 68 Frontage Road with Loop	4.13	
North Access Road	5.92	
General Aviation Relocation Area	17.29	
Proposed Parking and Circulation	11.87	
Proposed Drainage Improvements	1.26	
Highway 68 Frontage Road with Cul-de-Sac		3.42
Alternative 1 North Access Road and GA Relocation Area		23.20
Alternative 1 Parking and Circulation		11.83
Alternative 1 Drainage Improvements		0.72
Soil Deposition Areas	25.26	25.26
Terminal Area	17.04	17.20

2.3 Special-Status Biological Resources Investigated for Potential Occurrence

Prior to conducting the surveys, SWCA performed a search of the CNDDB and obtained a list of species to consider from the USFWS IPaC (Appendix B). Table 3 provides a description of the plant species reviewed and a rationale for expecting their presence or absence in the project areas, Table 4 includes an evaluation of natural communities of concern, and Table 5 includes an evaluation of the animal species including nesting birds. Special-status species with occurrences in the study areas are listed in bold and shaded grey. Species observed during the surveys or otherwise warranting specific focus are discussed in Sections 3.3 and 3.4.

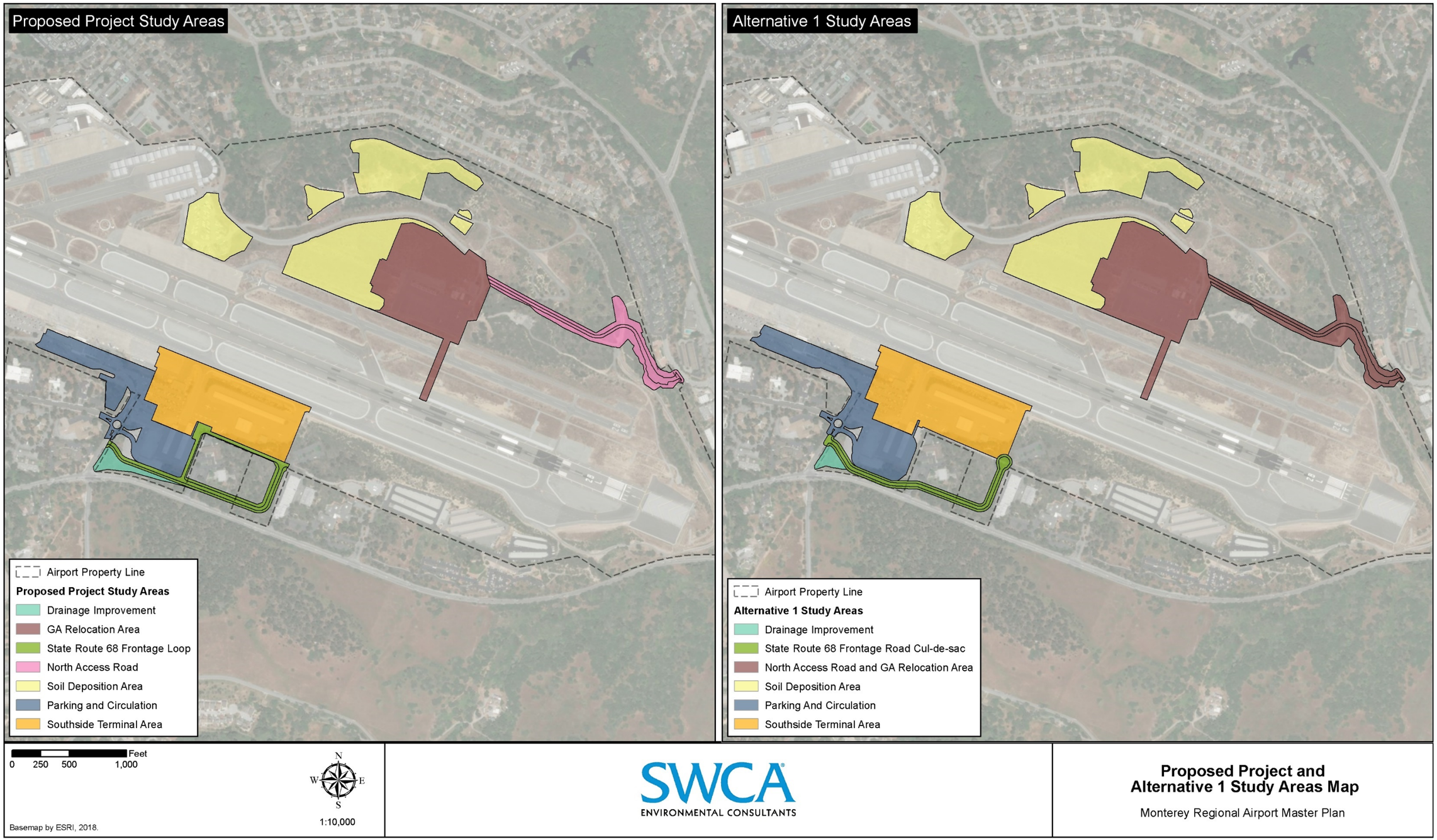

Figure 3. Proposed Project and Alternative 1 study areas map.

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Table 3. Special-Status Plant Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/State/ CNPS	Rationale for Expecting Presence or Absence
vernal pool bent grass *Agrostis lacuna-vernalis*	Annual herb; occurs in vernal pools or margins of mima mounds. Known from occurrences on Fort Ord National Monument. 115–145 meters.	April–May	--/--/1B.1	**Suitable Conditions Absent:** The airport property does not support any vernal pool or mima mound habitats. Species was not observed in the project areas during surveys conducted in the appropriate season. This species has not been documented on the airport property.
Hickman's onion *Allium hickmanii*	Usually occurs on sandy loam in grasslands, closed cone coniferous forest, chaparral, and coastal scrub. 5–200 meters.	March–May	--/--/1B.2	**Suitable Conditions Present:** Suitable soil and habitats occur in the project areas. Species not observed in the project areas during surveys conducted in the appropriate season. This species has not been documented on the airport property.
little sur manzanita *Arctostaphylos edmundsii*	Evergreen shrub; occurs on sandy soils in coastal bluff scrub and chaparral. 30–105 meters.	November–April	--/--/1B.2	**Suitable Conditions Present:** Suitable soil and habitat occur in the project areas. Species not observed in the project areas during surveys conducted in the appropriate season. This species has not been documented on the airport property.
Hooker's manzanita *Arctostaphylos hookeri* ssp. *hookeri*	Evergreen shrub; occurs on sandy soils, shaly soils, and sandstone outcrops. Associated with closed cone coniferous forest, chaparral, and coastal scrub. 85–536 meters.	January–June	--/--/1B.2	**Suitable Conditions Present:** Suitable soil and habitat occur in the project areas. Species not observed in the project areas during surveys conducted in the appropriate season. This species has not been documented on the airport property.
Toro manzanita *Arctostaphylos montereyensis*	Evergreen shrub; occurs in cismontane woodland, chaparral, and coastal scrub on sandy soils. 30–730 meters.	February–March	**--/--/1B.2**	**Suitable Conditions Present:** Suitable soil and habitat occur in the project areas. Species not observed in the project areas during surveys conducted in the appropriate season.
Pajaro manzanita *Arctostaphylos pajaroensis*	Evergreen shrub; occurs in chaparral on sandy soils. 30–760 meters.	December–March	--/--/1B.1	**Suitable Conditions Present:** Suitable soil and habitat occur in the project areas. Species not observed in the project areas during surveys conducted in the appropriate season. This species has not been documented on the airport property.
sandmat manzanita *Arctostaphylos pumila*	**Low-growing evergreen shrub; occurs in maritime chaparral and openings within Monterey pine forest. 3–205 meters.**	**February–March**	**--/--/1B.2**	**Species Present: Sandmat manzanita is present in the project areas.**

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/State/ CNPS	Rationale for Expecting Presence or Absence
alkali milk-vetch *Astragalus tener* var. *tener*	Annual herb; occurs on playas, valley and foothill grassland, and vernal pools within adobe clay and alkaline soils. 1–60 meters.	March–June	--/--/1B.2	**Suitable Conditions Absent:** The project areas do not support clay soils or vernal pools. Species not observed in the project areas during surveys conducted in the appropriate season. This species has not been documented on the airport property.
coastal dunes milk-vetch *Astragalus tener* var. *titi*	Annual herb; occurs in coastal bluff scrub, coastal dunes, and coastal prairie. Often in vernally mesic areas. 1–50 meters.	March–May	FE/SE/1B.1	**Suitable Conditions Absent:** The project areas are not located on the coastal strand or adjacent bluffs. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the MRY property.
twisted horsehair lichen *Bryoria spiralifera*	Epiphytic lichen; typically associated with north coast coniferous forests located on immediate coast. Largest known population is on Samoa Peninsula in Humboldt County. 0–30 meters.	NA	--/--/1B.1	**Suitable Conditions Absent:** The project areas do not support North Coast coniferous forests and are not located on the immediate coast. Lichens were not observed on the Monterey pines located in the survey areas.
pink johnny-nip *Castilleja ambigua* ssp. *insalutata*	Annual herb; occurs in coastal prairie and coastal scrub. 0–100 meters.	May–August	--/--/1B.1	**Suitable Conditions Present:** Suitable open habitat occurs in the northern study areas. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
Congdon's tarplant *Centromadia parryi* ssp. *congdonii*	Occurs in depressional areas within valley and foothill grassland known to occur in clay soils. 1–230 meters.	June–November	--/--/1B.2	**Suitable Conditions Absent:** The project areas do not contain the appropriate soils. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
Monterey spineflower ***Chorizanthe pungens***	**Annual herb; occurs in chaparral, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland on sandy soils. 3–450 meters.**	**April–June**	**FT, CH/--/1B.2**	**Species Present: Monterey spineflower was observed in the project study areas.**
robust spineflower *Chorizanthe robusta* var. *robusta*	Annual herb; occurs in chaparral, cismontane woodland, coastal dunes, and coastal scrub with sandy or gravelly soils. 3–300 meters.	April–September	FE, CH/--/1B.1	**Suitable Conditions Present:** The project study areas support suitable sandy soil and habitats. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/State/ CNPS	Rationale for Expecting Presence or Absence
Jolon clarkia *Clarkia jolonensis*	Annual herb; occurs in chaparral, cismontane woodland, coastal scrub, and riparian woodland. 20–660 meters.	April–June	--/--/1B.2	**Suitable Conditions Present:** The study areas support appropriate habitats Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
purple amole *Chlorogalum purpureum* var. *purpureum*	Bulbiferous herb; occurs in chaparral, cismontane woodland, and valley and foothill grassland on gravelly or clay soils. 205–350 meters.	April–June	FT, CH/--/1B.1	**Suitable Conditions Absent:** The project areas do not contain suitable soils and the elevation is lower than documented range for this species. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
San Francisco collinsia *Collinsia multicolor*	Annual herb; occurs in closed-cone coniferous forest and coastal scrub. Occasionally found in serpentinite. 30–250 meters.	March–May	--/--/1B.2	**Suitable Conditions Present:** The study areas support appropriate habitats Species not observed in the project areas during surveys conducted in the appropriate season. Species has been documented on airport property approximately 4,000 feet east of the project area.
seaside bird's-beak ***Cordylanthus rigidus* ssp. *littoralis***	**Annual herb; occurs in closed-cone coniferous forest, chaparral, cismontane woodland, coastal dunes, and coastal scrub with sandy soils. Often found in disturbed sites. 0–425 meters.**	**April–October**	**--/SE/1B.1**	**Species Present: Seaside bird's-beak was observed in study areas.**
Hutchinson's larkspur *Delphinium hutchinsoniae*	Perennial herb; occurs in broadleaf upland forest, chaparral, coastal prairie, and coastal scrub. 0–427 meters.	March–June	--/--/1B.2	**Suitable Conditions Present:** The study areas support the appropriate habitats. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
umbrella larkspur *Delphinium umbraculorum*	Perennial herb; occurs in cismontane woodland. 400–1,600 meters.	April–June	--/--/1B.3	**Suitable Conditions Absent:** The elevation of the project study areas is lower than documented range for this species. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
Eastwood's goldenbush ***Ericameria fasciculata***	**Perennial shrub; occurs in closed-cone coniferous forest, chaparral, coastal dunes, and coastal scrub and within openings on sandy soil. 30–275 meters.**	**July–October**	**--/--/1B.1**	**Species Present: Eastwood's goldenbush was observed in the project study areas.**

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/State/ CNPS	Rationale for Expecting Presence or Absence
Pinnacles buckwheat *Eriogonum nortonii*	Annual herb; occurs in chaparral and valley and foothill grassland with sandy soils, often colonizing recently burned areas. 300–975 meters.	May–August	--/--/1B.3	**Suitable Conditions Absent:** The project areas support the appropriate soils but the elevation is lower than documented range for this species. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
sand-loving wallflower *Erysimum ammophilum*	Perennial herb; occurs in chaparral, coastal dunes, and coastal scrub with sandy soils and openings. 0–60 meters.	February–June	--/--/1B.2	**Suitable Conditions Present:** The project areas support suitable soil and habitat conditions for this species. Species was not observed in the project areas during surveys conducted in the appropriate season. Species has been documented on the northern portion of the AMP study area (ESA 2004).
Menzies' wallflower *Erysimum menziesii* ssp. *menziesii*	Perennial herb; occurs in coastal dunes. 0–35 meters.	March–June	FE/SE/1B.1	**Marginal Conditions Present:** The project study areas support suitable sandy soil does not support coastal dunes. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been observed on the airport property.
fragrant fritillary *Fritillaria liliacea*	Bulbiferous herb; occurs in cismontane woodland, coastal prairies, coastal scrub, and valley and foothill grassland; often associated with serpentinite. 3–410 meters.	February–April	--/--/1B.2	**Suitable Conditions Absent:** The project study areas do not support the appropriate soils. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
sand gilia *Gilia tenuiflora* ssp. *arenaria*	Annual herb; occurs in chaparral, cismontane woodland, coastal dunes, and coastal scrub in sandy soil with openings. 0–45 meters.	April–June	FE/ST/1B.2	**Suitable Conditions Present:** The project study areas support suitable sandy soil and open habitat conditions for this species. Species not observed in the project areas during surveys conducted in the appropriate season. Surveys conducted by in 2005 by Denise Duffy and Associates indicate that approximately 15 sand gilia individuals were observed near the North Access Road study area. However, the Denise Duffy report does not map or describe the locations of occurrences.
Gowen cypress *Hesperocyparis goveniana*	Evergreen tree; occurs in closed-cone coniferous forest and maritime chaparral. Typically associated with sandy soil. Known from only three native occurrences in the Monterey area, including the Del Monte Forest/Huckleberry Hill, Point Lobos, and Pacific Grove. 30–300 meters	NA	FT/--/1B.2	**Suitable Conditions Absent:** The airport is not located within any of the three known stands of this species. Species not observed in the project areas. Species has not been documented on the airport property.

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/State/ CNPS	Rationale for Expecting Presence or Absence
Monterey cypress *Hesperocyparis macrocarpa*	Evergreen tree; occurs in closed-cone coniferous forest. Known from only two native occurrences in the Monterey area. 10–30 meters	NA	--/--/1B.2	**Suitable Conditions Absent:** The airport is not located within any of the two known stands of this species. Natural occurrences of this species are absent; however, numerous planted species occur in the study areas.
Kellogg's horkelia *Horkelia cuneata* ssp. *sericea*	Perennial herb; occurs in closed-cone coniferous forest, maritime chaparral, and coastal scrub with sandy or gravelly openings. 10–200 meters.	April–September	--/--/1B.1	**Suitable Conditions Present:** The study areas support suitable sandy soil and open habitat conditions for this species. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
Point Reyes horkelia *Horkelia marinensis*	Perennial herb from the Rosaceae family that occurs in coastal dunes, prairie, and scrub habitats. 5–755 meters.	May–September	--/--/1B.2	**Suitable Conditions Absent:** The project study areas do not support coastal dune habitat. Species was not observed in the project areas during surveys conducted in the appropriate season. Species has not been observed on the airport property.
Contra Costa goldfields *Lasthenia conjugens*	Annual herb; occurs in mesic sites with cismontane woodland, playas, valley and foothill grassland, or vernal pools. 0–470 meters.	March–June	FE, CH/--/1B.1	**Suitable Conditions Absent:** The study areas include a stormwater runoff collection area that provides marginal conditions for this species, but ongoing disturbances likely preclude this species from occurring. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
beach layia *Layia carnosa*	Annual herb; occurs in coastal dunes and coastal scrub on sandy soils. 0–60 meters.	March–July	FE/SE/1B.1	**Marginal Conditions Present:** The project study areas support suitable sandy soil and open habitat but are not located in the coastal dunes. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
legenere *Legenere limosa*	Annual herb; occurs in vernal pools. 1–880 meters.	April–June	--/--/1B.1	**Suitable Conditions Absent:** The project areas do not support vernal pools. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/State/ CNPS	Rationale for Expecting Presence or Absence
Tidestrom's lupine *Lupinus tidestromii*	Rhizomatous herb; occurs on coastal dunes. 0–100 meters.	April–June	FE/SE/1B.1	**Suitable Conditions Absent:** The study areas support suitable sandy soil and open habitat conditions but are not located at the immediate coast. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
Carmel Valley bush-mallow *Malacothamnus palmeri* var. *involucratus*	Perennial shrub; occurs in chaparral, cismontane woodland, and coastal scrub. 30–1,100 meters.	May–August	--/--/1B.2	**Suitable Conditions Present:** The study areas support suitable habitat conditions. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
Santa Lucia bush-mallow *Malacothamnus palmeri* var. *palmeri*	Deciduous shrub; occurs in chaparral with rocky substrates. 60–360 meters.	May–July	--/--/1B.2	**Suitable Conditions Absent:** The study areas are located at a lower elevation than the species' documented range and do not support rocky soils. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
Carmel Valley malacothrix *Malacothrix saxatilis* var. *arachnoidea*	Rhizomatous herb; occurs in chaparral and coastal scrub with rocky substrates. 25–1036 meters.	June–December	--/--/1B.2	**Suitable Conditions Absent:** The study areas do not support rocky soils. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
white fairypoppy *Meconella oregana*	Annual herb; occurs in coastal prairie and coastal scrub habitats; only known from five occurrences in California. 250–620 meters.	March–April	--/--/1B.1	**Suitable Conditions Absent:** The study areas are located at a lower elevation than the species' documented range. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
marsh microseris *Microseris paludosa*	Perennial herb; occurs in closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grassland. 5–300 meters	April–June	--/--/1B.2	**Marginal Conditions Present:** Appropriate habitat occurs in the study areas but the lack of vernally mesic areas is not **c**onducive to this species. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/State/ CNPS	Rationale for Expecting Presence or Absence
northern curly-leaved monardella *Monardella sinuata* ssp. *nigrescens*	Annual herb; occurs in sandy soil among chaparral, lower montane coniferous forest, coastal dunes, and coastal scrub with openings. 0–300 meters	April–September	--/--/1B.2	**Suitable Conditions Present:** Species occurs on the airport property approximately 700 feet east of the study area. CNDDB documents occurrences along Highway 68, south of the airport fence, east of Olmstead Road, and west of Canyon Del Rey. This roughly corresponds with the study area. Species was not observed in the project areas during surveys conducted in the appropriate season.
San Joaquin wooly-threads *Monolopia (Lembertia) congdonii*	Annual herb; occurs in chenopod scrub and valley and foothill grassland on sandy soils. 60–800 meters.	February–May	FE/--/1B.2	**Suitable Conditions Absent:** The study areas do not support appropriate soil types and are at a lower elevation than this species' range. Species was not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
woodland woollythreads *Monolopia gracilens*	Annual herb; associated with serpentine soil. Often found in openings within broadleafed upland forest, chaparral, cismontane woodland, north coast coniferous forest, and valley and foothill grassland. 100–1200 meters	February – July	--/--/1B.2	**Suitable Conditions Absent:** The study areas do not support appropriate soil types and are at a lower elevation than this species' range. Species was not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
Monterey pine ***Pinus radiata***	**Evergreen tree; only native stands restricted to Año Nuevo, Cambria, and the Monterey Peninsula. Occurs in closed-cone coniferous forest and cismontane woodland. 25–185 meters.**	**n/a**	**--/--/1B.1**	**Species Present: Monterey pines are present in the study areas.**
Yadon's piperia ***Piperia yadonii***	**Perennial herb; occurs in coastal bluff scrub, closed-cone coniferous forest, and maritime chaparral with sandy soil. 10–510 meters.**	**May–August**	**FE, CH/--/1B.1**	**Species Present: Yadon's piperia is present in the study areas.**
Choris' popcorn-flower *Plagiobothrys chorisianus* var. *chorisianus*	Annual herb; occurs in vernal pools and other wet areas among chaparral, coastal prairie, and coastal scrub habitats. 15–160 meters	March–June	--/--/1B.2	**Suitable Conditions Absent:** Vernal pools are not present in the study areas. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
hooked popcorn-flower *Plagiobothrys uncinatus*	Annual herb; occurs in chaparral, cismontane woodland, and valley and foothill grassland with sandy soils. 300–760 meters.	April–May	--/--/1B.1	**Suitable Conditions Absent:** The study areas are located at a lower elevation than the species' range and do not support the appropriate communities. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/State/ CNPS	Rationale for Expecting Presence or Absence
Hickman's cinquefoil *Potentilla hickmanii*	Perennial herb; occurs in wet areas associated with coastal bluff scrub, closed-cone coniferous forest, meadows and seeps, and freshwater marshes. 10–149 meters.	April–August	FE/SE/1B.1	**Marginal Conditions Present:** The southern BSA includes a stormwater collection area that provides marginal habitat for this species. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
angel's hair lichen *Ramalina thrausta*	Epiphytic lichen; grows on dead twigs and other lichens in north coast coniferous forests. 75–430 meters	n/a	--/--/2B.1	**Suitable Conditions Absent:** The study areas do not support north coast coniferous forests. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
pine rose *Rosa pinetorum*	Perennial shrub; occurs in closed-cone coniferous forest. 2–300 meters.	May–July	--/--/1B.2	**Suitable Conditions Present:** The study areas support Monterey pine forest. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
maple-leaved checkerbloom *Sidalcea malachroides*	Perennial herb; occurs in broad-leafed upland forest, coastal prairies, coastal scrub, north coast coniferous forest, and riparian woodland. Often found in disturbed areas. 2–730 meters.	April–August	--/--/4.2	**Suitable Conditions Present:** The study areas support coastal scrub and grassland habitats. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
Santa Cruz microseris *Stebbinsoseris decipiens*	Annual herb; occurs in broadleaf upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, and valley and foothill grassland. Associated with open areas; occasionally occurring in serpentinite. 10–500 meters.	April–May	--/--/1B.2	**Suitable Conditions Present:** The study areas support coastal scrub, chaparral, forested areas, and grassland habitats. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
California screw moss *Tortula californica*	Moss; occurs in chenopod scrub and valley and foothill grassland associated with sandy soil. 10–1,460 meters.	n/a	--/--/1B.2	**Suitable Conditions Absent:** The BSA does not support the appropriate habitats. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
Santa Cruz clover *Trifolium buckwestiorum*	Annual herb; occurs in broadleaf upland forest, cismontane woodland and coastal prairies with gravelly margins. 105–610 meters.	April–October	--/--/1B.1	**Suitable Conditions Absent:** The study areas do not support the appropriate habitat or soils. The study areas are at lower elevation than this species known range. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/State/ CNPS	Rationale for Expecting Presence or Absence
saline clover *Trifolium hydrophilum*	Annual herb; occurs in marshes and swamps, valley and foothill grassland (mesic, alkaline), and vernal pools. 0–300 meters.	April–June	--/--/1B.2	**Suitable Conditions Absent:** The study areas do not support the appropriate wetland habitats. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
Pacific Grove clover *Trifolium polyodon*	Annual herb; usually associated with mesic sites in closed-cone coniferous forest, coastal prairies, meadows and seeps, and valley and foothill grassland. 5–120 meters.	April–June	--/SR/1B.1	**Marginal Conditions Present:** The study area includes a stormwater collection area that provides marginal habitat for this species. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.
Monterey clover *Trifolium trichocalyx*	Annual herb; occurs in closed-cone coniferous forest with sandy openings or burned areas. 30–240 meters.	April–June	FE/SE/1B.1	**Suitable Conditions Present:** The study area supports the appropriate habitats. Species not observed in the project areas during surveys conducted in the appropriate season. Species has not been documented on the airport property.

General references: CNPS 2018; Baldwin et al. 2012; Matthews and Mitchell 2015; CNDDB 2018.

Status Codes

--= No status

Federal: FE = Federal Endangered; FT = Federal Threatened; CH = Federal Critical Habitat

State: SE = State Endangered; ST= State Threatened; SR= State Rare

California Native Plant Society (CNPS): Rank 1B = rare, threatened, or endangered in California and elsewhere; Rank 2 = rare, threatened, or endangered in California, but more common elsewhere; Rank 3 = plants that about which more information is needed; Rank 4 = a watch list plants of limited distribution.
Threat Code: _.1 = Seriously endangered in California (over 80% of occurrences threatened; _.2 = Fairly endangered in California (20-80% occurrences threatened); _.3 = Not very endangered in California (<20% of occurrences threatened)

Rationale Terms: **Species Present:** Species was or has been observed in the survey area. **Suitable Conditions Present:** The appropriate habitat, soils, and elevation are present in the survey area. **Marginal Conditions Present:** The appropriate habitat and/or soils are present but other factors (past disturbances, elevation range) may preclude species occurrence. **Suitable Conditions Absent:** The survey area did not support the appropriate habitat, soils, and/or elevation for the species.

Table 4. Natural Communities of Concern Investigated for Occurrence

Natural Community	Description	Rationale for Expecting Presence or Absence
central dune scrub	A back-dune plant community characterized by low-growing, drought tolerant shrubs that develop considerable cover. Diagnostic species include *Ericameria ericoides* and *Lupinus chamissonis*.	The project study areas are not located on the coast and do not support dune scrub habitats.
central foredunes	A foredune plant community characterized by scattered low-growing perennial plants including *Abronia* sp., *Ambrosia* sp., and *Cackile* sp. Usually occurring in areas exposed to tidal action.	The project study areas are not located on the coast and do not support any foredune habitats.
central maritime chaparral	**A variable scrub community of moderate to high cover dominated by various *Arctostaphylos* sp. Found on well-drained sandy soils in areas subject to summer fog.**	**Central maritime chaparral is present in the project study areas.**
coastal and valley freshwater marsh	A wetland community that is found in areas of permanently or prolonged freshwater saturation without significant current or flow. Vegetation is dominated by perennial emergent monocots including cattails and rushes.	The project study areas do not support coastal and valley freshwater marsh.
Monterey cypress forest	A moderately dense forest dominated by *Callitropsis macrocarpa*; understory usually consists of scattered shrubs and perennial herbs. This community is confined to rocky granitic soils of coastal bluffs.	The project study areas do not support Monterey cypress forest.
Monterey pine forest	**Open to dense forest dominated by *Pinus radiata* with a significant presence of coast live oak. The understory is variable in density and composition. Monterey pine forests are limited to areas with well-drained sandy soils and marine fog.**	**Monterey Pine forest is present in the project study areas.**
northern bishop pine forest	Open to dense serotinous forest dominated by *Pinus muricata.* This community often intergrades with northern coastal scrub on rocky soils, upland redwood forest on protected sites, or pygmy cypress forest on coastal terraces with podzol soils. .	The project study areas do not support northern bishop pine forest.
northern coastal salt marsh	Marsh habitat supporting herbaceous, suffrutescent, salt-tolerant hydrophytes often active in summer and dormant in winter. Characteristic species include *Jaumea carnosa*, *Limonium californicum*, and *Frankenia salina.* Developed around Humboldt Bay, Tomales Bay, San Francisco Bay, Elkhorn Slough, and Morro Bay.	The project study areas do not support northern coastal salt marsh.
valley needlegrass grassland	Grassland reaching up to 2 feet tall and dominated by *Nassella* sp., which is a native tussock-forming grass. Annual grasses occur between the perennials, often exceeding the bunch grasses in cover. Usually occurs on fine-textured soils that are wet in the winter and very dry in the summer.	The project study areas do not support valley needlegrass grassland.

Table 5. Special-Status Animal Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Legal Status Federal/State/ CDFW	Rationale for Expecting Presence or Absence
Invertebrates			
vernal pool fairy shrimp *Branchinecta lynchi*	Occur in vernal pool habitats including depressions in sandstone to small swale, earth slump, or basalt-flow depressions with a grassy or, occasionally, muddy bottom in grassland.	FT, CH/--/--	**Habitat Absent:** The project areas do not support suitable vernal pool habitat. Species is not expected to occur in the project areas.
California linderiella *Linderiella occidentalis*	Occur in seasonal ponds in grasslands, sandstone depressions, and alluvial flats with hardpan beneath.	--/--/SA	**Habitat Absent:** The project areas do not support suitable sandstone depressions. Species is not expected to occur in the project areas.
globose dune beetle *Coelus globosus*	Inhabitant of coastal sand dune habitat. Inhabits foredunes and sand hummocks, burrowing beneath the sand surface. Most common beneath dune vegetation.	--/--/SA	**Habitat Absent:** The project areas do not include coastal sand dunes. Species not expected to occur.
monarch butterfly *Danaus plexippus*	Species occurs along the coast from northern Mendocino to Baja California, Mexico. Winter roosts in wind-protected tree groves (e.g., eucalyptus, Monterey pine, and cypress) where nectar and water sources are abundant.	--/--/SA	**Habitat Present:** Suitable winter roost habitat occurs in the Monterey pines located in the study area.
Smith's blue butterfly *Euphilotes enoptes smithi*	Occurs in coastal dunes and coastal sage scrub plant communities in Monterey and Santa Cruz counties. Utilizes *Eriogonum latifolium* and *Eriogonum parvifolium* as a host plant for larval and food.	FE, PCH/--/--	**Habitat Absent**: The necessary host plants were not observed in the BSA.
Fish			
tidewater goby *Eucyclogobius newberryi*	Occurs in brackish shallow lagoons and lower stream reaches where water is fairly still, but not stagnant.	FE, CH/--/SSC	**Habitat Absent**: The project areas do not support suitable aquatic habitat.
steelhead – south/central California coast DPS *Oncorhynchus mykiss irideus*	Occurs in clear, cool water with abundant in-stream cover, well-vegetated stream margins, relatively stable water flow, and a 1:1 pool-to-riffle ratio.	FT, CH/--/SSC	**Habitat Absent**: The project areas do not support suitable aquatic habitat.
Amphibians			
California tiger salamander *Ambystoma californiense*	Occurs in vernal pools within grassland or oak woodlands; require seasonal water, ground squirrel burrows, or other underground refuges.	FT, CH/ST/--	**Habitat Absent**: The project areas do not support suitable aquatic breeding habitat and are separated from other breeding areas by development and roads. Species is not expected to occur in the project areas.
California red-legged frog *Rana draytonii*	Occurs in aquatic habitats with little or no flow and surface water depths to at least 2.3 feet. Presence of fairly sturdy underwater supports such as cattails.	FT, CH /--/SSC	**Habitat Present:** The northern detention pond in the AMP project study area could support this species.

Species Name	Habitat and Distribution	Legal Status Federal/State/ CDFW	Rationale for Expecting Presence or Absence
Coast range newt *Taricha torosa torosa*	Breed in ponds, reservoirs, and slow-moving streams. Frequents terrestrial habitats such as oak woodlands.	--/--/CSC	**Habitat Absent**: The project areas do not support suitable aquatic habitat.
Reptiles			
southwestern pond turtle *Emys marmorata*	Occurs in quiet waters of ponds, lakes, streams, and marshes; typically in the deepest parts with an abundance of basking sites.	--/--/SSC	**Habitat Absent**: The project study areas do not support any suitable aquatic habitat. Not expected to occur in the project areas.
silvery legless lizard *Anniella pulchra pulchra*	Occurs in sandy or loose loamy soils with high moisture content under vegetation.	**--/--/**SSC	**Habitat Present**: The project areas support appropriate soils and shelter habitats for species. Recent surveys for this species have indicated that the airport property supports very few legless lizards. However, species has been found on the property. Minimization measures are recommended.
black legless lizard *Anniella pulchra nigra*	Occurs in sand dunes and sandy soils in the Monterey Bay and Morro Bay regions. Inhabits sandy soil/dune areas with bush lupine and mock heather as dominant plans. Moist soil is essential.	--/--/SSC	**Habitat Present**: The project areas support appropriate soils and shelter habitats for species. Recent surveys for this species have indicated that the airport property supports very few legless lizards. However, species has been found on the property. Minimization measures are recommended.
coast horned lizard *Phrynosoma blainvillii*	Frequents a wide variety of habitats; most commonly occurring in lowlands along sandy washes with scattered low bushes.	--/--/SSC	**Habitat Present**: The project areas support sandy soil and open habitat with suitable shelter sites. Species has not been observed on the airport property but may exist there.
two-striped garter snake *Thamnophis hammondii*	Occurs in coastal California from Salinas to Baja California and at elevations up to 7,000 feet. Found along streams with rocky beds and permanent freshwater.	--/--/SSC	**Habitat Absent**: The project areas do not support suitable aquatic habitat.
Birds			
tricolored blackbird *Agelaius tricolor*	(Nesting colony) requires open water, protected nesting substrate, and foraging area with insect prey.	--/--/SSC	**Habitat Absent**: The airport property does not support suitable nesting habitat. Species not expected to occur in any of the project areas.
burrowing owl *Athene cunicularia*	(Burrow and wintering sites) occurs in open, dry grasslands, deserts and scrublands. Subterranean nester, dependent upon burrowing mammals.	BCC/--/SSC	**Marginal Habitat Present**: The airport is not within the nesting range of species. Although unlikely, portions of the northside GA development areas may attract a wintering species.

Species Name	Habitat and Distribution	Legal Status Federal/State/ CDFW	Rationale for Expecting Presence or Absence
marbled murrelet *Brachyramphus marmoratus marmoratus*	(Nesting); spends most of the non-breeding season in offshore or nearshore environments near coniferous forests. The only California alcid species to nest inland. Typically nests in the upper branches of redwoods or Douglas-fir forests. Builds its nests with lichens and mosses.	FT, CH/SE/--	**Habitat Absent**: The project study areas do not support suitable nesting habitat. Species is not expected to occur in the project areas.
ferruginous hawk *Buteo regalis*	(Non-breeding and wintering); occurs in open grasslands, sagebrush flats, desert scrub, low foothills, and fringes of pinyon-juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice.	BCC/--/WL	**Nesting Habitat Absent**: Uncommon winter visitor. CNDDB documents one occurrence northeast of Marina. If an individual were present on MRY, it would be foraging and not nesting.
western snowy plover *Charadrius alexandrinus nivosus*	(Nesting); occurs on sandy beaches, salt pond levees, and shores of large alkali lakes. Needs sandy, gravelly, or friable soils for nesting.	FT, CH/--/SSC	**Habitat Absent**: The project study areas do not contain any aquatic sites with shoreline for foraging and do not support suitable nesting habitat. Species is not expected to occur in the project areas.
black swift *Cypseloides niger*	(Nesting); occurs along the coastal belt of Santa Cruz and Monterey Counties, central and southern Sierra Nevada, and in the San Bernardino and San Jacinto Mountains. Breeds in small colonies on cliffs, near waterfalls, and on sea bluffs above the ocean.	BCC/--/SSC	**Habitat Absent**: The project study areas do not support t cliffs or bluffs that are needed for nesting habitat. This species is not expected to occur on the airport property. Species was not observed during the surveys.
Southwestern willow flycatcher *Empidonax traillii extimus*	Occurs in riparian woodlands of southern California.	FE/SE/--	**Habitat Absent**: The project areas do not support any riparian habitat.
California horned lark ***Eremophila alpestris actia***	**Occurs in short grass prairies, coastal plains, fallow grain fields, and alkali flats. Found in coastal regions from Sonoma to San Diego County, and west to the San Joaquin Valley.**	**--/--/WL**	**Species Present: The Northside GA and Maintenance Building project areas support suitable conditions for species. Species has been observed on the airfield during past survey efforts.**
prairie falcon *Falco mexicanus*	(Nesting); occurs in dry, open terrain that is either level or hilly. Nesting habitat is limited to cliffs.	BCC/--/WL	**Nesting Habitat Absent:** The project areas do not include cliffs for nesting. The airfield may provide foraging habitat for individuals that nest off the property.
ashy storm-petrel *Oceanodroma homochroa*	(Rookery site); colonial nester on offshore islands. Usually nests on driest part of islands. Forages over open ocean. Nest sites on islands are in crevices beneath loosely piled rocks or driftwood, or in caves.	--/--/SSC	**Habitat Absent**: The project areas do not support rookery habitat. Species is not expected to occur at the airport.
California brown pelican *Pelecanus occidentalis californicus*	(Nesting colony and communal roosts); nests on coastal islands in colonies.	FE/SD, FP/--	**Habitat Absent**: The project areas do not support nesting or roosting habitat. Species is not expected to occur at the airport.
California clapper rail *Rallus longirostris obsoletus*	Occurs within salt and brackish marshes dominated by pickleweed and Pacific cordgrass (*Spartina foliosa*). Currently, this species is restricted to marsh areas within the vicinity of San Francisco Bay.	FE/SE, FP/--	**Habitat Absent**: The project areas do not support suitable marsh habitat. Species is not expected to occur in the project areas.

Species Name	Habitat and Distribution	Legal Status Federal/State/ CDFW	Rationale for Expecting Presence or Absence
bank swallow *Riparia riparia*	Nests in colonies in vertical sand banks. Forages over meadows and water.	--/ST/--	**Habitat Absent**: The project areas do not support cliffs or banks for nesting habitat. Species is not expected to occur in the project areas.
least Bell's vireo *Vireo bellii pusillus*	(Nesting); summer resident of southern California. Occurs in low riparian areas in the vicinity of water or in dry river bottoms below 2,000 feet. Nests along the margins of bushes or twigs of willow, *Baccharis*, or mesquite.	FE, CH, BCC/SE/--	**Habitat Absent**: The project areas do not support suitable nesting habitat. Species is not expected to occur in the project areas.
Other nesting birds **Class Aves**	**(Nesting); various habitats.**	**MBTA/--/CDFW Section 3503**	**Habitat Present**: **The project areas include vegetation that provide avian nesting habitat. Pre-activity nesting bird surveys are recommended.**
Mammals			
Townsends big-eared bat *Corynorhinus townsendii*	Occurs in a wide variety of habitats; most common in mesic (wet) sites. May use trees for day and night roosts; however, requires caves, mines, rock faces, bridges or buildings for maternity roosts. Maternity roosts are in relatively warm sites.	--/SC/SSC	**Marginal Habitat Present:** The project study areas support trees for daytime roosts but do not support suitable maternity roost habitat or mesic areas for foraging.
southern sea otter *Enhydra lutris nereis*	Sea otters are found in nearshore marine environments of California from Año Nuevo, San Mateo County to Point Sal, Santa Barbara County.	FT, MMPA/FP/--	**Habitat Absent**: The project areas do not support any suitable marine habitat.
hoary bat *Lasiurus cinereus*	Occurs in open habitats and habitat mosaics with access to trees for cover. Roosts in dense foliage of medium to large trees.	--/--/SA	**Habitat Present:** The trees in the project study areas provide suitable roosting habitat and the open areas of the airfield provide foraging habitat. Species not observed during the surveys.
Salinas harvest mouse *Reithrodontomys megalotis distichlis*	Known only from the Monterey Bay region. Occurs in fresh and brackish water wetlands and probably in the adjacent uplands around the mouth of the Salinas River.	--/--/SA	**Habitat Absent**: The project areas do not support suitable marsh habitat. Species is not expected to occur in the project areas.
American badger *Taxidea taxus*	Occurs in open stages of shrub, forest, and herbaceous habitats; needs uncultivated ground with friable soils for burrowing.	--/--/SSC	**Habitat Absent**: The project areas do not support suitable habitat.

Status Codes

-- = No status

Federal: FE = Federal Endangered; FT = Federal Threatened; FC = Federal Candidate; CH= Federal Critical Habitat; PCH = Proposed Federal Critical Habitat; BCC = USFWS Bird of Conservation Concern; MBTA= Protected by Federal Migratory Bird Treaty Act; MMPA = Protected by Marine Mammal Protection Act

State: SE = State Endangered; ST = State Threatened; SD = State Delisted; FP = Fully Protected Species; SC = State Candidate

CDFW: SSC= California Species of Special Concern; WL = Included on CDFW Watch List; SA= Included in CDFW "Special Animals" List; CDFW Section 3503 = Protected by Section 3503 of CDFW code

Rationale Terms: **Species Present:** Species was or has been observed in the survey area. **Habitat Present:** The survey area is within the species range and supports the appropriate habitat, soils, and elevation. **Marginal Habitat Present:** The survey area is in the species range and supports the appropriate habitat and/or soils but other factors (past disturbances, presence of predators) may preclude species occurrence. **Habitat Absent:** The survey area is not within the species range and/or does not support the appropriate habitat, soils, and/or elevation for the species.

3 SURVEY RESULTS

3.1 Topography and Soils

The topography within the project study areas is relatively flat to moderately sloped with the greatest slope occurring in the southern and eastern parts of the project areas. The elevation is approximately 200 feet (60 meters). According to the Natural Resources Conservation Service (NRCS) Web Soil Survey, soils in the project areas consist of Baywood sand (2–15% slopes), Arnold loamy sand (9-15% slopes), and Oceano sand (2-15% slopes) (NRCS 2017). Baywood sand is a deep excessively drained soil, which is found on slopes and stabilized dunes formed by windblown sand. Baywood sand supports chaparral and oak woodland communities. Most of the study areas consists of Baywood sand. The steep slope located just south of the existing terminal consists of Arnold loamy sand. Arnold loamy sand is a deep, excessively drained soil found on steep slopes of foothills and mountains. It is formed from weathered sandstone and naturally supports annual grassland, brush, and woodlands. Oceano sand is a deep excessively drained soil derived from stabilized windblown sand. A small polygon of Oceano sand is mapped in the northern study areas.

3.2 Vegetative Communities

The following sections describe the plant communities that occur in the project study areas. Figure 4 includes a map of the vegetative communities on the airport.

3.2.1 Ruderal

Ruderal vegetation is usually found in disturbed areas that have been significantly altered by construction, landscaping, or other types of land-clearing activities. Ruderal habitats often occur along roadsides and fence-lines, near developments, and in other areas experiencing severe surface disturbance. Plants found within this habitat are typically introduced Mediterranean species that colonize disturbed lands. Few occurrences of hardy native species such as Monterey spineflower, sandmat manzanita (*Arctostaphylos pumila*), purple owl's clover (*Castilleja exserta*), and annual lupine (*Lupinus bicolor*) have been able to exist in the ruderal vegetation. In some areas, native plant species have started to recolonize the ruderal vegetation but do not provide sufficient cover to be considered a native plant community. These areas are mapped as "Ruderal with Remnant Native Trees/Shrubs" in Figure 4.

3.2.2 Pinus Radiata Forest (Monterey Pine Forest)

Monterey pine forest includes Monterey pine (*Pinus radiata*) trees as the dominant or co-dominant species in the tree canopy. This habitat type occurs on marine terraces and headlands with well-drained soils. The Monterey pine forest is largely in the southern project areas along the southern airport property boundary. It includes coast live oak (*Quercus agrifolia*) and a few landscape trees as subdominants in the tree canopy creating a *Pinus radiata*/*Quercus agrifolia* association in parts of the airport. The shrub layer varies from landscape and ruderal species near the terminal and existing airport parking, to nonnative grassland adjacent to Highway 68, and to dense maritime chaparral in and near the parcel with Assessor Parcel Number ending 5000 (APN 5000). Numerous occurrences of Yadon's piperia are in the Monterey pine forest on the south side of the airport.

3.2.3 Arctostaphylos Pumila Shrubland (Sandmat Manzanita Chaparral)

Sandmat manzanita chaparral is similar in definition to central maritime chaparral (Holland 1986). This community consists of variable, thick-leaved shrubs of moderate to high cover, dominated by sandmat manzanita. Sandmat manzanita chaparral is typically located on well-drained, sandy substrates within the summer coastal fog zone in scattered locations near Monterey and Fort Ord. On the airport, this community includes mixed stands with woollyleaf manzanita (*Arctostaphylos tomentosa*), and as a shrub layer in the Monterey pine forest. The stands are dense to moderately dense with large areas being impassable. Some areas of this community are almost completely covered with manzanita species, whereas, other areas have a greater presence of common chaparral species. Manzanita species observed in the chaparral include sandmat manzanita, woollyleaf manzanita (*Arctostaphylos tomentosa* ssp. *tomentosa)*, and bristly twig manzanita *(A. t.* ssp. *bracteosa)*. The common chaparral species include but are not limited to, black sage (*Salvia mellifera*), chamise (*Adenostoma fasciculatum*), California sage (*Artemisia californica*), and toyon (*Heteromeles arbutifolia*).

3.2.4 Quercus Agrifolia Woodland Alliance (Coast live oak Woodland)

Coast live oak woodlands feature coast live oak as the dominant evergreen tree, often reaching 30 to 75 feet in height and establishing dense canopies (Holland 1986). The shrub layer is typically poorly developed but may include species such as toyon (*Heteromeles arbutifolia*) and gooseberry (*Ribes* spp.). The herbaceous layer is dominated by native and exotic grasses and forbs.

The airport supports coast live oak woodland on the eastern, northern, and southern portions of the property. This community intergrades with the Monterey pine forest, sandmat manzanita chaparral, and other communities. The community on the airport has a shrub layer that includes poison oak (*Toxicodendron diversilobum*), California blackberry (*Rubus ursinus*), woollyleaf manzanita, Monterey ceanothus (*Ceanothus cuneatus* var. *rigidus*), Toro manzanita (*Arctostaphylos montereyensis*), black sage, and California sage. The herbaceous layer is patchy and includes a variety of annual grasses, fiesta flower (*Pholistoma auritum*), buttercups (*Ranunculus californicus*), and California melic (*Melica imperfecta*).

3.2.5 Baccharis Pilularis Shrubland Alliance (Coyote Brush Scrub)

Coyote brush scrub is similar in definition to central coastal scrub (Holland 1986). This is a shrubland community that is dominated by coyote brush (*Baccharis pilularis*) and includes mock heather (*Ericameria ericoides*), buckbrush (*Ceanothus cuneatus cuneatus*), California sage, black sage, and other scrub species. This community is indicative of disturbed places that are in the process of being recolonized by native shrubs. A small patch of this community occurs on the northeast portion of the study areas. The surrounding habitats include sandmat manzanita chaparral and ruderal areas. Based on the surroundings, the area supporting coyote brush shrubland was likely subject to past clearing and probably supported chaparral or coastal scrub associates prior to the disturbance. Other native plants found in the coyote brush shrubland include mock heather, California sage, and sand scrub ceanothus (*Ceanothus dentatus*).

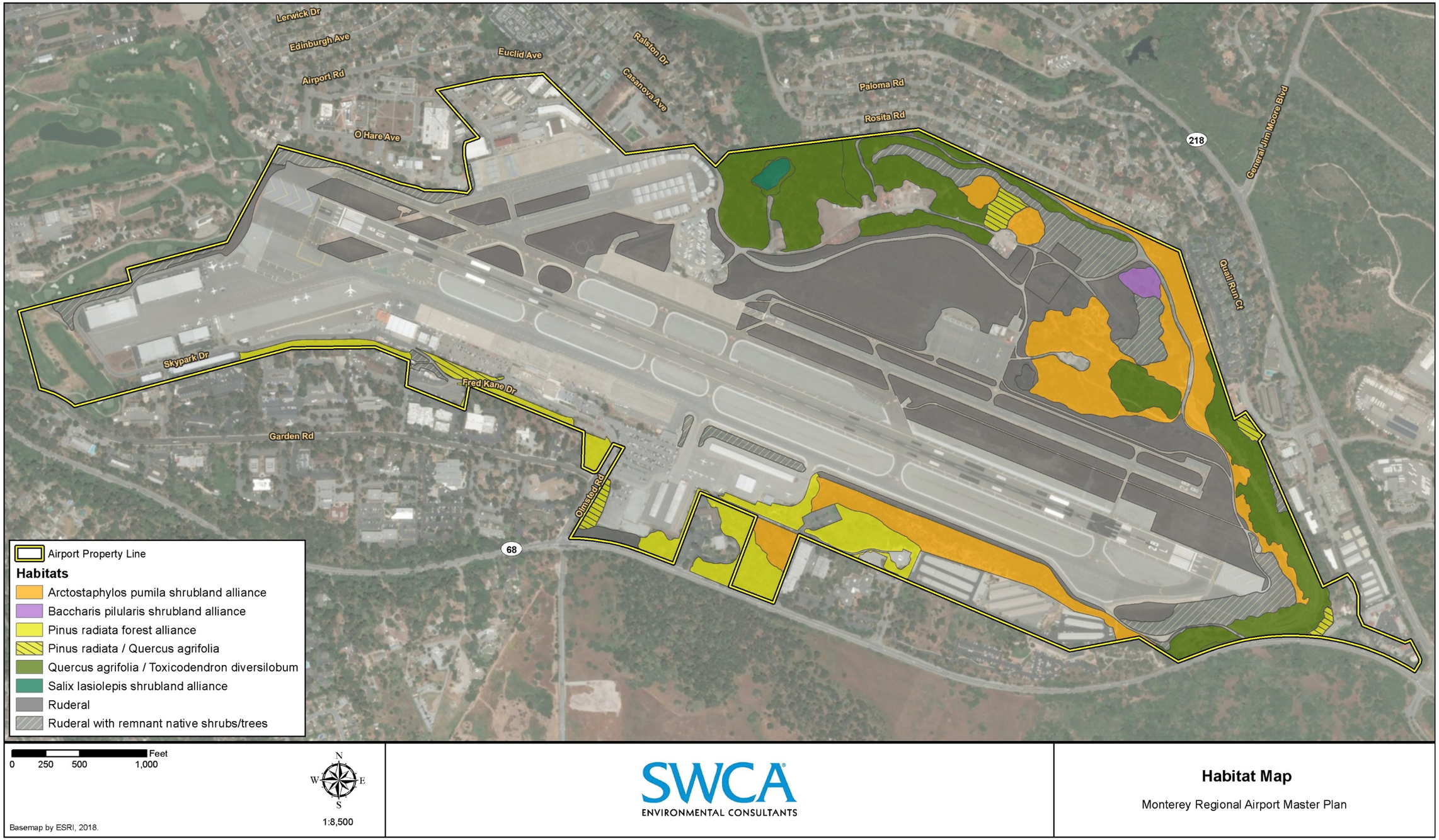

Figure 4. Habitat map.

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3.2.6 Salix lasiolepis Shrubland (Arroyo Willow Thickets)

Arroyo willow thickets are similar in definition to central coast riparian scrub, which consists of scrubby streamside thickets that are dominated by any of several willow species, including arroyo willow (*Salix lasiolepis*) (Holland 1986). The thickets vary in density from partially open to impenetrable. The understory commonly supports species such as California blackberry and stinging nettle (*Urtica dioica*) in drier sites, or cattail and sedges in mesic (moist) sites. Arroyo willow thickets occur on many soil types including sand and gravel bars in areas close to groundwater or surface water. The only arroyo willow thicket on the airport is in the northern detention basin. This low-lying area receives storm water from the airport property and directs the water through culverts and channels to the municipal stormwater system in the city of Del Rey Oaks.

3.3 Special-Status Plants Observed in the Study Areas

Table 6 below summarizes the special-status plants that were observed in the study areas. Figure 5 includes a map of the special-status species occurrences. Descriptions of the sandmat manzanita, Monterey spineflower, Eastwood's goldenbush (*Ericameria fasciculata*), Monterey ceanothus, Yadon's piperia, small-leaved lomatium (*Lomatium parvifolium*), seaside bird's beak, and Monterey pine observed in the study areas are provided in the sections following Table 6.

Table 6. Summary of Special-Status Species Observed in the Study Areas

Species Name	Legal Status Federal/State/CNPS	Occupied Study Areas
sandmat manzanita *Arctostaphylos pumila*	--/--/1B.2	Sandmat manzanita occurs in all study areas.
Monterey spineflower *Chorizanthe pungens*	FT/--/1B.2	Monterey spineflower occurs in the Highway 68 Frontage Road with Loop, North Access Road, GA Relocation, Proposed Parking and Circulation, Soil Deposition Areas, Frontage Road with Cul-de-Sac, Alternative 1 North Access Road and GA Relocation Area, and the Soil Deposition study areas.
Eastwood's goldenbush *Ericameria fasciculata*	--/--/1B.1	Eastwood's goldenbush occurs in the Highway 68 Frontage Road with Loop, North Access Road, Proposed Parking and Circulation, Soil Deposition Areas, Frontage Road with Cul-de-Sac, Alternative 1 North Access Road and GA Relocation Area, and the Soil Deposition study areas.
Monterey ceanothus *Ceanothus cuneatus* var. *rigidus*	--/--/4.2	Monterey ceanothus occurs in the Highway 68 Frontage Road with Loop, North Access Road, Terminal Area, Alternative 1 Parking and Circulation, and Alternative 1 N. Access Road and GA Relocation study areas.
Yadon's piperia *Piperia yadonii*	FE/--/1B.1	Yadon's piperia occurs in the Highway 68 Frontage Road with Loop, Proposed Parking and Circulation, Alternative 1 Parking and Circulation, Terminal Area, Frontage Road with Cul-de-Sac, Proposed Drainage Improvement, and Alternative 1 Drainage Improvement study areas.
small-leaved lomatium *Lomatium parvifolium*	--/--/4.2	Small-leaved lomatium occurs in the Highway 68 Frontage Road with Loop, North Access Road, Soil Deposition Areas, Frontage Road with Cul-de-Sac, Alternative 1 North Access Road and GA Relocation Area, and the Soil Deposition study areas.
seaside bird's beak *Cordylanthus rigidus ssp. littoralis*	--/SE/1B.1	Seaside bird's beak occurs in the Highway 68 Frontage Road with Loop and Frontage Road with Cul-de-Sac study areas.

Species Name	Legal Status Federal/State/CNPS	Occupied Study Areas
Monterey pine *Pinus radiata*	--/--/1B.1	Monterey pine trees occur in the Terminal Area, North Access Road, Alternative 1 North Access Road and GA Relocation, Soil Deposition Areas, Proposed and Alternative 1 Drainage Improvements, Highway 68 Frontage Road with Loop, and Highway 68 Frontage Road with Cul-de-Sac study areas.

Status Codes

-- = No status

Federal: FE = Federal Endangered; FT=Federal Threatened

State: SE=State Endangered; ST= State Threatened; SR= State Rare

CNPS: Rank 1B = rare, threatened, or endangered in California and elsewhere. Rank 2 = rare, threatened, or endangered in California, but more common elsewhere. Rank 3 = plants about which more information is needed. Rank 4 = a watch list plants of limited distribution.
Threat Code: _.1 = Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat); _.2 = Fairly endangered in California (20-80% occurrences threatened); _.3 = Not very endangered in California (<20% of occurrences threatened or no current threats known)

3.3.1 Sandmat Manzanita (Arctostaphylos pumila)

Sandmat manzanita is a low-growing (typically less than 1.5 meters tall) evergreen shrub that occurs in maritime chaparral and in openings within Monterey pine forest. It is endemic to California and limited to areas around Monterey Bay, at elevation ranging from 3 to 205 meters. Sandmat manzanita typically occurs on sandy soils associated with stabilized dunes. The California Native Plant Society (CNPS) has included sandmat manzanita on List 1B.2. Sandmat manzanita is widespread on the airport property with numerous occurrences in the study areas.

3.3.2 Monterey Spineflower (Chorizanthe pungens)

Monterey spineflower is an annual herb that occurs at 3 to 450 meters in openings among chaparral, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland on sandy soils. Monterey spineflower is federally threatened under the Federal Endangered Species Act (FESA) and ranked as a CNPS 1B.2 species (CNPS 2018). The openings in the Monterey pine forest and maritime chaparral in the study areas provide good habitat for this species. Numerous occurrences of Monterey spineflower were observed in the study areas.

3.3.3 Eastwood's Goldenbush (Ericameria fasciculata)

Eastwood's goldenbush is a perennial shrub that occurs in openings within closed-cone coniferous forest, chaparral, coastal dunes, and coastal scrub. It is typically found in sandy soil at elevations ranging from 30 to 275 meters. Eastwood's goldenbush is ranked as a CNPS 1B.2 (CNPS 2018) species and is sporadically located in several of the study areas (refer to Table 6).

3.3.4 Monterey Ceanothus (Ceanothus cuneatus var. rigidus)

Monterey ceanothus is an evergreen shrub that occurs in closed-cone, coniferous forest, chaparral, and coastal scrub with sandy soils at elevation ranging from 3 to 550 meters. The *Ceanothus cuneatus* species is endemic to California with the *rigidus* variation being endemic to Monterey and San Luis Obispo Counties. CNPS has included Monterey ceanothus on List 4.2 (CNPS 2018). Species included on List 4.2 are considered to have a limited distribution and are "fairly endangered" in California. Monterey ceanothus was observed in various locations in the BSA with most the occurrences in the central maritime chaparral and the oak woodland located at the eastern end of the runways (see Figure 5).

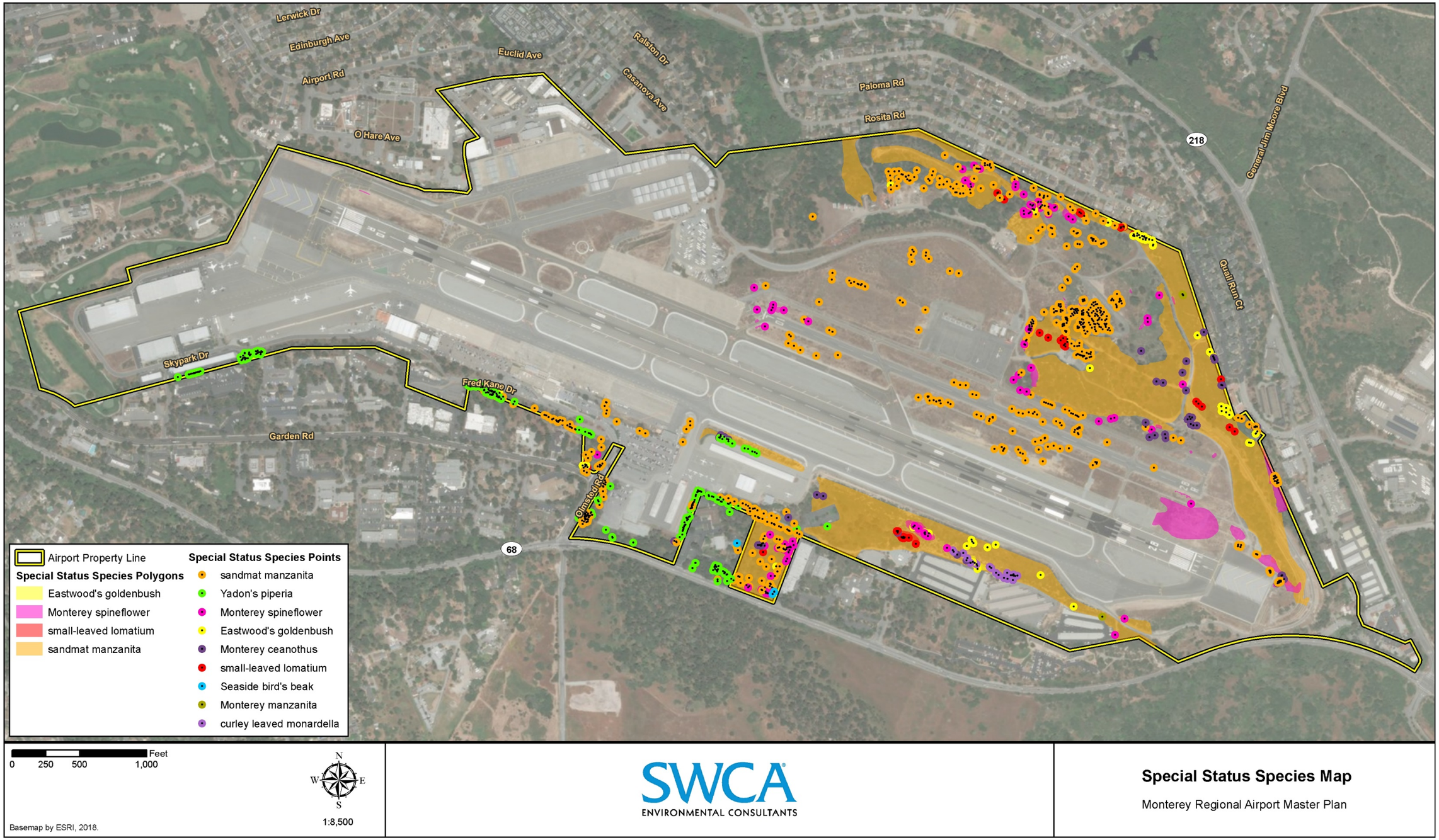

Figure 5. Map of special-status species occurrences.

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3.3.5 Yadon's Piperia (Piperia yadonii)

Yadon's piperia is a perennial herb that primarily occurs at elevation ranging from 10 to 510 meters in Monterey pine forests with sparse understories, or maritime chaparral with sandstone substrates and Hooker's manzanita (*Arctostaphylos hookeri*) (USFWS 1998). CNPS also reports some occurrences in coastal bluff scrub. Yadon's piperia is listed as endangered under the FESA and is included a CNPS Rank 1B.1 species (CNPS 2018). Numerous Yadon's piperia are located on the southern portion of the airport property and within several of the project study areas (see Table 6). The Yadon's piperia occurrences observed in the project study areas are largely concentrated in the Monterey pine forest, which includes maritime chaparral associates and nonnative vegetation.

3.3.6 Seaside Bird's Beak (Cordylanthus rigidus ssp. littoralis)

Seaside bird's beak is an annual herb that occurs in closed-cone coniferous forest, chaparral, cismontane woodland, coastal dunes, and coastal scrub with sandy soils. This species has been documented to occur at elevation ranging from 0 to 425 meters. Although it is more commonly found in intact native communities, it can persist in disturbed sites. This species is known from approximately 20 occurrences on the central California coast from northern Santa Barbara County to northern Monterey County. Seaside bird's beak is listed as endangered under the CESA and is a CNPS Rank 1B.1 species (CNPS 2018). Calflora documents three occurrences in the general vicinity of the airport (Calflora 2018). Most of these occurrences are located on the Robert Talbot property immediately east of the study areas; however, several individuals were observed in the Proposed Frontage Road Loop and the Alternative 1 Frontage Road Cul-de-Sac study areas.

3.3.7 Small-Leaved Lomatium (Lomatium parvifolium)

Small-leaved lomatium is a perennial herb that is endemic to California. This species has been documented in Santa Cruz, Monterey, San Luis Obispo, Santa Barbara, and Ventura Counties. It is most commonly found in chaparral and closed-cone pine forests. It is largely a coastal species and can be found in a variety of soil types. Small-leaved lomatium blooms January through June. The CNPS has applied the rare plant Rank 4.2 to this species, which indicates that small-leaved lomatium has a limited distribution and is moderately threatened in California. This species occurs in sporadic patches among the maritime chaparral on the airport property.

3.3.8 Monterey Pine (Pinus radiata)

Monterey pine is an evergreen coniferous tree that is restricted to Monterey, Santa Cruz, San Luis Obispo, and San Mateo Counties. This species is widely cultivated and planted; however, it is considered rare when associated with a natural stand. Currently, there are five known natural stands—three in the counties noted above and two located in Mexico. Monterey pine is an important forestry species in New Zealand and was widely seeded in Hawaii for reforestation purposes. Monterey pine is listed on two very different special-status lists. CNPS considers natural occurrences of Monterey pine to be "rare, threatened, or endangered in California and elsewhere (1B.1)" (CNPS 2018). The California Invasive Plant Council considers the species to have a limited threat to natural ecosystems outside of its native range. Most of the occurrences on the airport are naturally occurring and are most likely part of the natural Monterey population.

3.4 Federal and State Protected Wildlife

FESA- and/or CESA-protected animal species were not observed in the study areas during the surveys. However, the airport property supports suitable habitat for nesting birds, which are protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFGC), and California legless lizards (*Anniella pulchra*). California red-legged frog (CRF) (*Rana draytonii*) and California tiger salamander (CTS) (*Ambystoma californiense*) have documented occurrences within 1.3 miles of the airport. This section provides an evaluation of the potential for the master plan and short-term projects study areas to support these species.

3.4.1 Migratory Birds

The entire airport property provides suitable habitat for nesting birds. A variety of bird species may use the trees and shrubs on the airport to build nests or forage in; raptors may use the trees for nesting and the shrub and grass areas for foraging. If project activities are conducted between March and September, birds may be nesting within or adjacent to the affected area(s) and the individuals could be directly or indirectly impacted. The MBTA and CFGC protects many bird species from take; to maintain compliance with the MBTA and CFGC, the proposed short-term projects and future master plan development projects should avoid take of nesting birds.

3.4.2 California Red-Legged Frog (Rana draytonii)

CRF is listed as threatened under the FESA. A member of the true frog family Ranidae, CRF occur mainly in coastal drainages and aquatic habitats from the vicinity of Point Reyes, California south to northwestern Baja California, Mexico. Monterey, San Luis Obispo, and Santa Barbara Counties support the greatest amount of occupied habitat. CRF breed in aquatic sites with deep pools, emergent vegetation, and overhanging vegetation, but also use riparian and upland areas throughout their life cycle. Adult frogs with access to permanent water will generally remain active throughout the summer. In cooler areas, they may hibernate in burrows or other refugia in the winter. CRF adults may move upstream and downstream of breeding habitat to forage and find refugia (USFWS 2017).

SWCA reviewed the CNDDB to determine if any CRF occurrences have been documented within the a 3.1-mile radius around the airport property. There have not been any documented observations of CRF on the airport property. In addition, SWCA has been conducting biological surveys on the airport property since 2009 and has not observed CRF on the airport. As of May 2018, CNDDB does not document any CRF occurrences on the airport (CNDDB 2018). The closest occurrence (#939) is located approximately 1.3 miles southwest of the airport in Montara Pond 1. Montara Pond 1 is an artificially maintained pond at the Tehama Golf Club. The 1.3 miles between occurrence #939 and the airport is characterized by steep terrain, open space, mining operations, Highway 68 and other paved roads, and urban development. These land uses greatly limit the potential for straight-line movements from Montara Pond 1 to the airport and associated short-term project sites. Therefore, it is unlikely that the short-term projects would affect CRF.

A stormwater detention basin in the coast live oak woodland at the northwestern portion of the airport property supports suitable habitat for CRF. The basin supports a willow thicket that is occasionally trimmed and the basin water levels fluctuate based on the season. Due to the trimming and fluctuation water levels, the habitat in the basin varies and is unlikely to support breeding CRF, but it provides marginal summer shelter habitat for the species. Considering the habitat characteristics, any occurrence of CRF in the basin would likely be transitory. Considering these factors, protocol surveys for CRF would likely be inconclusive.

3.4.3 California Tiger Salamander (Ambystoma californiense)

The CTS is a large, stocky, terrestrial salamander in the Ambystomatidae family. Adult males can be 8 inches long, whereas, females are generally less than 7 inches long. Coloration consists of white or pale-yellow spots or bars on a black background on the back and sides. Adults are primarily nocturnal in their aboveground activities and are generally active during nights of heavy rainfall (USFWS 2009).

The species is restricted to grasslands and low (below 1,500 feet) foothill regions where lowland aquatic sites are available for breeding. CTS prefer natural ephemeral pools or ponds; stock ponds will be utilized if they are dry out seasonally. Adults travel to these ponds from upland habitat during winter rains. They spend two to five weeks in the water for reproduction, depending on gender (USFWS 2009). Ninety percent of the adult CTS lifetime is spent in the upland habitat in small mammal burrows. These terrestrial populations are often difficult to observe. Adults do not breed every year and can live to be at least 10 years old. Studies have shown that CTS use an approximately 2,200-foot radius around a breeding pond (364 acres) (USFWS 2009). Dispersal movements of up to 0.62 mile are considered likely (USFWS 2009).

SWCA reviewed the CNDDB to identify documented CTS occurrences within the airport property and 3.1 miles of the airport. No CTS occurrences are documented on the airport property. SWCA has been conducting biological surveys on the airport since 2009 and have not observed CTS on the airport. CNDDB documents three occurrences within 3.1 miles of the airport:

- **Occurrence #394:** Tehama Golf Club Montara Pond 1, located 1.3 miles south-southeast of the eastern project boundary; habitat is comprised of a former cattle stock pond. This is in the same general area as the CRF occurrence #939 discussed above.
- **Occurrence #167:** located 2.3 miles east of the eastern project boundary; habitat is comprised of a vernal pool with multiple rodent burrows on the former Fort Ord military reservation.
- **Occurrence # 166:** located 3.0 miles east of the eastern project boundary; habitat is comprised of a vernal pool on the former Fort Ord military reservation.

Much like the CRLF occurrences, the CTS occurrences are separated from the project site by steep terrain, open space, Highway 218, Highway 68, other paved roads, and urban development. These land uses greatly limit the potential for straight line movements from the documented CTS occurrences to the project site.

3.4.4 California Red-Legged Frog and California Tiger Salamander Discussion

The project study areas are largely comprised of developed lands and upland habitats including ruderal vegetation, coast live oak woodland, Monterey pine forest, and maritime chaparral. The only mesic sites in the study areas are the detention basin discussed above and a low-lying stormwater collection area that is situated between Highway 68 and the existing GA hangars. The stormwater collection area receives overland runoff from the impermeable surfaces surrounding the GA hangars and the highway. The area may have been excavated to serve as a stormwater collection area; however, it is not a defined basin and does not have bed or bank features. The stormwater collection site has native sandy soils that have a rapid percolation rate; therefore, standing water is rarely present. The vegetation in the stormwater collection area includes Monterey pine trees, landscape trees, and dense grasses at the ground level. Herbaceous species observed in the area included creeping wild rye (*Elymus triticoides*), velvet grass (*Holcus lanatus*), annual blue grass (*Poa annua*), and Baltic rush (*Juncus balticus*). The sporadic and short-lived presence of water and the lack of emergent vegetation in the stormwater collection area indicates that area is not suitable for CTS or CRF breeding habitat. This coupled with the distance and urban development

between other breeding habitats indicates that CRF and CTS are not likely to use the area as upland habitat.

As discussed above, a stormwater detention basin on the northern portion of the airport supports a willow thicket and has fluctuating water levels. The habitats immediately surrounding the detention basin include disturbed oak woodland with a grassy understory and sporadic shrubs. Urban development dominates the landscape beyond the oak woodland. The general habitat conditions in the basin are marginal for CRF and/or CTS; however, the periodic maintenance in the basin and the urban development around the basin likely preclude the presence of CRF and/or CTS in the area. As proposed, the Master Plan would designate the detention basin and surrounding oak woodland as conservation open space.

3.4.5 California Legless Lizards (Anniella pulchra pulchra, A. p. nigra)

The CDFW recognizes two subspecies of legless lizard in coastal California—silvery legless lizard (*A. p. pulchra*) and black legless lizard (*A. p. nigra*). Both of which are herein referred to as California legless lizards and are considered as California Species of Special Concern (SSC) by CDFW. These are elusive, fossorial (sub-surface), coastally distributed lizards ranging from the San Francisco Bay area southward into northern Mexico (Zeiner et al. 1990). Suitable habitat includes loose soils of coastal dune, valley foothill woodland, chaparral, and coastal scrub areas, where the species forages at the bases of vegetation and under leaf litter.

The sandy soils in the project study areas provide suitable habitat for California legless lizards. SWCA biologists have conducted numerous legless lizard survey and monitoring efforts as part of the recent Monterey Regional Airport Runway Safety Area Project (RSA Project) and other projects on the airport. These survey and monitoring efforts included excavation of over 45 acres of legless lizard habitat and only one individual was identified. The past survey results indicate that the species is likely present in low numbers on the airport; therefore, implementation of predisturbance surveys for legless lizards and other reptile species are recommended to ensure that project construction would not adversely affect native reptile species.

3.4.6 Federal and State Regulated Habitats

3.4.6.1 JURISDICTIONAL WATERS

The airport property does not contain any jurisdictional waters. There are two wet areas on the airport—the stormwater collection area situated between Highway 68 and the existing airport parking and the northern detention basin discussed above. The stormwater collection area is low-lying, but does not include a bed or banks, support riparian vegetation, have an ordinary high water mark, or have any hydrological connection to a navigable water or other waterway. The stormwater collection area receives overland flow from the adjacent hangars, parking areas, and highway.

The northern detention basin is a maintained stormwater detention area with earthen and concrete banks and a spillway. The basin is designed to allow stormwater to percolate into the soil; therefore, the spillway is rarely used for stormwater flow. The spillway connects to the municipal stormwater system to the north and does not direct flows to traditional navigable waters, relatively permanent waters, or other potential waters of the United States; therefore, it is unlikely that the detention basin would be considered "waters of the United States."

3.4.6.2 CRITICAL HABITAT

The airport property and various project areas are not located in any critical habitat units. This determination is based on information obtained from the Trusted Resources List obtained from the USFWS IPaC (see Appendix B) and various *Federal Register* (FR) documents. Numerous species have designated habitat in Monterey County; some of the critical habitat units located near the airport property are discussed below.

- On May 29, 2002, the USFWS designated approximately 18,829 acres in Santa Cruz and Monterey Counties as Monterey spineflower critical habitat (67 FR 37498–37546). This designation included airport property; however, the designation was challenged. In January 2008, the USFWS published a revised ruling (73 FR 1525) that does not designate airport properties as critical habitat for Monterey spineflower.
- On October 24, 2007, the USFWS designated eight critical habitat units for Yadon's piperia in Monterey County (72 FR 60422); Unit 4 – Aguajito is the closest to the action area. Unit 4 includes two subunits consisting of 108 acres, which are located approximately 0.83 miles south of the airport.
- On June 19, 2012, the USFWS designated critical habitat for the Pacific Coast population of western snowy plover (*Charadrius alexandrinus nivosus*) (77 FR 36727–36869). Unit CA 22 is the closest unit to the airport and is located approximately 1.5 miles west of the airport.

4 REGULATORY OVERVIEW

4.1 Federal Policies and Regulations

4.1.1 Federal Endangered Species Act of 1973

The FESA (50 Code of Federal Regulations [CFR] 17) provides legal protection for plant and animal taxa that are in danger of extinction and classified as either threatened or endangered under the FESA. The FESA requires federal agencies to make a finding on all federal actions, including the approval by an agency of a public or private action, such as the issuance of an U.S. Army Corps of Engineers (USACE) permit under Section 404 of the Clean Water Act (CWA), as to the potential to jeopardize the continued existence of any listed species potentially impacted by the action.

Section 9 of the FESA protects federally listed plant and animal species from unlawful take. "Take" is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." The USFWS regulates activities that may result in "take" of listed species. Federally designated critical habitat is also regulated. Constraints to listed species resulting from the implementation of a project would require the responsible agency or individual to formally consult with the USFWS to determine the extent of impact to a listed species.

Project-related activities that could result in impacts, such as take, to listed species require federal agencies to consult with the USFWS to determine the extent of impacts to listed species. Once USFWS reviews a Biological Assessment for a project, they may issue a federal Biological Opinion and Incidental Take Statement under FESA Section 7 that includes provisions for legal take, provided that specific mitigation measures are employed for construction.

4.1.2 Migratory Bird Treaty Act of 1918

The MBTA protects all migratory birds, including their eggs, nests, and feathers. The MBTA was originally drafted to put an end to the commercial trade in bird feathers, popular in the latter part of the 1800s. The MBTA is enforced by the USFWS, and potential impacts to species protected under the MBTA are evaluated by USFWS in consultation with other federal agencies. On April 11, 2018, the USFWS issued guidance on the recent M-Opinion affecting MBTA implementation. The M-Opinion concludes that the take of birds resulting from an activity is not prohibited by the MBTA when the underlying purpose of that activity is not to take birds. The USFWS interprets the M-Opinion to mean the MBTA prohibitions on take apply when the purpose of the action is to take migratory birds, their eggs, or their nests. Working with other federal agencies on migratory bird conservation is an integral mission of the USFWS; therefore, the USFWS maintains that potential impacts to migratory birds resulting from federal actions should be addressed under NEPA. The airport property supports a variety of habitats for nesting birds. If proposed ground-disturbing activities were implemented during the nesting bird season, pre-disturbance nesting bird surveys should be conducted to avoid impacts to nesting migratory birds.

4.1.3 Section 404 of the Clean Water Act

The USACE is responsible for the issuance of permits for the placement of dredged or fill material into "waters of the United States" pursuant to Section 404 of the CWA (33 United States Code [USC] 1344). As defined by USACE in 33 CFR 328.3(a)(parts 1–6), "waters of the United States" are summarized as:

> *"Those waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; tributaries and impoundments to such waters; all interstate waters including interstate wetlands; and territorial seas."*

If a project would result in dredge or fill of "waters of the United States," the project would be subject to Section 404 of the CWA, based on review by the USACE. The airport property, including the BSA, does not contain any jurisdictional wetlands or other waters that would be subject to the CWA.

4.2 State Policies and Regulations

4.2.1 California Fish and Game Code

CFGC Section 3503 – Protections of Bird's Nests includes provisions to protect the nests and eggs of birds. Section 3503 states: "It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto."

Per CFGC Section 2835, in absence of a CDFW-approved Natural Community Conservation Plan, the CDFW cannot authorize take of a Fully Protected species. The classification of Fully Protected was the state's initial effort in the 1960s to identify and provide additional protection to those animals that were rare or faced possible extinction. Most "fully" protected species have been listed as threatened or endangered species under the CESA. Fully Protected species lists were created for fish, mammals. amphibians and reptiles, birds, and mammals. CFGC Section 3511 (birds), Section 4700 (mammals), Section 5050 (reptiles and amphibians), and Section 5515 (fish) include provisions to protect Fully Protected species, such as: (1) prohibiting take or possession "at any time" of the species listed in the statute, with few exceptions; (2) stating that "no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to "take" a species that has been designated as Fully Protected; and (3) stating that no previously issued permits or licenses for take of these species "shall have any force or effect" for authorizing take or possession. Unless an applicant has developed a CDFW-

approved Natural Community Conservation Plan, CDFW is unable to authorize incidental take of Fully Protected species when activities are proposed in areas inhabited by those species.

The CDFW also manages the California Native Plant Protection Act of 1977 (NPPA) (CFGC Section 1900 et seq.), which was enacted to identify, designate, and protect rare plants. In accordance with CDFW guidelines, plant species with CNPS Ranks 1A, 1B, 2A, 2B, and 3 are considered "rare" under the NPPA. Impacts to plants with these rarity rankings must be fully evaluated under CEQA. Plants with CNPS Rank 4 have limited distributions but are not necessarily eligible for listing. It is recommended that impacts to plants with CNPS Rank 4 also be evaluated per CEQA.

Pursuant to Division 2, Chapter 6, Sections 1600–1602 of the CFGC, the CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife. The CDFW defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." The CDFW's definition of "lake" includes "natural lakes or man-made reservoirs." The CDFW jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife.

4.2.2 California Endangered Species Act of 1984

California has a parallel mandate to the FESA, which is embodied in the CESA and the NPPA. The CESA ensures legal protection for plants listed as rare or endangered, and wildlife listed as threatened or endangered. The CDFW regulates activities that may result in the "take" of such species. The CDFW also maintains a list of California SSC based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. Under state law, CDFW is empowered to review projects for their potential to impact state-listed species and SSC, and their habitats.

Take of state-listed species would require a Section 2081 Incidental Take Permit from CDFW. This process requires submittal of a sensitive species study and permit application package, and is similar to the FESA Section 10 process, except that CDFW is the regulatory and decision-making agency. A CDFW 2081 Incidental Take Permit typically has mitigation requirements. If CDFW concurs that impacts to a state-listed species would likely result from a project, alternatives, and measures to avoid or reduce the impacts must be identified in a Section 2081 permit to allow for incidental take authorization. CDFW may also include compensatory mitigation (mitigation/conservation bank) requirements for impacts to habitat for listed plants and wildlife.

4.2.3 Section 401 of the Clean Water Act of 1977

Section 401 of the CWA and its provisions ensure that federally permitted activities comply with the federal CWA and state water quality laws. Section 401 is implemented through a review process that is conducted by the Regional Water Quality Control Board (RWQCB) and is triggered by the Section 404 permitting process.

4.2.4 Senate Bill 1334

The passage of Senate Bill (SB) 1334 enacted Public Resources Code (PRC) Section 21083.4, which maintains that the potential conversion of oak woodland is subject to CEQA and is to be mitigated. Per SB 1334 and PRC Section 21083.4, all California counties are required to adopt oak woodlands management plans and ordinances that require a discretionary permit for oak woodland conversions and set a minimum mitigation standard.

5 THRESHOLDS OF SIGNIFICANCE

Guidance for determining CEQA significance thresholds is based on Appendix G of the State CEQA Guidelines. Using these guidelines, activities requiring CEQA review would have a significant impact on biological resources if they would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the CDFW or the USFWS;
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS;
3. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA;
4. Interfere substantially with the movement of any resident or migratory species of wildlife, wildlife corridors, or wildlife nursery sites;
5. Conflict with any local policies or ordinances protecting biological resources; and/or
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

6 SHORT-TERM PROJECTS IMPACT ANALYSIS

This impact assessment focuses on identifying potential impacts associated with implementation of the proposed short-term projects and is based on the site's existing conditions, the regulatory setting at the time that this report was completed, and the project description provided by the Airport. The emphasis is on determining the potential effects of the short-term projects on federal, state, and locally regulated species and habitats in the project study areas. Adverse impacts could occur if a component of the proposed short-term projects would result in temporary or permanent modification to jurisdictional habitats or to habitats occupied by special-status species. Where potential impacts to biological resources have been identified, measures for avoiding, minimizing, or mitigating adverse effects to the resources are recommended. Impact calculations are based on the conceptual site plans and are subject to refinement.

The two project alternatives include multiple components that are associated with the goal of increasing the runway-taxiway separation to 327.5 feet between Taxiway A and Runway 10R-28L. Although the project components are connected by the common goal, each project component would affect different areas and resources within the study areas. As such, Chapters 6 and 7 discuss the impacts and recommended avoidance and/or mitigation measures associated with the study areas that were defined to address the various project components.

6.1 Threshold #1: Candidate, Sensitive, or Special-Status Species

For the purpose of this analysis, candidate, sensitive, or special-status plant and wildlife species are identified as follows:

- Plants and animals listed or proposed for listing as threatened or endangered under the FESA (50 CFR 17.1—17.78).

- Plants and animals that are candidates for possible future listing as threatened or endangered under the FESA. From the February 28, 1996, *Federal Register*, page 7597: "those species for which the Service has on file sufficient information on biological vulnerability and threat(s) to support issuance of a proposed rule to list but issuance of the proposed rule is precluded."
- Plants and animals that meet the definitions of rare or endangered species under CEQA (State CEQA Guidelines Section 15380).
- Plants considered by the CNPS to be "rare, threatened, or endangered" in California (CNPS Rare Plant Ranks 1A, 1B, 2A, 2B, and 3).
- Plants listed under the California NPPA (CFGC Section 1900 et seq.).
- Animals listed or proposed for listing by the State of California as threatened or endangered under the CESA (14 California Code of Regulations [CCR] 670.5).
- Plants listed or proposed for listing by the State of California as threatened or endangered under the CESA pursuant to CFGC Sections 1904 (NPPA), 2074.2, and 2075.5.
- Plants and wildlife considered sensitive by other federal and/or state natural resource agencies (e.g., United States Forest Service, Bureau of Land Management).
- Animal species of special concern to the CDFW.
- Animal species that are fully protected in California (CFGC Sections 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).

6.1.1 Proposed Project

Table 7 summarizes the potential impacts to candidate, sensitive, or special-status species associated with the Proposed Project. The discussions following Table 7 provide details of the impacts to each resource. Refer to Section 7, Short-Term Projects Mitigation for the measures listed in each discussion below.

Table 7. Summary of Impacts to Candidate, Sensitive, or Special-Status Species associated with the Proposed Project

Resource	Proposed Project Impacts by Project Study Area (ind. = individuals)							Total Impact
	Terminal Area	Parking & Circulation	Frontage Road Loop	Drainage Improvements	N. Access Road	GA Relocation	Soil Deposition	
sandmat manzanita	157 ind.	63 ind.	180 ind.	15 ind.	716 ind.	26	361 ind.	**1,518 ind.**
Monterey pine	30 ind.	37 ind.	165 ind.	0	32 ind.	0	59 ind.	**323 ind.**
Eastwood's goldenbush	0	0	1 ind.	0	6 ind.	0	1 ind.	**8 ind.**
Monterey ceanothus	9 ind.	1 ind.	0	0	8 ind.	0	0	**18 ind.**
small-leaved lomatium	0	0	32 ind.	0	16 ind.	0	1 ind.	**49 ind.**
Monterey spineflower	0	37 ind.	136 ind.	0	15 ind.	126 ind.	225 ind.	**539 ind.**
Yadon's piperia	53 ind.	39 ind.	323 ind.	45 ind.	0	0	0	**460 ind.**

6.1.1.1 SANDMAT MANZANITA

Sandmat manzanita is a CNPS Rank 1B.2 plant that is widespread on the airport property. It occurs in all the Proposed Project study areas. Construction of the Proposed Project components would result in the

direct removal of the sandmat manzanita individuals located in the disturbance areas. Table 7 provides the estimated numbers of individuals that could be removed by each of the Proposed Project components. In total, the proposed short-term project components have the potential to directly remove 1,518 sandmat manzanita plants. The following list provides the quantity and location of the anticipated sandmat manzanita plant removals. Measures BIO-1 and BIO-13 through BIO-23 are recommended to address the Proposed Project's impacts on sandmat manzanita.

- **Terminal Area:** Approximately 157 sandmat manzanita plants would be removed during the construction of the new airport terminal and associated aircraft ramp. The individuals to be removed are in the ruderal vegetation that currently exists just north of the existing GA hangars, in the ruderal vegetation located adjacent to the existing ARFF station, and in the Monterey pine forest located on the bank that is immediately south of the GA ramp and hangars.
- **Parking and Circulation:** Approximately 63 sandmat manzanita plants would be removed during the construction of parking and circulation improvements that would occur on the southside of the airport. Most of the impacts would result from the removal of the Monterey pine forest located just west of the existing Fred Kane Road and Olmstead Road intersection. This habitat and associated sandmat manzanita plants would be removed for the construction of new surface parking. Few individuals would be removed for the proposed traffic circle at Olmstead Road and Garden Road.
- **Highway 68 Frontage Road Loop:** Approximately 180 sandmat manzanita plants would be removed during the construction of the new Highway 68 Frontage Road Loop. All the impacts would occur in the Monterey pine forest and sandmat manzanita chaparral that are in the undeveloped parcel that is between the Fenton Keller and Robert Talbott properties.
- **Drainage Improvements:** Approximately 15 sandmat manzanita plants would be removed during the construction of the drainage improvements that would occur on the southside of the airport at the Highway 68 and Olmstead Road intersection.
- **North Access Road:** Approximately 716 sandmat manzanita plants would be removed during the construction of the proposed north access road. The proposed north access road would traverse the hillside just east of the runways and the undeveloped lands located just north of the air operations area (AOA). This area supports dense sandmat manzanita chaparral and coast live oak woodland.
- **General Aviation Relocation:** Construction of the expanded north GA area would result in the removal of approximately 26 sandmat manzanita plants that occur in the ruderal vegetation. These individuals are routinely mowed for fire abatement and are not part of a native plant community.
- **Soil Deposition Areas:** Construction of the relocated commercial terminal apron would require excavating and stockpiling large quantities of soil. The excavated soil would be stockpiled in five soil deposition areas located on the northern part of the airport property. The soil stockpiles would result in the removal of approximately 361 sandmat manzanita plants. Most of this impact would occur in the largest of the five stockpile areas that would be placed in the coast live oak woodland, Monterey pine forest, sandmat manzanita chaparral, and ruderal habitats that are located immediately north of the existing industrial lease areas on the airport.

6.1.1.2 MONTEREY PINE

Monterey pine is a CNPS Rank 1B.1 plant that is widespread on the airport property. It occurs in all the Proposed Project study areas, with the exception of the GA relocation sites. The Monterey pine forests on the airport are largely intermixed with the maritime chaparral. Fire suppression in the maritime chaparral has allowed the Monterey pines to become established in the chaparral community. Monterey pines and

other tall trees create site barriers for pilots and can be problematic for safe operations. Therefore, airports commonly remove tall trees under Federal Aviation Regulation (FAR) Part 77, Obstructions to Navigation. Construction of the Proposed Project components would result in the removal of the Monterey pines in the disturbance areas. Table 7 above provides the estimated numbers of individuals that could be removed by each of the Proposed Project components. The following list provides the quantity and location of the anticipated Monterey pine tree removals. Measures BIO-3 and BIO-13 through BIO-19 are recommended to address the Proposed Project's impacts on Monterey pines.

- **Terminal Area:** 30 Monterey pine trees would be removed during the construction of the new airport terminal and associated aircraft ramp. The individuals to be removed are in the Monterey pine forest located on the bank that is immediately south of the GA ramp.
- **Parking and Circulation:** 37 Monterey pine trees would be removed during the construction of parking and circulation improvements that would occur on the south side of the airport. Most of the impacts would result from the removal of the Monterey pine forest located just west of the existing Fred Kane Road and Olmstead Road intersection for the construction of new surface parking. Few individuals would be removed for the proposed traffic circle at Olmstead Road and Garden Road and the proposed parking structure.
- **Highway 68 Frontage Road Loop:** 165 Monterey pine trees would be removed during the construction of the new Highway 68 Frontage Road Loop. All these impacts would occur in the ruderal habitat located between the existing airport parking and Highway 68 and in the Monterey pine forest and sandmat manzanita chaparral that are in the undeveloped parcel that is between the Fenton Keller and Robert Talbott properties.
- **North Access Road:** 32 Monterey pine trees would be removed during the construction of the proposed north access road. The proposed north access road would traverse the hillside just east of the runways and the undeveloped lands located just north of the AOA. These areas support dense sandmat manzanita chaparral and coast live oak woodland that harbor sporadic Monterey pine trees.
- **Soil Deposition Areas:** The soil stockpiles would result in the removal of approximately 59 Monterey pine trees. Construction of the proposed airport terminal would require excavating and stockpiling large amounts of soil. The excavated soil would be stockpiled in five soil deposition areas on the northern part of the airport property.

6.1.1.3 EASTWOOD'S GOLDENBUSH

Eastwood's goldenbush is a CNPS Rank 1B.1 species that has sporadic occurrences on the airport property, with the highest concentrations in the northeast portion of the property. This species was observed in the Parking and Circulation, Highway 68 Frontage Road Loop, North Access Road, and Soil Deposition study areas. The Proposed Project would remove one occurrence from the Highway 68 Frontage Road Loop study area, one occurrence from the Soil Deposition study area, and six occurrences from the North Access Road study area. As designed, the Proposed Project would avoid the individuals located in the Parking and Circulation study area. Measures BIO-4 and BIO-13 through BIO-23 are recommended to address the Proposed Project's impacts on Eastwood's goldenbush.

6.1.1.4 MONTEREY CEANOTHUS

Monterey ceanothus is a CNPS Rank 4.2 species that was observed in the Parking and Circulation, North Access Road, and Terminal study areas. The Proposed Project would remove one occurrence from the Parking and Circulation study area, nine occurrences from the Terminal study area, and eight occurrences from the North Access Road study area. Measures BIO-5 and BIO-13 through BIO-23 are recommended to address the Proposed Project's impacts on Monterey ceanothus.

6.1.1.5 SMALL-LEAVED LOMATIUM

Small-leaved lomatium is a CNPS Rank 4.2 species that was observed in the Parking and Circulation, North Access Road, and Soil Deposition study areas. The Proposed Project would remove one occurrence from the Soil Deposition study area, 16 occurrences from the North Access Road study area, and 32 occurrences from the Highway 68 Frontage Road Loop study area. As designed, the Proposed Project would avoid the individuals located in the Proposed Project Parking and Circulation study area. Measures BIO-6 and BIO-13 through BIO-23 are recommended to address the Proposed Project's impacts small-leaved lomatium.

6.1.1.6 MONTEREY SPINEFLOWER

Monterey spineflower is a federally threatened and CNPS Rank 1B.2 species that is widespread on the airport property. This species is commonly found in open or disturbed areas on the airport. The Monterey spineflower population on the airport fluctuates seasonally making it difficult to predict the potential impacts to the species that could occur from future projects. Based on the project design and the 2016 and 2017 survey data, it is anticipated that the Proposed Project could impact approximately 539 individuals and the seed bank that occurs at the occurrences. The anticipated impacts would occur in the Parking and Circulation, Highway 68 Frontage Road Loop, North Access Road, GA Relocation, and Soil Deposition study areas. The impacts would include the removal of individuals, loss of soil seed bank from removing top soil, and the conversion of available habitat to developed areas. Measures BIO-7 and BIO-13 through BIO-23 are recommended to address the Proposed Project's impacts on Monterey spineflower.

6.1.1.7 YADON'S PIPERIA

Yadon's piperia is a federally endangered and CNPS Rank 1B.1 species that has numerous occurrences on the southern portion of the airport and sparse occurrences in the northern portion of the airport. Yadon's piperia was observed in the Terminal, Parking and Circulation, Highway 68 Frontage Road Loop, and Drainage Improvement study areas. As designed, the Proposed Project would remove 460 Yadon's piperia from these study areas. The Proposed Project has the potential to remove approximately 39% of the Yadon's piperia population that occurs on the airport property and the adjacent Fenton Keller property, and the loss of approximately 15% of the larger population occurring on and around the airport. The Proposed Project would permanently remove approximately 1.84 acres of occupied Yadon's piperia habitat. The impacts would include the removal of individuals, loss of soil seed bank from removing top soil, and the conversion of occupied habitat to developed areas. Measures BIO-8, BIO-9, and BIO-13 through BIO-23 are recommended to address the Proposed Project's impacts on Yadon's piperia.

6.1.1.8 SEASIDE BIRD'S BEAK

Seaside bird's beak is listed as endangered under the CESA and is a CNPS Rank 1B.1 species. The 2016 and 2017 surveys documented the presence of two (one in 2016 and one in 2017) individuals in the Proposed Project Highway 68 Frontage Road Loop study area. Utilizing the survey data, the Airport redesigned the frontage road alignment to avoid the known occurrences. As currently designed, the Proposed Project frontage road would be constructed approximately 25 feet to the north of the occurrences. Seaside bird's beak is an annual species. As such, it's population numbers and exact location can fluctuate from season to season. Measures BIO-10 and BIO-13 through BIO-23 are recommended to address the Proposed Project's impacts on seaside bird's beak.

6.1.1.9 CALIFORNIA LEGLESS LIZARDS

The vegetative communities in the Proposed Project study areas provide suitable habitat for silvery and black legless lizards (collectively referred to as California legless lizards) and other reptile species.

Grading activities could result in direct take of these reptiles. Direct take may include being struck by equipment, entrapped in stockpiled materials or trenches, or trampled or collected by construction personnel. Measures BIO-12 through BIO-23 are recommended to reduce the potential impacts to California legless lizards.

6.1.1.10 NESTING BIRDS

The habitats occurring in the Proposed Project study areas provide suitable nesting habitat for birds. Common passerines may use the oak woodland and maritime chaparral for nesting; raptors may use the oak and pine trees for nesting. These available nesting habitats would be impacted by land-clearing activities. If land-clearing activities are conducted between March and September, birds may be nesting within or adjacent to the affected area(s) and the individuals could be directly or indirectly impacted. Direct impacts may include loss of active nests during vegetation removal. Noise or other disturbances may cause an individual to abandon a nest resulting in an indirect impact. Minimization measure BIO-11 is recommended to avoid the potential impacts to nesting birds.

6.1.2 Alternative 1

Table 8 summarizes the potential impacts to candidate, sensitive, or special-status species associated with Alternative 1. The discussions following Table 8 provide details of the impacts to each resource. Refer to Section 7, Short-Term Projects Mitigation for the measures listed in each discussion below.

Table 8. Summary of Impacts to Candidate, Sensitive, or Special-Status Species associated with Alternative 1

Resource	Proposed Project Impacts by Project Study Area (ind. = individuals)						Total Impact
	Terminal Area	Parking & Circulation	Frontage Road Cul-de-Sac	Drainage Improvements	N. Access Road / GA Relocation	Soil Deposition	
sandmat manzanita	152 ind.	44 ind.	136 ind.	15 ind.	742 ind.	361 ind.	**1,450 ind.**
Monterey pine	32 ind.	32 ind.	150 ind.	0	32 ind.	59 ind.	**305 ind.**
Eastwood's goldenbush	0	0	1 ind.	0	6 ind.	1 ind.	**8 ind.**
Monterey ceanothus	9 ind.	1 ind.	0	0	8 ind.	0	**18 ind.**
small-leaved lomatium	0	0	32 ind.	0	16 ind.	1 ind.	**49 ind.**
Monterey spineflower	0	0	136 ind.	0	141 ind.	225 ind.	**502 ind.**
Yadon's piperia	53 ind.	3 ind.	59 ind.	41 ind.	0	0	**156 ind.**

6.1.2.1 SANDMAT MANZANITA

Sandmat manzanita is a CNPS Rank 1B.2 plant that is wide spread on the airport property. It occurs in all the Alternative 1 project study areas. Construction of the Proposed Project components would result in the removal of the sandmat manzanita individuals located in the disturbance areas. Table 8 provides the estimated numbers of individuals that could be removed by each of the Alternative 1 project components. In total, the Alternative 1 project components have the potential to remove 1,450 sandmat manzanita plants. The following list provides the quantity and location of the anticipated sandmat manzanita removals. Measures BIO-2 and BIO-13 through BIO-23 are recommended to address the Proposed Project's impacts on sandmat manzanita.

- **Terminal Area:** Approximately 152 sandmat manzanita plants would be removed during the construction of the new airport terminal and associated aircraft ramp. The individuals to be removed are in the ruderal vegetation that currently exists just north of the existing GA hangars, in the ruderal vegetation located adjacent to the existing ARFF station, and in the Monterey pine forest located on the bank that is immediately south of the GA ramp and hangars.
- **Parking and Circulation:** Approximately 44 sandmat manzanita plants would be removed during the construction of parking and circulation improvements that would occur on the southside of the airport.
- **Highway 68 Frontage Road Cul-de-sac:** Approximately 136 sandmat manzanita plants would be removed during the construction of the new Highway 68 Frontage Road Cul-de-Sac. All these impacts would occur in the Monterey pine forest and sandmat manzanita chaparral that are in the undeveloped parcel that is between the Fenton Keller and Robert Talbott properties.
- **Drainage Improvements:** Approximately 15 sandmat manzanita plants would be removed during the construction of the drainage improvements that would occur on the southside of the airport at the Highway 68 and Olmstead Road intersection.
- **North Access Road and General Aviation Relocation:** Approximately 742 sandmat manzanitas would be removed during construction of the proposed north access road (716 individuals) and GA Relocation area (26 individuals). The proposed north access road would traverse the hillside just east of the runways and the undeveloped lands located just north of the AOA. This area supports dense sandmat manzanita chaparral and coast live oak woodland. The GA study area supports ruderal vegetation with sparse sandmat manzanita occurrences.
- **Soil Deposition Areas:** The soil stockpiles would remove approximately 361 sandmat manzanita plants, most of which are in the largest of the stockpile areas. Construction of the proposed airport terminal would require excavating and stockpiling large amounts of soil. The excavated soil would be stockpiled in five soil deposition areas on the northern part of the airport property.

6.1.2.2 MONTEREY PINE

Monterey pine is a CNPS Rank 1B.1 plant that is widespread on the airport property. It occurs in all the Alternative 1 study areas, with the exception of the Drainage Improvement area. Construction of the Alternative 1 components would result in the direct removal of the Monterey pines in the disturbance areas. Table 8 above provides the estimated numbers of individuals that could be removed by each of the Alternative 1 components. In total, the Alternative 1 components have the potential to remove 305 Monterey pine. The following discusses the quantity and location of the Monterey pine removals.

- **Terminal Area:** 32 Monterey pine trees would be removed during the construction of the new airport terminal and associated aircraft ramp. The individuals to be removed are in the Monterey pine forest located on the bank that is immediately south of the existing GA ramp and hangars.
- **Parking and Circulation:** 32 Monterey pine trees would be removed during the construction of parking and circulation improvements that would occur on the south side of the airport. These individuals would be removed for the proposed traffic circle at Olmstead Road and Garden Road and the proposed surface parking.
- **Highway 68 Frontage Road Cul-de-sac:** 150 Monterey pine trees would be removed during construction of the new Highway 68 Frontage Road Cul-de-Sac. These impacts would occur in the ruderal habitat located between the existing airport parking and Highway 68 and in the Monterey pine forest and sandmat manzanita chaparral that are in the undeveloped parcel that is between the Fenton Keller and Robert Talbott properties.

- **North Access Road and General Aviation Relocation:** 32 Monterey pine trees would be removed during construction of the north access road. The north access road would traverse the hillside just east of the runways and the undeveloped lands located north of the AOA. These areas support dense sandmat manzanita chaparral and coast live oak woodland that harbor sporadic Monterey pines.
- **Soil Deposition Areas:** Construction of the proposed airport terminal would require excavating and stockpiling large amounts of soil. The excavated soil would be stockpiled in five soil deposition areas on the northern part of the airport property. The soil stockpiles would remove 59 Monterey pine trees. Most of this impact would occur in the largest stockpile area that would be in the coast live oak woodland, Monterey pine forest, sandmat manzanita chaparral, and ruderal habitats that are immediately north of the existing industrial lease areas on the airport located north of Airport Road.

6.1.2.3 EASTWOOD'S GOLDENBUSH

Eastwood's goldenbush is a CNPS Rank 1B.1 species that has sporadic occurrences on the airport property, with the highest concentrations in the northeast part of the property. This species was observed in the Parking and Circulation, Highway 68 Frontage Road Cul-de-Sac, North Access Road, and Soil Deposition study areas. Alternative 1 would remove one occurrence from the Highway 68 Frontage Road Cul-de-Sac study area, one occurrence from the Soil Deposition study area, and six occurrences from the North Access Road study area. The individuals near the intersection of Olmstead Road and Garden Road are located outside of the anticipated Alternative 1 Parking and Circulation study area would be avoided. Measures BIO-4 and BIO-13 through BIO-23 are recommended to address the Alternative 1 impacts on Eastwood's goldenbush.

6.1.2.4 MONTEREY CEANOTHUS

Monterey ceanothus is a CNPS Rank 4.2 species that was observed in the Parking and Circulation, North Access Road, and Terminal study areas. Alternative 1 would remove one occurrence from the Parking and Circulation study area, nine occurrences from the Terminal study area, and eight occurrences from the North Access Road study area. Measures BIO-5 and BIO-13 through BIO-23 are recommended to address the Alternative 1 impacts on Monterey ceanothus.

6.1.2.5 SMALL-LEAVED LOMATIUM

Small-leaved lomatium is a CNPS Rank 4.2 species that was observed in the Highway 68 Frontage Road Cul-de-Sac, North Access Road and GA Relocation, and Soil Deposition study areas. Alternative 1 would remove one occurrence from the Soil Deposition study area, 16 occurrences from the North Access Road and GA Relocation study area, and 32 occurrences from the Highway 68 Frontage Road Cul-de-Sac study area. The individuals near the intersection of Olmstead Road and Garden Road are located outside of the anticipated Alternative 1 Parking and Circulation study area would be avoided. Measures BIO-6 and BIO-13 through BIO-23 are recommended to address the Alternative 1 impacts to small-leaved lomatium.

6.1.2.6 MONTEREY SPINEFLOWER

Monterey spineflower is a federally threatened and CNPS Rank 1B.2 species that is widespread on the airport property. The Monterey spineflower population on the airport fluctuates seasonally making it difficult to predict the potential impacts to the species that could occur from future projects. Based on the Alternative 1 design and the 2016 and 2017 survey data, it is anticipated that Alternative 1 could impact approximately 502 individuals and the seed bank at the occurrences. The anticipated impacts would occur in the Highway 68 Frontage Road Cul-de-Sac, North Access Road and GA Relocation, and Soil

Deposition study areas. The impacts would include the removal of individuals, loss of soil seed bank from removing top soil, and the conversion of available habitat to developed areas. Measures BIO-7 and BIO-13 through BIO-23 are recommended to address the Alternative 1 impacts on Monterey spineflower.

6.1.2.7 YADON'S PIPERIA

Yadon's piperia is a federally endangered and CNPS Rank 1B.1 species that has numerous occurrences on the southern portion of the airport and sparse occurrences in the northern portion of the airport. Yadon's piperia was observed in the Terminal, Parking and Circulation, Highway 68 Frontage Road Cul-de-Sac, and Drainage Improvement study areas. As designed, Alternative 1 would directly remove 156 Yadon's piperia from these study areas. Alternative 1 has the potential to remove approximately 13% of the Yadon's piperia population that occurs on the airport property and the Fenton Keller property, and the loss of approximately 5% of the larger population occurring on and around the airport. Alternative 1 would permanently remove approximately 1.61 acres of occupied Yadon's piperia habitat. The impacts would include the physical removal of individuals, loss of soil seed bank from removing top soil, and the conversion of occupied habitat to developed areas. Measures BIO-8, BIO-9, and BIO-13 through BIO-23 are recommended to address the Alternative 1 impacts on Yadon's piperia.

6.1.2.8 SEASIDE BIRD'S BEAK

Seaside bird's beak is listed as endangered under the CESA and is a CNPS Rank 1B.1 species. The 2016 and 2017 surveys documented the presence of two (one in 2016 and one in 2017) individuals in the Alternative 1 Highway 68 Frontage Road Cul-de-Sac study area. Utilizing the survey data, the Airport redesigned the frontage road cul-de-sac alignment to avoid the known occurrences. As currently designed, the Alternative 1 frontage road would be constructed approximately 25 feet to the north of the occurrences. Seaside bird's beak is an annual species. As such, it's population numbers and exact location can fluctuate from season to season. Measures BIO-10 and BIO-13 through BIO-23 are recommended to address the Proposed Project's impacts on seaside bird's beak.

6.1.2.9 CALIFORNIA LEGLESS LIZARDS

The vegetative communities in the Alternative 1 study areas provide suitable habitat for silvery and black legless lizards and other reptile species. Grading activities could result in direct take of these reptiles. Direct take may include being struck by equipment, entrapped in stockpiled materials or trenches, or trampled or collected by construction personnel. Measures BIO-12 through BIO-23 are recommended to reduce the potential impacts to California legless lizards.

6.1.2.10 NESTING BIRDS

The habitats occurring in the Alternative 1 study areas provide suitable nesting habitat for birds. Common passerines may use the oak woodland and maritime chaparral for nesting; raptors may use the oak and pine trees for nesting. These available nesting habitats would be impacted by land-clearing activities. If land-clearing activities are conducted between March and September, birds may be nesting within or adjacent to the affected area(s) and the individuals could be directly or indirectly impacted. Direct impacts may include loss of active nests during vegetation removal. Noise or other disturbances may cause an individual to abandon a nest resulting in an indirect impact. Minimization measure BIO-11 is recommended to avoid the potential impacts to nesting birds.

6.1.3 Threshold 1 Proposed Project and Alternative 1 Compared Impacts

Differences between the two project alternatives resulted in variations of impacts to special-status species in the study areas. Table 9 summarizes the differences and/or similarities of the anticipated impacts to special-status species between the Proposed Project and Alternative 1.

Table 9. Comparison of Alternative Impacts

Resource	Proposed Project Impact	Alternative 1 Impact	Reason for Variance
sandmat manzanita	1,518 Individuals	1,450 Individuals	Exclusion of surface parking at Olmstead Road and Fred Kane Drive avoided impacts in the Alternative 1 Parking and Circulation study area. Exclusion of the loop in the Proposed Project frontage road reduced the impact area in the Frontage Road Loop and Terminal study areas.
Monterey pine	323 Individuals	305 Individuals	Exclusion of surface parking at Olmstead Road and Fred Kane Drive avoided impacts in the Alternative 1 Parking and Circulation study area. Exclusion of the loop in the Proposed Project frontage road reduced the impact area in the Frontage Road Loop and Terminal study areas.
Eastwood's goldenbush	8 Individuals	8 Individuals	No Change
Monterey ceanothus	18 Individuals	18 Individuals	No Change
small-leaved lomatium	49 Individuals	49 Individuals	No Change
Monterey spineflower	539 Individuals	502 Individuals	Exclusion of surface parking at Olmstead Road and Fred Kane Drive avoided impacts in the Alternative 1 Parking and Circulation study area
Yadon's piperia	460 Individuals	156 Individuals	Exclusion of the loop in the Proposed Project frontage road reduced the impact area in the Frontage Road Loop study area. Exclusion of the parking structure from the Proposed Project reduced the impact in the Proposed Project Parking and Circulation study area.

6.2 Threshold #2: Riparian Habitat or Sensitive Natural Community

The Proposed Project and Alternative 1 study areas do not support riparian habitats. However, the Proposed Project and Alternative 1 do support sandmat manzanita chaparral, Monterey pine forest, and coast live oak woodland, which the CDFW considers to be Sensitive Natural Communities. CDFW maintains a list of Sensitive Natural Communities that are evaluated using the NatureServe Heritage Methodology to assign Global and State rankings to the communities (NatureServe 2018). Natural Communities with ranks of "S1" through "S3" are considered Sensitive Natural Communities to be addressed in the environmental review processes of CEQA and its equivalents. The Global and State ranking system does not imply that specific actions are required in review of projects that may impact the community; however, regulatory agencies may request that impacts to these communities be addressed in environmental documents.

Sandmat manzanita chaparral and Monterey pine forest have "G1" Global Rank and an "S1" State Rank, which indicate that these communities are "critically imperiled." Coast live oak woodland has a "G4"

Global Rank and an "S4" State Rank, which indicate that coast live oak woodland is "apparently secure" in its range (Nature Serve 2018).

Oak woodlands are also considered under SB 1334 and associated PRC Section 21083.4, which maintains that the potential conversion of oak woodland is subject to CEQA and is to be mitigated. The following sections discuss the Proposed Project's and Alternative 1 potential impacts to the sensitive natural communities including oak woodlands.

6.2.1 Proposed Project

The Proposed Project could result in direct and indirect effects on sandmat manzanita chaparral, Monterey pine forest, and coast live oak woodland. Direct impacts could include the removal of the communities and conversion of the lands to developed areas. Indirect effects include erosion, accidental grading or equipment maneuvering, and spread of nonnative species that may negatively affect the natural processes that support the communities. Measures BIO-13 through BIO-22 are recommended to address impacts to sensitive natural communities and the flora and fauna that occupy the communities.

The Proposed Project would impact 4.21 acres of sandmat manzanita chaparral. This impact would result from the grading and development of the Proposed Highway 68 Frontage Road with Loop (0.53 acre), North Access Road and GA Relocation (3.26 acres), and the Soil Deposition Area (0.41 acre).

The Proposed Project would impact 5.27 acres of Monterey pine forest. This impact would result from the grading and development of the Terminal Area (1.16 acres), Proposed Parking and Circulation Area (1.09 acres), Proposed Highway 68 Frontage Road with Loop (1.94 acres), Proposed Drainage Improvements (0.45 acre), North Access Road and GA Relocation (0.36 acre), and the Soil Deposition Area (0.27 acre).

The Proposed Project would impact 4.83 acres of coast live oak woodland and 705 coast live oak trees. This impact would result from the grading and development of the North Access Road and GA Relocation (1.77 acres, 128 trees), the Soil Deposition (3.06 acres, 428 trees), Highway 68 Frontage Road Loop (83 trees), and the Parking and Circulation (66 trees) project components.

6.2.2 Alternative 1

Alternative 1 would impact 4.16 acres of sandmat manzanita chaparral. This impact would result from the grading and development of the Highway 68 Frontage Road with Cul-de-Sac (0.49 acre), North Access Road (3.26 acres), and the Soil Deposition Area (0.41 acre).

Alternative 1 would impact 4.54 acres of Monterey pine forest. This impact would result from the grading and development of the Terminal Area (1.16 acres), Parking and Circulation Area (0.71 acre), Highway 68 Frontage Road with Cul-de-Sac (1.73 acres), Drainage Improvements (0.31 acre), North Access Road (0.36 acre), and the Soil Deposition Area (0.27 acre).

Alternative 1 would impact 4.83 acres of coast live oak woodland and 657 coast live oak trees. This impact would result from the grading and development of the North Access Road and GA Relocation (1.77 acres, 128 trees), the Soil Deposition (3.06 acres, 428 trees), Highway 68 Frontage Road Loop (66 trees), and the Parking and Circulation (35 trees) project components.

6.3 Threshold #3: Wetlands

The Proposed Project and Alternative 1 study areas do not contain jurisdictional wetlands or other waters; therefore, impacts to jurisdictional wetlands or other waters are not expected.

6.4 Threshold #4: Movement of Resident or Migratory Species

The AOA on the airport property is fenced per FAA safety requirements. Portions of the airport property that are not included in the AOA are surrounded by existing development. The existing perimeter fence and development in the area limits the use of the airport property as a migratory route for resident wildlife species. However, common wildlife species such as California mule deer (*Odocoileus hemionus californicus*) and coyote (*Canis latrans*) use the undeveloped portions of the airport property for foraging and shelter. Although the Proposed Project and Alternative 1 project components may reduce the available foraging and shelter area for resident deer and coyote, implementation of the project components is not expected to significantly disrupt a migratory corridor.

6.5 Threshold #5: Local Policies or Ordinances Regarding Biological Resources

Those aspects of the Proposed Project and Alternative 1 that are in the City of Monterey (City) jurisdiction are subject to Chapter 37 Preservation of Trees and Shrubs of the City Code. Specifically, Section 37-2.5 Protection of Trees During Construction, Section 37-8 Removal or Damaging Trees on Private Property; Permit Required, and Section 37-11 Conditions of Removal/Mitigation Measures of the City Code. The following sections discuss the potential impacts to trees of various species in relation to the City Code.

In addition to impacts to trees, the Proposed Project and Alternative 1 components that are in the City jurisdiction have the potential to impact vegetation types identified for protection in the City of Monterey Conservation Element goals and policies. The goals and policies listed below are pertinent to the Proposed Project and Alternative 1 components that would occur in the City jurisdiction.

- **Goal d.** Protect the character and composition of existing native vegetative communities. Conserve, manage, and restore habitats for endangered species, and protect biological diversity represented by special-status plant and wildlife species.
    - **Policy d.1.** Protect existing native plants and promote the use of locally occurring, native vegetation for public and private landscaping and revegetation efforts.
    - **Policy d.2.** Discourage the use of plant species on the California Exotic Pest Plant Council lists.
    - **Policy d.3.** Protect existing sensitive habitats by careful planning to avoid and/or mitigate significant impacts to habitat areas identified as having high and moderate biological values.
    - **Policy d.4.** Protect and manage habitats that support special-status species, are of high biological diversity, or are unusual or regionally restricted. Prepare biotic reports or habitat management plans as needed to ensure protection of habitat values.
    - **Policy d.5.** Reduce biotic impacts to a less-than-significant level on project sites by ensuring that mitigation measures identified in biotic reports are incorporated as conditions of approval for development projects. Compliance with the City Tree Ordinance is the mechanism that will be used to address impacts of tree removals. As mitigation for significant impacts, avoidance, replacement, restoration of habitats on- or off-site or other measures may be required.
    - **Policy d.6.** Within identified habitat areas with high biological value, the City will provide for a focused evaluation of areas identified as appropriate habitat for special-status species during the project review and approval process.

6.5.1 Proposed Project

6.5.1.1 TREES WITHIN CITY OF MONTEREY JURISDICTION

The Proposed Project includes the Highway 68 Frontage Road Loop and Parking and Circulation components that would occur within City jurisdiction. These Proposed Project components would result in the removal of 306 trees of the following species:

- coast live oak: 117 trees
- Monterey pine: 179 trees
- Monterey cypress: six trees
- golden wattle (*Acacia pycnantha*): four trees

None of the trees that would be removed have been designated as a "Local Landmark Tree" by the City. Measure BIO-25 is recommended to offset the Proposed Project's potential impact to trees within City jurisdiction.

6.5.1.2 CITY OF MONTEREY CONSERVATION ELEMENT GOALS AND POLICIES REGARDING BIOLOGICAL RESOURCES

The Frontage Road Loop and Parking and Circulation components of the Proposed Project would result in the removal of native habitats that are provided special considerations under the City of Monterey Conservation Element goals and policies. The following list identifies the Proposed Project's potential inconsistencies with the City of Monterey Conservation Element. Measures BIO-23 and BIO-24 are recommended to address these inconsistencies.

- **Policy d.1:** The Highway 68 Frontage Road Loop and the Parking and Circulation components of the Proposed Project would result in the removal of native plants that comprise native plant communities.
- **Policy d.3:** The Highway 68 Frontage Road Loop and the Parking and Circulation components of the Proposed Project would result in the removal of 2.76 acres of Monterey pine forest and 0.53 acres of sandmat manzanita chaparral plant communities. These plant communities are considered Sensitive Natural Communities by the CDFW. The portions of these communities that occur in the Proposed Project study areas are partially disturbed but largely intact, therefore have moderate to high biological values.
- **Policy d.4:** The Highway 68 Frontage Road Loop and the Parking and Circulation components of the Proposed Project would result in the removal of plant communities that contain Yadon's piperia, Monterey spineflower, Seaside bird's beak, sandmat manzanita, and Eastwood's goldenbush. Yadon's piperia and Monterey spineflower are listed under the FESA; seaside bird's beak is listed under the CESA. All the plant species are ranked as rare species by the CNPS and are protected under the NPPA. These plant species and their associated plant communities are regionally restricted to the Monterey area and of high biological diversity.

6.5.2 Alternative 1

6.5.2.1 TREES WITHIN CITY OF MONTEREY JURISDICTION

Alternative 1 includes the Highway 68 Frontage Road Cul-de-Sac and Parking and Circulation components that would occur within City jurisdiction. These Alternative 1 components would result in the removal of 252 trees of the following species:

- coast live oak: 67 trees
- Monterey pine: 164 trees
- Monterey cypress: 17 trees
- golden wattle: four trees

None of the trees that would be removed have been designated as a "Local Landmark Tree" by the City. Measure BIO-26 is recommended to offset Alternative 1's potential impact to trees within City jurisdiction.

6.5.2.2 CITY OF MONTEREY CONSERVATION ELEMENT GOALS AND POLICIES REGARDING BIOLOGICAL RESOURCES

The Frontage Road Cul-de-Sac and Parking and Circulation components of Alternative 1 would result in the removal of native habitats that are provided special considerations under the City of Monterey Conservation Element goals and policies. The following list identifies Alternative 1's potential inconsistencies with the City of Monterey Conservation Element. Measures BIO-23 and BIO-24 are recommended to address these inconsistencies.

- **Policy d.1:** The Highway 68 Frontage Road Cul-de-Sac and the Parking and Circulation components of Alternative 1 would result in the removal of native plants that comprise native plant communities.
- **Policy d.3:** The Highway 68 Frontage Road Cul-de-Sac and the Parking and Circulation components of Alternative 1 would result in the removal of 2.24 acres of Monterey pine forest and 0.48 acres of sandmat manzanita chaparral plant communities. These plant communities are considered Sensitive Natural Communities by the CDFW. The portions of these communities that occur in the Alternative 1 study areas are partially disturbed but largely intact, therefore have moderate to high biological values.
- **Policy d.4:** The Highway 68 Frontage Road Cul-de-Sac and the Parking and Circulation components of Alternative 1 would result in the removal of plant communities that contain Yadon's piperia, Monterey spineflower, Seaside bird's beak, sandmat manzanita, and Eastwood's goldenbush. Yadon's piperia and Monterey spineflower are listed under the FESA; seaside bird's beak is listed under the CESA. All the plant species are ranked as rare species by the CNPS and are protected under the NPPA. These plant species and their associated plant communities are regionally restricted to the Monterey area and of high biological diversity.

6.6 Threshold #6: Conflict with a Habitat Conservation Plan, Natural Community Conservation Plan, or other Conservation Plan

In 2015, the Airport completed the construction of the RSA Project. The EIR for the RSA Project identified impacts to sandmat manzanita chaparral, coast live oak woodland, and rare plants that occurred in the affected communities. As part of the mitigation for these impacts, the Airport developed and adopted a Habitat Conservation and Enhancement Plan (HCEP) that established three conservation areas on the eastern part of the airport property. Conservation Area 1 includes 1.2 acres of central maritime chaparral that is dominated by sandmat manzanita, Conservation Area 2 includes 3.0 acres of coast live oak woodland, and Conservation Area 3 includes 1.2 acres of maritime chaparral restoration plantings within the vegetated Engineered Material Arresting System retaining walls and adjacent areas. The Airport designated these areas as open space on the Airport Layout Plan and have been conducting habitat management activities in these areas. The Proposed Project and Alternative 1 include the North Access Road component that would remove 0.79 acre of Conservation Area 1 (sandmat manzanita chaparral) and 0.46 acre of Conservation Area 2 (coast live oak woodland). The removal of these established conservation areas conflicts with the approved mitigation for the RSA Project. As such, the Airport should replace the affected conservation areas to maintain compliance with the RSA Project's established mitigation. Measures BIO-27 and BIO-28 are recommended to replace the affected portions of the RSA Project mitigation areas.

7 SHORT-TERM PROJECTS MITIGATION

7.1 Threshold #1: Candidate, Sensitive, or Special-status Species

7.1.1 Sandmat Manzanita Proposed Project

BIO-1 The Project Sponsor shall propagate, plant, and maintain at least 3,036 sandmat manzanita container plants. The sandmat manzanita container plants may be installed in the temporary disturbance areas and/or landscaping of the Proposed Project North Access Road, the onsite Conservation Area 4 (Figure 6), or the offsite conservation lands (see BIO-20 through BIO-22; Figure 6) as appropriate. The sandmat manzanita container plants shall be monitored and maintained for 7 years following installation. In order for the sandmat manzanita replacement mitigation to be considered successful, at least 3,036 replacement sandmat manzanita plants must be self-sustaining by the end of the 7-year monitoring program.

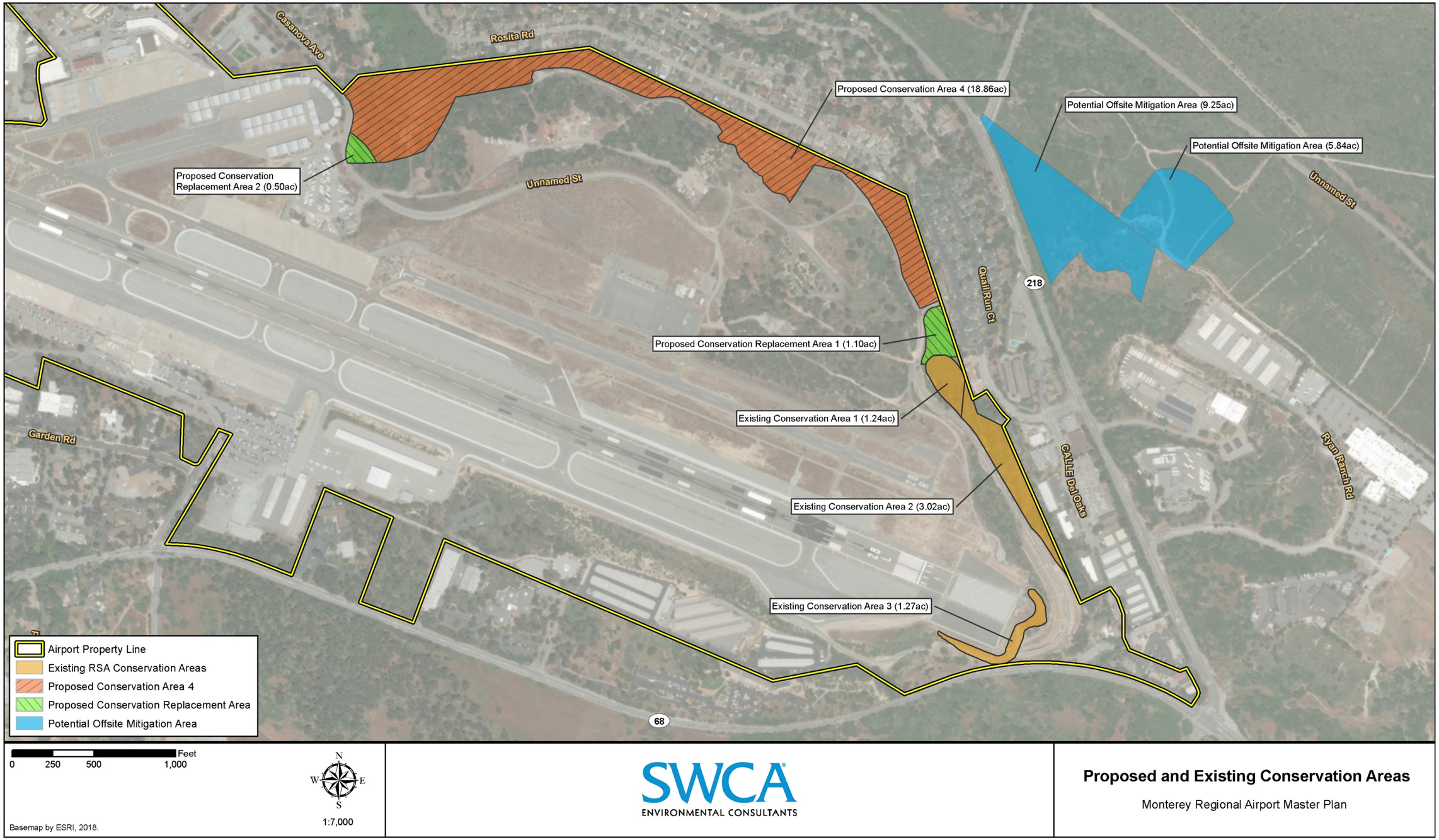

Figure 6. Proposed and existing conservation areas.

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7.1.2 Sandmat Manzanita Alternative 1

BIO-2 The Project Sponsor shall propagate, plant, and maintain at least 2,900 sandmat manzanita container plants. The sandmat manzanita container plants may be installed in the temporary disturbance areas and/or landscaping of the Alternative 1 North Access Road, the onsite Conservation Area 4 (see Figure 6), or the offsite conservation lands (see BIO-20 through BIO-22; Figure 6) as appropriate. The sandmat manzanita container plants shall be monitored and maintained for 7 years following installation. To consider the sandmat manzanita replacement mitigation successful, at least 2,900 replacement sandmat manzanita plants must be self-sustaining by the end of the 7-year monitoring program.

7.1.3 Monterey Pine Proposed Project and Alternative 1

Monterey pine and other tall tree species are problematic to safe aircraft operations at airports. Tall trees in the approach/departure flight path or adjacent to the runways often impede pilot's sight barriers. The FAA has established sight line restrictions on public use airports to reduce sight impediments (FAR Part 77, Obstructions to Navigation). These restrictions require the Airport and other airport operators to remove trees and other objects that impede pilot's view of the airfield. Because of these restrictions, the Airport's ability to mitigate impacts to Monterey pine trees by planting more trees onsite is greatly limited. For past projects, the Airport has mitigated Monterey pine tree removals by replacing the removed trees at a 1.1:1 mitigation ratio. Applying this ratio to the Proposed Project would require the Airport to plant 356 Monterey pines (336 Monterey pines for Alternative 1) on the airport property. The FAA sight restrictions make this mitigation strategy infeasible for the Proposed Project and Alternative 1. As such, the following mitigation is recommended to offset the Monterey pine tree removals to the maximum extent feasible.

BIO-3 Prior to construction of any Proposed Project or Alternative 1 component that would remove Monterey pine trees, the Project Sponsor will establish 1.0 acre of Monterey pine forest conservation space on the north side of the airport property. The Airport will plant up to 25 Monterey pine trees in the conservation space. The 1.0 acre of Monterey pine forest conservation space will be managed under an HCEP as described in BIO-17 below.

7.1.4 Eastwood's Goldenbush Proposed Project and Alternative 1

BIO-4 Prior to any site disturbances, the Project Sponsor will retain a qualified biologist and/or horticulturalist to collect a sufficient amount of Eastwood's goldenbush seed from individuals on the airport property to propagate a minimum of 16 Eastwood's goldenbush container plants. The propagated materials will be planted and maintained in Conservation Area 4 (see Figure 6).

7.1.5 Monterey Ceanothus Proposed Project and Alternative 1

BIO-5 Prior to any site disturbances, the Project Sponsor will retain a qualified biologist and/or horticulturalist to collect a sufficient amount of Monterey ceanothus seed from individuals on the airport property to propagate a minimum of 36 Monterey ceanothus container plants. The propagated materials will be planted and maintained in Conservation Area 4 (see Figure 6).

7.1.6 Small-Leaved Lomatium Proposed Project and Alternative 1

BIO-6 To minimize impacts to small-leaved lomatium and promote the continued existence of the species on the airport property, the Project Sponsor will implement a soil and seed bank conservation program that will include small-leaved lomatium seed and top soil collection and distribution.

Small-leaved lomatium will be conserved in Conservation Area 4 by broadcast seeding and relocating the soil seed bank. Seed to be broadcast will be collected from the project areas prior to start of construction. This species flowers from January through June; therefore, seed collection would begin in May and continue through September, or when seed production ceases. To the extent feasible, all available seed would be collected from plants located in the project disturbance areas.

Soil from the project disturbance areas containing small-leaved lomatium seed would be collected and reapplied. To accomplish this, the upper 6 inches of soil located within the vicinity of existing small-leaved lomatium individuals will be collected and redistributed prior to grading activities. Soil collection would occur immediately following completion of seed collection and prior to the first rainfall. The collected soil should be immediately distributed in the disturbance areas. The collected seed would be broadcast over the relocated soil, and then the receptor site will be lightly raked to cover the seed.

7.1.7 Monterey Spineflower Proposed Project and Alternative 1

BIO-7 To minimize Monterey spineflower impacts and promote the continued existence of the species on the airport property, the Project Sponsor will implement a soil and seed bank conservation program that will include Monterey spineflower seed and top soil collection and distribution.

Monterey spineflower will be conserved in the temporarily impacted portions of the Proposed Project and/or Alternative 1 disturbance areas by broadcast seeding and relocating the soil seed bank. Seed to be broadcast will be collected from the project areas prior to start of construction. All seed collection activities will be conducted by a USFWS-approved biologist. This species flowers from April through June; therefore, seed collection would begin in August and continue through September, or when seed production ceases. To the extent feasible, all available seed would be collected from plants located in the project disturbance areas.

Soil from the project disturbance areas containing Monterey spineflower seed would be collected and reapplied. To accomplish this, the upper 6 inches of soil located within the vicinity of existing Monterey spineflower individuals will be collected and redistributed prior to grading activities. Soil collection would occur immediately following completion of seed collection and prior to the first rainfall. The collected soil should be immediately distributed in the disturbance areas that do not have existing Monterey spineflower occurrences. The collected seed would be broadcast over the relocated soil, and then the receptor site will be lightly raked to cover the seed.

7.1.8 Yadon's Piperia Proposed Project and Alternative 1

As stated in Sections 6.1.1.7 and 6.1.2.7, the Proposed Project and Alternative 1 have the potential to remove Yadon's piperia occurrences and convert occupied Yadon's piperia habitat to developed lands. The Airport should include the following minimization measures to reduce the anticipated impacts to Yadon's piperia. These measures are intended to address the Airport's responsibilities as a lead agency under CEQA. The measures may be subject to change during a FESA Section 7 consultation between the FAA and USFWS for any project component(s) that require FAA funding, approval, oversight, or other federal nexus.

BIO-8 If Alternative 1 and/or the Highway 68 Frontage Road Cul-de-Sac are implemented, the associated Surface Parking and Surface Parking Circulation Road(s) will be designed to be constructed on the existing asphalt to avoid impacts to the Yadon's piperia that are located on the Airport/Fenton Keller property boundary. If the Proposed Project and/or Highway 68 Frontage Road loop are implemented, the Yadon's piperia located on the Airport/Fenton Keller Property boundary would be removed and implementation of a 5-year Yadon's piperia seed and bulb collection and translocation program (Measure BIO-9) would be necessary in this location.

Prior to construction of the Surface Parking and associated Surface Parking Circulation Road(s), the construction plans shall clearly show the placement of construction exclusion fence along the toe of slope at the Airport/Fenton Keller property boundary. The intent of the fence is to exclude the Yadon's piperia occurrences from accidental disturbance during construction. The fence should be maintained in place throughout the construction period.

BIO-9 To minimize the impacts to Yadon's piperia, the Project Sponsor will retain a qualified biologist to design and implement a 5-year Yadon's piperia seed and bulb collection and translocation program. The seed and bulb translocation program will be prepared and approved for implementation by the Project Sponsor in the 2 years prior to construction of any Proposed Project or Alternative 1 component that would impact Yadon's piperia, including but not limited to construction of the new Terminal and associated aircraft ramp and the Highway 68 Frontage Road. The Yadon's piperia seed and bulb collection and translocation program should include the following:

- Detailed methods and a schedule for the collection and distribution of Yadon's piperia seed and the translocation of Yadon's piperia bulbs of individuals that are in the construction area(s).
- During the flowering/blooming period for Yadon's piperia (anticipated to be May–July) and in the year prior to project construction, a qualified biologist will mark with pin flags, individual Yadon's piperia plants that will be impacted by the project construction.
    - During the time that the marked Yadon's piperia are setting seed (anticipated to be between August and September), the biologist will collect seed from the marked individuals. The collected seed will be redistributed in a predetermined seed and bulb receiver site that is located adjacent to but outside of the disturbance area. Due to mycorrhizal associations, the seed and bulb receiver site must be near existing Yadon's piperia individuals.
        - Prior to distributing the collected seed in the receiver site, the receiver site will be cleared of nonnative vegetation.

  - Once the seed receiver site is prepared, the biologist will hand broadcast the seed in the receiver site, gently rake the seed into the duff/soil surface, and cover the seed with pine needle duff.
  - The seed and bulb receiver site and nearby Yadon's piperia occurrences will be fenced during construction to exclude the area from accidental damages during construction activities.

- Prior to construction and when plants are dormant (anticipated to be October–December), the biologist will excavate and relocate bulbs of the marked plants to the seed and bulb receiver site. The bulbs should be planted approximately 6 inches below the soil surface.
- Following completion of the seed and bulb relocation efforts, the biologist will monitor the receiver site for 4 consecutive years. The goal of the monitoring will be to quantify and document the number of individuals that emerged in the receiver site, the presence of non-native vegetation, and overall success of the translocation efforts.
- Nonnative vegetation removal must be conducted during the monitoring program. Nonnative vegetation removal may not utilize translocated herbicides due to root to tuber/bulb transfer.

7.1.9 Seaside Bird's Beak Proposed Project and Alternative 1

As stated in Sections 6.1.1.8 and 6.1.2.8 the Proposed Project Highway 68 Frontage Road Cul-de-Sac and Alternative 1 Highway 68 Frontage Road Cul-de-Sac would be constructed adjacent to seaside bird's beak occurrences. The following avoidance measures are proposed to facilitate avoidance of the occurrences.

BIO-10 To account for Seaside bird's beak seasonal population fluctuations and facilitate species avoidance, the Project Sponsor will conduct annual surveys for seaside bird's beak in the Airport-owned parcel located between the Fenton Keller and Robert Talbott properties. The annual seaside bird's beak survey will be conducted in June, July, or August of each year preceding the final design and development of the chosen Highway 68 Frontage Road alternative. The intent of the annual survey effort is to collect GPS data on the species' distribution and develop a multi-season assessment of the quantity and distribution of the seaside bird's beak occurrences near the Highway 68 Frontage Road alignment. The annual survey GPS data will be provided to the Airport so that the Airport's project design team can use the survey data during the development of the final design plans to align the proposed road in such a manner that avoids impacts to the seaside bird's beak.

If full avoidance of the seaside bird's beak is feasible, the project contractors, under the direction of an environmental monitor, will install construction exclusion fencing around the occurrences to exclude construction-related disturbances from the area. If the Airport's design team determines that full avoidance of the species is not feasible, the Project Sponsor will delay construction of the Highway 68 Frontage Road until they have coordinated with the CDFW to obtain a CESA Section 2081 Incidental Take Permit for seaside bird's beak.

7.1.10 Nesting Birds Proposed Project and Alternative 1

BIO-11 To the maximum extent possible, initial vegetation-clearing activities in the project areas should be conducted between October and February, which is outside of the typical bird breeding season. If the project schedule does not provide for late season vegetation removal,

a nesting bird survey will be conducted by a qualified biologist no more than 1 week prior to the land clearing to determine presence/absence of nesting birds within the vegetated area. If active nests are observed, work activities will be avoided within 100 feet of the active nest(s) until young birds have fledged and left the nest. The nests shall be monitored weekly by a biologist having experience with nesting birds to determine when the nest(s) become inactive. The buffer may be reduced but not eliminated during active nesting if deemed appropriate by the biologist. Readily visible exclusion zones will be established in areas where nests must be avoided. The Airport and the appropriate regulatory agency will be contacted if any federally or state-listed bird species are observed during surveys. Nests, eggs, or young of birds covered by the MBTA and CFGC will not be moved or disturbed until the young have fledged.

7.1.11 California Legless Lizard Proposed Project and Alternative 1

BIO-12 Within 30 days prior to site grading, the environmental monitor shall conduct surveys for California legless lizards and other reptiles. The surveyor should utilize hand search or cover board methods in areas of disturbance where legless lizards are expected to be found (e.g., under shrubs, other vegetation, or debris). If cover board methods are used, they should commence at least 30 days prior to the start of construction. If hand search methods are used, the surveys should be completed immediately prior to and during grading activities. The surveyor should capture and relocate any legless lizards or other reptiles observed during the survey effort. The captured individuals should be relocated from the construction area(s) and placed in suitable habitat on the airport property.

7.2 Threshold #2: Riparian Habitat or Sensitive Natural Community

7.2.1 Proposed Project and Alternative 1

BIO-13 Prior to ground disturbance, the Project Sponsor shall retain an environmental monitor for all measures requiring environmental mitigation to ensure compliance with the EIR mitigation measures. The monitor shall be responsible for: (1) ensuring that procedures for verifying compliance with environmental mitigations are implemented; (2) establishing lines of communication and reporting methods; (3) conducting daily and weekly compliance reporting; (4) conducting construction crew training regarding environmentally sensitive areas; (5) maintaining authority to stop work; and (6) outlining actions to be taken in the event of non-compliance. Monitoring shall be at a frequency and duration determined by the Project Sponsor and in consultation with the affected natural resource agencies (e.g., CDFW, USFWS).

BIO-14 All grading plans shall clearly show the location of project delineation fencing that excludes adjacent sensitive communities from disturbance. The fencing shall consist of highly visible construction fence supported by steel T-stakes that are driven into the soil. The monitoring biologist shall field-fit the placement of the project delineation fencing to minimize impacts to adjacent communities and other sensitive resources. The project delineation fencing shall remain in place and functional throughout the duration of the project and no work activities shall occur outside the delineated work area. The grading plans shall clearly show all staging areas, which shall be located within the construction area and outside the adjacent habitat areas.

BIO-15 Prior to the commencement of site grading, the environmental monitor shall conduct an environmental awareness training for all construction personnel. The environmental awareness training shall include discussions of the special communities and special-status species that occur in the project area. Topics of discussion shall include: descriptions of the species' habitats; general provisions and protections afforded by the FESA and CEQA; measures implemented to protect special-status species; review of the project boundaries and special conditions; the monitor's role in project activities; lines of communication; and procedures to be implemented in the event a special-status species is observed in the work area.

BIO-16 The Project Sponsor shall prepare a detailed erosion control plan, which shall address both temporary and permanent measures to control erosion. Erosion and soil protection shall be provided on all cut-and-fill slopes and the soil deposition areas. The erosion control plan shall include revegetation measures including mulching, hydro-seeding, or planting methods as appropriate. All permanent erosion control measures shall be initiated as soon as possible after completion of grading, and prior to the onset of the rainy season (October 15). Permanent revegetation and landscaping shall emphasize native shrubs and trees, to improve the probability of slope and soil stabilization without adverse impacts to slope stability due to irrigation infiltration and long-term root development. Vegetation shall be watered regularly to ensure adequate root establishment.

BIO-17 Prior to implementation of any Proposed Project or Alternative 1 component, the Project Sponsor shall prepare an HCEP that designates an 18.86-acre conservation area (Conservation Area 4) along the airport's northern property boundary as Open Space on the Airport Layout Plan. The HCEP shall provide for the conservation and management of approximately 11.92 acres of coast live oak woodland, 5.92 acres of sandmat manzanita chaparral, and 1.0 acre of Monterey pine forest habitats. Figure 6 shows the location of Conservation Area 4 and its associated habitat types.

Future activities in Conservation Area 4 shall be limited to preserving and rehabilitating the oak woodland, sandmat manzanita, Monterey pine forest, and special-status plant species that occur in the conservation area. Habitat rehabilitation activities shall focus on removing invasive species; planting native coast live oak woodland, sandmat manzanita chaparral, and Monterey pine forest associates; and augmenting the native rare plant species populations.

The HCEP shall be prepared by a qualified biologist and/or botanist and shall detail the methods for managing the conservation area. At a minimum, the HCEP should include the following elements:

- A brief narrative of the project location, description, and purpose;
- Clearly identified parties responsible for the conservation program and their contact information;
- A map showing and quantifying all conservation areas;
- Designation of a Monterey spineflower seed and soil receiver site;
- A detailed discussion of the methods for implementing the HCEP including invasive species removal, sources of plant materials, and supplemental watering regimes;
- Methods for the identification and removal of diseased or dead trees;

- Detailed discussions of a special-status plant species propagation program. Special-status plant propagules shall be collected from the disturbance areas, grown, and reintroduced into the conservation areas;
- Identification of locations, amounts, sizes, and types of plants to be planted, inclusive of at least 100 coast live oak trees, 2,000 sandmat manzanita container plants, and 25 Monterey pine trees.
- Identification of necessary components (e.g., temporary irrigation, amendments, etc.) to ensure successful plant reestablishment;
- A program schedule and established success criteria for a 7-year monitoring and reporting program that is structured to ensure the success of the HCEP; and
- Detailed discussions of the methods to be employed for implementing all additional habitat conservation requirements put forth by the USFWS and CDFW as appropriate.

BIO-18 The Project Sponsor shall retain a qualified biologist/botanist to supervise and monitor the implementation of the HCEP. The biologist/botanist should supervise plant propagation, site preparation, implementation timing, species utilized, planting installation, maintenance, monitoring, and reporting of the habitat rehabilitation efforts. The biologist/botanist shall prepare and submit six annual reports and one final monitoring report to the Airport and other agencies as appropriate. The annual and final monitoring reports should include discussions of the project activities, project photographs, and an assessment of the mitigation efforts' attainment of the success criteria.

BIO-19 The Project Sponsor shall include in the Proposed Project or Alternative 1 design plans the installation of a water supply and irrigation system. The system will supply water to temporary irrigation that will be used to provide supplemental water to Conservation Area 4. The water supply and temporary irrigation system shall be installed as part of the short-term project development and prior to the installation of plantings.

BIO-20 The Project Sponsor shall implement an offsite habitat conservation program that benefits local flora and fauna with emphasis on coast live oak woodland, maritime chaparral, and rare plant conservation. The conservation program shall be implemented on lands in the coastal Monterey area, preferably near the airport. The Project Sponsor is currently pursuing conservation lands located just east of the airport that support approximately 1.04 acres of annual brome grasslands, 2.55 acres of coast live oak woodland, 4.01 acres of arroyo willow thicket, 3.41 acres of chamise chaparral, and 4.08 acres of woollyleaf manzanita chaparral. Figure 6 shows the location of the potential offsite conservation lands. The potential conservation lands are located adjacent to an existing Native Rare Plant Reserve that was established by the USACE Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord. Should the acquisition of the potential conservation lands not be completed, the Project Sponsor shall pursue the acquisition of other lands that support or have the potential to support coast live oak woodland and maritime chaparral communities. Once the offsite conservation lands are secured, the Project Sponsor shall place the lands under a conservation easement in perpetuity.

BIO-21 Upon acquisition of the offsite conservation lands, the Project Sponsor shall conduct a biological inventory of the conservation lands that includes floristic botanical surveys and wildlife surveys as appropriate. The intent of the biological inventory is to identify and

quantify the resources present on the conserved lands and provide a baseline for the implementation of a resource-focused conservation program.

BIO-22 The Project Sponsor shall prepare and implement a conservation program on the conserved lands. The conservation program shall utilize the biological inventory to develop management actions that focus on conserving, rehabilitating, and/or enhancing the biological resources present. At a minimum, the conservation program shall include:

- A brief narrative of the conservation lands location, description, and purpose;
- Clearly identified parties responsible for the conservation program and their contact information;
- Maps showing and quantifying all conservation areas, habitats, invasive species, native rare species, and suitable rehabilitation areas;
- Identification of suitable habitat rehabilitation plant species including rare plants to be installed for mitigation for future projects proposed by the Project Sponsor.
- A detailed discussion of the methods for implementing the conservation program including invasive species removal, installation and maintenance of plant materials, and supplemental watering regimes;
- Methods for the identification and removal of diseased or dead trees, as needed;
- Detailed discussions of a special-status plant species management;
- Identification of necessary components (e.g., temporary irrigation, amendments, etc.) to ensure successful plant reestablishment; and
- A program schedule for a 7-year monitoring and reporting program that is structured to ensure the successful management of the conserved lands.

7.3 Threshold #3: Wetlands

The Proposed Project and Alternative 1 are not expected to have impacts on jurisdictional wetlands or other waters; therefore, mitigation for jurisdictional waters are not recommended.

7.4 Threshold #4: Movement of Resident or Migratory Species

Significant effects on the movement of resident or migratory species are not expected to result from the Proposed Project or Alternative 1; therefore, mitigation for impacts on the movement of wildlife is not recommended.

7.5 Threshold #5: Local Policies or Ordinances Regarding Biological Resources

7.5.1 Proposed Project and Alternative 1

BIO-23 The Project Sponsor shall incorporate California native plant species in the landscape designs of the Proposed Project and Alternative 1 North Access Road, Highway 68 Frontage Road Loop, and Highway 68 Frontage Road Cul-de-Sac designs.

BIO-24 The Project Sponsor shall not utilize any plant species that are listed on the California Exotic Pest Plant Council lists in the landscape designs of any of the Proposed Project or Alternative 1 components.

7.5.2 Proposed Project

BIO-25 During the City of Monterey permitting process for the Highway 68 Frontage Road Loop and associated Parking and Circulation project components, the Project Sponsor shall coordinate with the City Forester to determine an appropriate in-lieu fee for the replacement of the 117 coast live trees, 179 Monterey pine trees, six Monterey cypress trees, and four golden wattle trees that would be removed. Per City Code 37-11(D), the in-lieu fee payment to the City of Monterey shall be equivalent to the value of the removed trees or the cost of the numbers of replacement trees as determined by City Council Resolution. The value of the trees shall be established and conform to standards adopted by City Council Resolution. The payment shall be used to plant additional trees offsite in a location approved by the City Forester.

7.5.3 Alternative 1

BIO-26 During the City of Monterey permitting process for the Highway 68 Frontage Road Cul-de-Sac and associated Parking and Circulation project components, the Project Sponsor shall coordinate with the City Forester to determine an appropriate in-lieu fee for the replacement of the 67 coast live trees, 164 Monterey pine trees, 17 Monterey cypress trees, and four golden wattle trees that would be removed. Per City Code 37-11(D), the in-lieu fee payment to the City of Monterey shall be equivalent to the value of the removed trees or the cost of the numbers of replacement trees as determined by City Council Resolution. The value of the trees shall be established and conform to standards adopted by City Council Resolution. The payment shall be used to plant additional trees off-site in a location approved by the City Forester.

7.6 Threshold #6: Conflict with a Habitat Conservation Plan, Natural Community Conservation Plan, or other Conservation Plan

7.6.1 Proposed Project and Alternative 1

BIO-27 To replace the 0.79 acre of Conservation Area 1 (sandmat manzanita chaparral) that would be removed by the construction of the Proposed Project and Alternative 1 North Access Road, the Airport shall designate 1.1 acres of existing sandmat manzanita chaparral as open space on the Airport Layout Plan and manage the resource per the guidelines of the RSA Project

HCEP. The Airport shall revise the RSA Project HCEP to incorporate the new Conservation Area 1 boundaries and extend the conservation area invasive species management for an additional 2 years. The 1.1 acres to be designated as open space is located immediately north of the Conservation Area 1 boundary and within the existing airport perimeter fence (refer to Proposed Conservation Replacement Area 1 in Figure 6).

BIO-28 To replace the 0.46 acre of Conservation Area 2 (coast live oak woodland) that would be removed by the construction of the Proposed Project and Alternative 1 North Access Road, the Airport shall designate 0.46 acre of existing coast live oak woodland as open space on the Airport Layout Plan and manage the resource per the guidelines of the HCEP. The Airport shall revise the RSA Project HCEP to incorporate the new Conservation Area 2 boundaries and extend the conservation area invasive species management for an additional 2 years. The 0.46 acre to be designated as open space is located at the northwest corner of the airport property near the existing detention basin (refer to Proposed Conservation Replacement Area 2 in Figure 6).

8 MASTER PLAN PROGRAMMATIC IMPACT ANALYSIS

The programmatic impact assessment focuses on identifying potential impacts associated with implementation of the proposed AMP developments and is based on the site's existing conditions, the regulatory setting, and the project description provided by the Airport. The emphasis is on determining the potential effects of the master plan on federally, state, and locally regulated species and habitats in the AMP development areas. Adverse impacts could occur if the proposed AMP projects would result in temporary or permanent modification to jurisdictional habitats or to habitats occupied by special-status species. Where potential impacts to sensitive resources may occur, measures for avoiding, minimizing, or mitigating adverse effects to the resources are recommended. It is assumed that the provided measures would be incorporated in to future CEQA documents prepared for the specific projects.

8.1 Threshold #1: Candidate, Sensitive, or Special-status Species

Development of the following proposed long-term AMP components have the potential to directly or indirectly impact candidate, sensitive, or special-status species:

- Construction of non-aviation uses on the north and south sides of the airport.
- Upgrade the perimeter fence
- Construct a consolidated maintenance building
- Extend Taxiway B to the Runway 28L threshold and construct geometry improvements for Taxiways K and L.

Table 10 lists the special-status species that are known to occupy these AMP development areas, as shown in Appendix A. Refer to Section 9, Master Plan Programmatic Mitigation for the measures listed in each discussion below.

Table 10. Summary of Special-Status Species Observed in the AMP Areas

Species Name	Legal Status Federal/State/CNPS	Occupied Study Areas
sandmat manzanita *Arctostaphylos pumila*	--/--/1B.2	Sandmat manzanita occurs in all non-aviation development areas, extended Taxiway B development area, perimeter fence upgrade area, and the consolidated maintenance building area.
Monterey spineflower *Chorizanthe pungens*	FT/--/1B.2	Monterey spineflower occurs in all non-aviation development areas, extended Taxiway B development area, perimeter fence upgrade area, and the consolidated maintenance building area.
Eastwood's goldenbush *Ericameria fasciculata*	--/--/1B.1	Eastwood's goldenbush occurs in the northern non-aviation development areas and the perimeter fence upgrade area.
Monterey ceanothus *Ceanothus cuneatus* var. *rigidus*	--/--/4.2	Monterey ceanothus occurs in the northern non-aviation development areas and the perimeter fence upgrade area.
Yadon's piperia *Piperia yadonii*	FE/--/1B.1	Yadon's piperia occurs in all non-aviation development areas and the perimeter fence upgrade area.
Small-leaved lomatium *Lomatium parvifolium*	--/--/4.2	Small-leaved lomatium occurs in all non-aviation development areas and the perimeter fence upgrade area.
seaside bird's beak *Cordylanthus rigidus* ssp. *littoralis*	--/SE/1B.1	Seaside bird's beak occurs in southeastern non-aviation development area.
Monterey pine *Pinus radiata*	--/--/1B.1	Monterey pine trees occur in all non-aviation development areas, extended Taxiway B development area, perimeter fence upgrade area, and the consolidated maintenance building area.

Status Codes

-- = No status

Federal: FE = Federal Endangered; FT=Federal Threatened

State: SE=State Endangered; ST= State Threatened; SR= State Rare

CNPS: Rank 1B = rare, threatened, or endangered in California and elsewhere. Rank 2 = rare, threatened, or endangered in California, but more common elsewhere. Rank 3 = plants about which more information is needed. Rank 4 = a watch list plants of limited distribution.
Threat Code: _.1 = Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat); _.2 = Fairly endangered in California (20-80% occurrences threatened); _.3 = Not very endangered in California (<20% of occurrences threatened or no current threats known)

In addition to the species listed in Table 10, other special-status species including but not limited to California legless lizards, California horned lark (*Eremophila alpestris actia*), loggerhead shrike (*Lanius ludovicianus*), sharp-shinned hawk (*Accipiter striatus*), and Monterey manzanita (*Arctostaphylos montereyensis*) may occur in the AMP development areas. Potential direct impacts to these species could include physically removing, trampling, or destroying individuals that occupy the development areas. Indirect impacts could include altering the existing conditions in the development areas in such a way that the nearby areas could no longer support the special-status species.

8.1.1 California Red-Legged Frog and California Tiger Salamander

The only potential habitat for amphibious species on the airport property is the stormwater detention basin on the northern portion of the airport property. The detention basin is routinely managed for stormwater collection and is surrounded by urban development. The ongoing management and urban development in the area likely precludes the presence of CRF and CTS. As proposed, the AMP would designate the detention basin and adjacent oak woodland as Conservation Area 4 and include the area as open space on the Airport Layout Plan; therefore, adverse impacts to the basin and adjacent oak woodland are not expected.

8.2 Threshold #2: Riparian Habitat or Sensitive Natural Community

The non-aviation development and perimeter fence upgrade components of the AMP could result in direct and indirect effects on sandmat manzanita chaparral, Monterey pine forest, and coast live oak woodland. Direct impacts could include the physical removal of the communities and conversion of the lands to developed areas. Indirect effects include erosion, accidental grading or equipment maneuvering in the communities, and spread of nonnative species that may negatively affect the natural processes that support the communities. Measures BIO-AMP4 through BIO-AMP7 are recommended to address impacts to sensitive natural communities and the flora and fauna that occupy the communities.

8.3 Threshold #3: Wetlands

The AMP development areas do not contain jurisdictional wetlands or other waters; Therefore, impacts to jurisdictional wetlands or other waters are not expected to result from the AMP projects.

8.4 Threshold #4: Movement of Resident or Migratory Species

The AOA on the airport property is fenced per FAA safety requirements. Portions of the airport property that are not included in the AOA are surrounded by existing development. The existing perimeter fence and development in the area limits the use of the airport property as a migratory route for resident wildlife species. However, common wildlife species such as California mule deer and coyote use the undeveloped portions of the airport property for foraging and shelter. Although the AMP projects may reduce the available foraging and shelter area for resident deer and coyote in the area, implementation of the AMP project is not expected to significantly disrupt a migratory corridor.

8.5 Threshold #5: Local Policies or Ordinances Regarding Biological Resources

The non-aviation development located on the south side of the airport would be conducted on lands that are within City jurisdiction and are subject to City Code Chapter 37, Preservation of Trees and Shrubs. Specifically, Section 37-2.5 Protection of Trees During Construction, Section 37-8 Removal or Damaging Trees on Private Property; Permit Required, and Section 37-11 Conditions of Removal/Mitigation Measures of the City Code are applicable.

In addition to impacts to trees, the non-aviation development components of the AMP that are within City jurisdiction have the potential to impact vegetation types identified for protection in the City of Monterey Conservation Element goals and policies. The goals and policies listed below are pertinent to the AMP components that would occur within City jurisdiction.

- **Goal d.** Protect the character and composition of existing native vegetative communities. Conserve, manage, and restore habitats for endangered species, and protect biological diversity represented by special-status plant and wildlife species.
    - **Policy d.1.** Protect existing native plants and promote the use of locally occurring, native vegetation for public and private landscaping and revegetation efforts.
    - **Policy d.2.** Discourage the use of plant species on the California Exotic Pest Plant Council lists.

- **Policy d.3.** Protect existing sensitive habitats by careful planning to avoid and/or mitigate significant impacts to habitat areas identified as having high and moderate biological values.
- **Policy d.4.** Protect and manage habitats that support special-status species, are of high biological diversity, or are unusual or regionally restricted. Prepare biotic reports or habitat management plans as needed to ensure protection of habitat values.
- **Policy d.5.** Reduce biotic impacts to a less-than-significant level on project sites by ensuring that mitigation measures identified in biotic reports are incorporated as conditions of approval for development projects. Compliance with the City Tree Ordinance is the mechanism that will be used to address impacts of tree removals. As mitigation for significant impacts, avoidance, replacement, restoration of habitats on- or off-site or other measures may be required.
- **Policy d.6.** Within identified habitat areas with high biological value, the City will provide for a focused evaluation of areas identified as appropriate habitat for special-status species during the project review and approval process.

8.6 Threshold #6: Conflict with a Habitat Conservation Plan, Natural Community Conservation Plan, or other Conservation Plan

The AMP perimeter fence upgrade has the potential to directly impact the existing RSA Project Conservation Area 1, Conservation Area 2, and/or Proposed Conservation Replacement Area 1. Direct impacts to these conservation areas could include constructing the fence in an alignment that traverses one or more of the conservation areas, which would require vegetation removal and/or erosion in the affected conservation areas. These conservation areas were established to mitigate the impacts to sensitive natural communities and the special-status species that occupy the communities that resulted from the RSA Project. As such, any future project that results in the removal of all or a portion of the conservation areas must replace the impacted area to maintain compliance with past CEQA documentation.

9 MASTER PLAN PROGRAMMATIC MITIGATION

9.1 Threshold #1: Candidate, Sensitive, or Special-status Species

BIO-AMP1 Prior to approving any AMP development projects on undeveloped lands at the airport, the Project Sponsor shall retain a qualified biologist to conduct floristic botanical surveys and wildlife surveys in the proposed project area(s) and prepare a BRSR. The surveys and subsequent BRSR shall determine if special-status species occur in the development area(s) and if special-status species would be impacted by the proposed project(s). If impacts to special-status species would occur, the biologist and the Project Sponsor shall develop mitigation strategies to address the impacts. The following recommendations for mitigation ratios/strategies for some plants known to occur in the development areas may be applied to the proposed project(s):

- **Seaside bird's beak:** The Project Sponsor shall coordinate with the CDFW to obtain a Section 2081 Incidental Take Permit under the CESA. Under the Section 2081 Incidental Take Permit, mitigation ratios for seaside bird's beak may require

purchasing replacement habitat that is occupied by the species and conducting rehabilitation efforts on the replacement land.

- **Yadon's piperia:** For AMP projects with a federal nexus, the Project Sponsor shall coordinate with the FAA and USFWS during the ESA Section 7 process. Mitigation may require the Project Sponsor to implement minimization and conservation measures that relocate the individuals to be impacted. If these efforts fail or are deemed insufficient by USFWS, purchasing replacement habitat that is occupied by the species and conducting rehabilitation efforts on the replacement land may be required.
    - For projects that do not have a federal nexus, the Project Sponsor shall implement BIO-9.
- **Monterey spineflower:** For AMP projects with a federal nexus, the Project Sponsor shall coordinate with the FAA and USFWS during the ESA Section 7 process. Mitigation may require the Project Sponsor to implement minimization and conservation measures that involve seed and seed bank collection and redistribution on the airport property.
    - For projects that do not have a federal nexus, the Project Sponsor shall implement BIO-7.
- **CNPS Rare Plant Ranked 1, 2, and 3 species:** For each CNPS Rare Plant Ranked 1, 2, and 3 species (excluding Monterey pine) impacted by a proposed project(s), the Project Sponsor shall plant two container plants of the same species for each one plant impacted (2:1). The replacement plantings shall be planted in any of the four onsite conservation areas or an established offsite conservation area. The replacement plantings shall be monitored and maintained for no less than 5 years.
- **CNPS Rare Plant Ranked 4 species:** For each CNPS Rare Plant Rank 4 species impacted by a proposed project(s), the Project Sponsor shall:
    - For annual species, collect seed prior to project disturbance and redistribute the collected seed in suitable habitat in the project area following completion of disturbance
    - For perennial species, propagate and plant one container plant of the same species for each one plant impacted (1:1). The container plants shall be planted in any of the four onsite conservation areas or an established off-site conservation area. The replacement plantings shall be maintained and monitored for no less than 3 years.

BIO-AMP2 To the maximum extent possible, initial vegetation-clearing activities in the project areas should be conducted between October and February, which is outside of the typical bird breeding season. If the project schedule does not provide for late season vegetation removal, a nesting bird survey will be conducted by a qualified biologist no more than 1 week prior to the land clearing to determine presence/absence of nesting birds within the vegetated area. If active nests are observed, work activities will be avoided within 100 feet of the active nest(s) until young birds have fledged and left the nest. The nests shall be monitored weekly by a biologist having experience with nesting birds to determine when the nest(s) become inactive. The buffer may be reduced but not eliminated during active nesting if deemed appropriate by the biologist. Readily visible exclusion zones will be established in areas where nests must be avoided. The Airport and the appropriate regulatory agency will be contacted if any federally or state-listed bird species are

observed during surveys. Nests, eggs, or young of birds covered by the MBTA and CFGC will not be moved or disturbed until the young have fledged. The biologists shall submit a letter report to the Project Sponsor, documenting project compliance with the MBTA and CFGC Section 3503.

BIO-AMP3 Within 30 days prior to site grading, the environmental monitor shall conduct surveys for California legless lizards and other reptiles. The surveyor should utilize hand search or cover board methods in areas of disturbance where legless lizards are expected to be found (e.g., under shrubs, other vegetation, or debris). If cover board methods are used, they should commence at least 30 days prior to the start of construction. If hand search methods are used, the surveys should be completed immediately prior to and during grading activities. The surveyor should capture and relocate any legless lizards or other reptiles observed during the survey effort. The captured individuals should be relocated from the construction area(s) and placed in suitable habitat on the airport property.

9.2 Threshold #2: Riparian Habitat or Sensitive Natural Community

BIO-AMP4 Prior to approving any project in the proposed non-aviation development areas or the upgraded perimeter fence alignment that would convert undeveloped lands to developed areas or otherwise remove vegetation, the Project Sponsor shall retain a qualified biologist to map and quantify the vegetative communities that are present in the project area and determine if the project would result in a net loss of sandmat manzanita chaparral, Monterey pine forest, and/or coast live oak woodland.

- If a net loss of sandmat manzanita chaparral would occur, the Project Sponsor shall preserve and rehabilitate, re-establish, or create additional sandmat manzanita chaparral at a 2:1 ratio. The preserved sandmat manzanita chaparral may be located on the existing airport property or offsite, as appropriate.
- If a net loss of coast live oak woodlands would occur, the Project Sponsor shall conduct one or a combination of the following:
    - preserve and rehabilitate, re-establish, or create additional coast live oak woodland at a 2:1 ratio. The preserved coast live oak woodland may be located on the existing airport property or off-site, as appropriate.
    - Plant two coast live oak trees for each one coast live oak tree removed. Replacement trees may be planted on the existing airport property or offsite, as appropriate. Replacement trees should be grown from local (Monterey Peninsula) stock.
    - contribute $1,000 to the Oak Woodlands Conservation Fund, as established under subdivision (a) of Section 1363 of the CFGC per each coast live oak tree removed for the project. The Project Sponsor shall coordinate with the CDFW and the State Wildlife Conservation Board to ensure that the contributed funds will be granted to the State Wildlife Conservation Board for the purpose of purchasing oak woodland conservation easements.
- If the proposed project(s) would impact Monterey pine forest, the Project Sponsor shall design the proposed project(s) to minimize the impact to the greatest extent possible. If Monterey pine trees will be removed for the proposed project(s), the Project Sponsor shall incorporate Monterey Pine trees into the

project designs, in such a manner that does not conflict with safe flight operations at the airport.

- For any AMP project that results in a net loss of sandmat manzanita chaparral or coast live oak woodland that will be mitigated through the preservation and rehabilitation, re-establishment, or creation of habitat, the Project Sponsor shall develop a project-specific Habitat Mitigation and Monitoring Plan (HMMP). The HMMP shall: (1) identify the project description and mitigation requirements; (2) identify the responsible parties; (3) map and quantify all preservation/mitigation areas; (4) provide detailed discussions of the methods for implementing the mitigation program including invasive species removal, sources of plant materials, and supplemental watering regimes; (5) identify the locations, amounts, sizes, and types of plants to be planted; (6) Identify necessary components (e.g., temporary irrigation, amendments, etc.) to ensure successful plant re-establishment; and (7) provide a program schedule and established success criteria for a monitoring and reporting program that is structured to ensure the success of the mitigation.

BIO-AMP5 For any AMP project that has potential to impact a sensitive natural community or a special-status species, the Project Sponsor shall retain an environmental monitor for all measures requiring environmental mitigation to ensure compliance with the CEQA measures. The monitor shall be responsible for: (1) ensuring that procedures for verifying compliance with environmental mitigations are implemented; (2) establishing lines of communication and reporting methods; (3) conducting compliance reporting; (4) conducting construction crew training regarding environmentally sensitive areas; (5) maintaining authority to stop work; and (6) outlining actions to be taken in the event of non-compliance.

BIO-AMP6 For any AMP project that has potential to impact a sensitive natural community or will be conducted adjacent to a sensitive natural community, the Project Sponsor shall incorporate the use of construction delineation fencing to exclude construction-related impacts to the adjacent resources. The monitoring biologist shall field-fit the placement of the project delineation fencing to minimize impacts to adjacent communities and other sensitive resources. The project delineation fencing shall remain in place and functional throughout the duration of the project and no work activities shall occur outside the delineated work area.

BIO-AMP7 For any AMP project that has potential to impact a sensitive natural community or a special-status species, the environmental monitor shall conduct an environmental awareness training for all construction personnel prior to the commencement of ground disturbing activities. The environmental awareness training shall include discussions of the special communities and special-status species that occur in the project area. Topics of discussion shall include: description of the species' habitats; general provisions and protections afforded by the FESA and CEQA; measures implemented to protect special-status species; review of the project boundaries and special conditions; the monitor's role in project activities; lines of communication; and procedures to be implemented in the event a special-status species is observed in the work area.

9.3 Threshold #3: Wetlands

The AMP projects are not expected to have impacts on jurisdictional wetlands or other waters; therefore, mitigation for jurisdictional waters are not recommended.

9.4 Threshold #4: Movement of Resident or Migratory Species

Significant effects on the movement of resident or migratory species are not expected to result from the AMP projects; therefore, mitigation for impacts on the movement of wildlife is not recommended.

9.5 Threshold #5: Local Policies or Ordinances Regarding Biological Resources

BIO-AMP8 The Project Sponsor shall incorporate California native plant species in the landscape designs of any AMP development project that is conducted within City jurisdiction.

BIO-AMP9 The Project Sponsor shall not utilize any plant species that are listed on the California Exotic Pest Plant Council lists in the landscape designs of any AMP development project that is conducted within City jurisdiction.

BIO-AMP10 For any AMP project conducted within City jurisdiction that will result in the removal of coast live oak, Monterey pine, or Monterey cypress trees, the Project Sponsor shall conduct one of the following tree mitigation efforts:

- Per City Code 37-11(C), the Project Sponsor shall replace any coast live oak, Monterey Pine, or Monterey cypress tree(s) that are removed for AMP projects that occur within City jurisdiction, as directed by the City Forester. The replacement trees should be planted onsite, if feasible, but may be planted offsite if project conditions prohibit onsite planting. The removed trees shall be replaced at a ratio of up to three trees for every one tree removed.
- During the City of Monterey permitting process for the AMP development projects that are conducted within City jurisdiction, the Project Sponsor shall coordinate with the City Forester to determine an appropriate in-lieu fee for the replacement of coast live trees, Monterey pine trees, and/or Monterey cypress trees that would be removed for the project. Per City Code 37-11(D), the in-lieu fee payment to the City of Monterey shall be equivalent to the value of the removed trees or the cost of the numbers of replacement trees as determined by City Council Resolution. The value of the trees shall be established and conform to standards adopted by City Council Resolution. The payment shall be used to plant additional trees off-site in a location approved by the City Forester.

9.6 Threshold #6: Conflict with a Habitat Conservation Plan, Natural Community Conservation Plan, or other Conservation Plan

BIO-AMP11 To avoid direct impacts to the conservation areas on the airport property, the Project Sponsor shall design the upgraded perimeter fence alignment to avoid the conservation areas. If full avoidance of the conservation areas is not feasible, the Project Sponsor shall replace on a 1:1 basis all portions of the affected conservation area(s) that will fall within the upgraded perimeter fence. The replacement conservation areas shall support the same vegetative community type as the affected conservation area. Replacement conservation areas should be located on the airport property, if feasible. If establishing a replacement conservation area on the airport property is not feasible, the Project Sponsor may establish a replacement conservation area offsite, provided the replacement conservation area supports the same vegetative community type as the affected conservation area.

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APPENDIX A

Project Alternatives Maps

PROPOSED PROJECT

ALTERNATIVE 1

APPENDIX B

USFWS IPaC and CNDDB Database Queries

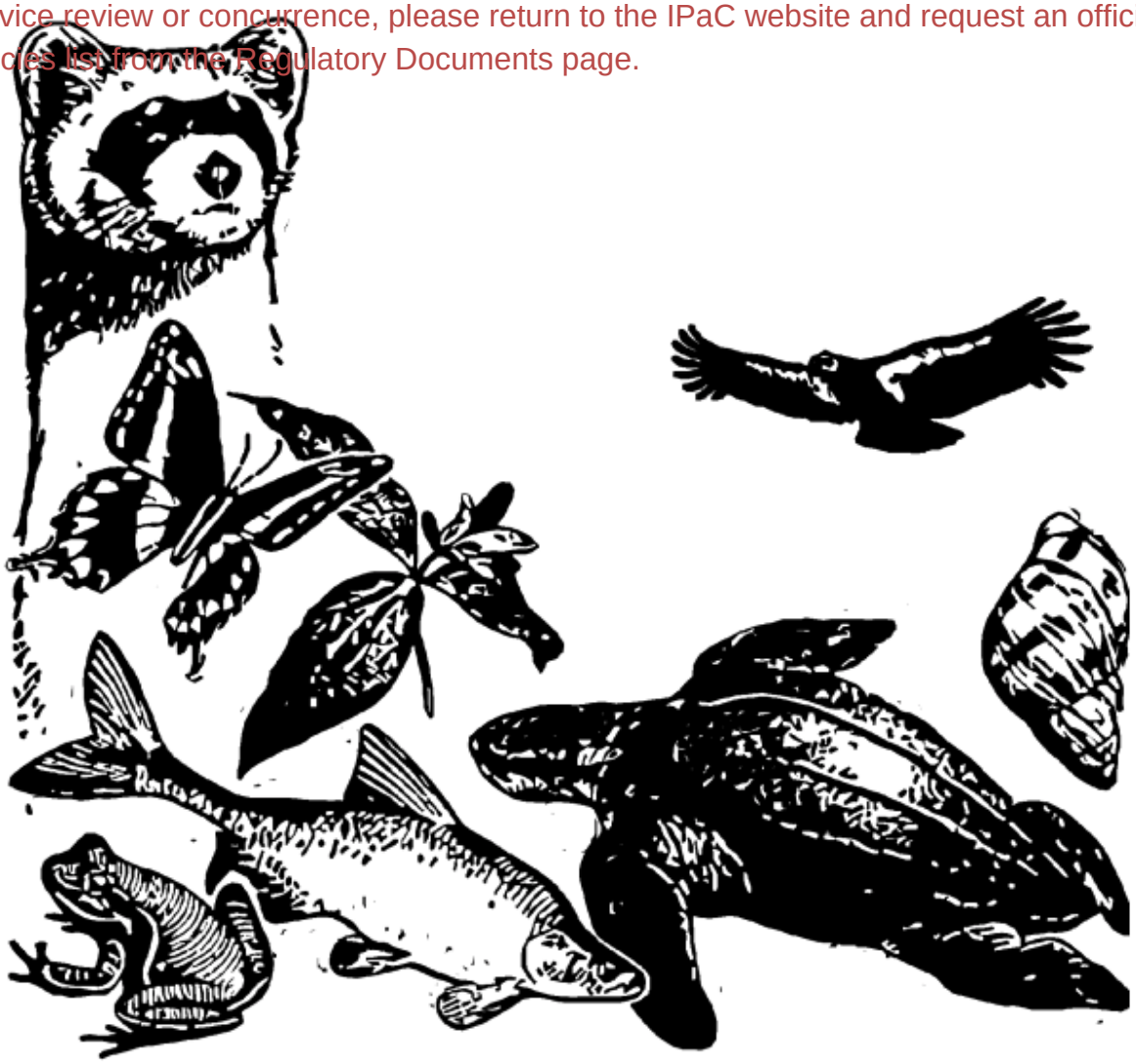
U.S. Fish & Wildlife Service

Monterey Regional Airport Safety Enhancement Project

IPaC Trust Resources Report

Generated October 03, 2016 04:50 PM MDT, IPaC v3.0.9

This report is for informational purposes only and should not be used for planning or analyzing project level impacts. For project reviews that require U.S. Fish & Wildlife Service review or concurrence, please return to the IPaC website and request an official species list from the Regulatory Documents page.



IPaC - Information for Planning and Conservation (https://ecos.fws.gov/ipac/): A project planning tool to help streamline the U.S. Fish & Wildlife Service environmental review process.

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U.S. Fish & Wildlife Service

IPaC Trust Resources Report

NAME

Monterey Regional Airport Safety Enhancement Project

LOCATION

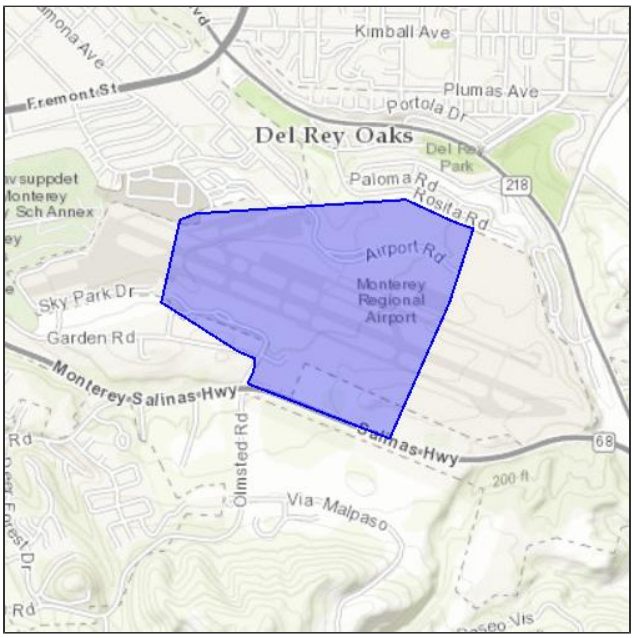
Monterey County, California

DESCRIPTION

Relocation of airport facilities including the terminal , parking, roadways, hangers, ARFF building, and connected actions.

IPAC LINK

https://ecos.fws.gov/ipac/project/OMH7W-X5WGZ-HOLC6-MIA3L-VBSQHE



U.S. Fish & Wildlife Service Contact Information

Trust resources in this location are managed by:

Ventura Fish And Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003-7726
(805) 644-1766

Endangered Species

Proposed, candidate, threatened, and endangered species are managed by the Endangered Species Program of the U.S. Fish & Wildlife Service.

This USFWS trust resource report is for informational purposes only and should not be used for planning or analyzing project level impacts.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list from the Regulatory Documents section.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list either from the Regulatory Documents section in IPaC or from the local field office directly.

The list of species below are those that may occur or could potentially be affected by activities in this location:

Amphibians

California Red-legged Frog Rana draytonii — Threatened

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=D02D

California Tiger Salamander Ambystoma californiense — Threatened

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=D01T

Birds

California Condor Gymnogyps californianus — Endangered

CRITICAL HABITAT
There is **final** critical habitat designated for this species.
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B002

Least Bell's Vireo Vireo bellii pusillus — Endangered

CRITICAL HABITAT
There is **final** critical habitat designated for this species.
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B067

Marbled Murrelet Brachyramphus marmoratus — Threatened

CRITICAL HABITAT
There is **final** critical habitat designated for this species.
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B08C

Southwestern Willow Flycatcher Empidonax traillii extimus — Endangered

CRITICAL HABITAT
There is **final** critical habitat designated for this species.
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B094

Western Snowy Plover Charadrius alexandrinus nivosus — Threatened

CRITICAL HABITAT
There is **final** critical habitat designated for this species.
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B07C

Crustaceans

Vernal Pool Fairy Shrimp Branchinecta lynchi — Threatened

CRITICAL HABITAT
There is **final** critical habitat designated for this species.
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=K03G

Fishes

Tidewater Goby Eucyclogobius newberryi — Endangered

CRITICAL HABITAT
There is **final** critical habitat designated for this species.
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=E071

Flowering Plants

Clover Lupine Lupinus tidestromii — Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q2DD

Contra Costa Goldfields Lasthenia conjugens — Endangered

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q122

Marsh Sandwort Arenaria paludicola — Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q25H

Monterey Gilia Gilia tenuiflora ssp. arenaria — Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q2AJ

Monterey Spineflower Chorizanthe pungens var. pungens — Threatened

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q271

Yadon's Piperia Piperia yadonii — Endangered

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q3FA

Insects

Smith's Blue Butterfly Euphilotes enoptes smithi — Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=I00R

Mammals

Southern Sea Otter Enhydra lutris nereis — Threatened

CRITICAL HABITAT

No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=A0A7

Critical Habitats

There are no critical habitats in this location

Migratory Birds

Birds are protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Any activity that results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish & Wildlife Service.[1] There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

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1. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern
  http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds
  http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data
  http://www.birdscanada.org/birdmon/default/datasummaries.jsp

The following species of migratory birds could potentially be affected by activities in this location:

Allen's Hummingbird Selasphorus sasin — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0LI

Bald Eagle Haliaeetus leucocephalus — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B008

Black Oystercatcher Haematopus bachmani — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0KJ

Black Swift Cypseloides niger — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FW

Burrowing Owl Athene cunicularia — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0NC

Costa's Hummingbird Calypte costae — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JE

Flammulated Owl Otus flammeolus — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0DK

Fox Sparrow Passerella iliaca — Bird of conservation concern
Season: Wintering

Lawrence's Goldfinch Carduelis lawrencei — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0J8

Lesser Yellowlegs Tringa flavipes — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0MD

Lewis's Woodpecker Melanerpes lewis — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HQ

Long-billed Curlew Numenius americanus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06S

Marbled Godwit Limosa fedoa — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JL

Nuttall's Woodpecker Picoides nuttallii — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HT

Oak Titmouse Baeolophus inornatus — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0MJ

Olive-sided Flycatcher Contopus cooperi — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0AN

Peregrine Falcon Falco peregrinus — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FU

Rufous-crowned Sparrow Aimophila ruficeps — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0MX

Short-billed Dowitcher Limnodromus griseus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JK

Short-eared Owl Asio flammeus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HD

Snowy Plover Charadrius alexandrinus — Bird of conservation concern
Season: Breeding

Tricolored Blackbird Agelaius tricolor — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06P

Western Grebe aechmophorus occidentalis — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EA

Whimbrel Numenius phaeopus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JN

Yellow Warbler dendroica petechia ssp. brewsteri — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EN

Red Knot Calidris canutus ssp. roselaari — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0G6

Wildlife refuges and fish hatcheries

There are no refuges or fish hatcheries in this location

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

This location overlaps all or part of the following wetlands:

Freshwater Emergent Wetland

PEMCh

A full description for each wetland code can be found at the National Wetlands Inventory website: http://107.20.228.18/decoders/wetlands.aspx

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Seaside (3612157) OR Monterey (3612158) OR Marina (3612167) OR Salinas (3612166) OR Spreckels (3612156) OR Soberanes Point (3612148) OR Mt. Carmel (3612147) OR Carmel Valley (3612146))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Candidate Endangered	G2G3	S1S2	SSC
Agrostis lacuna-vernalis vernal pool bent grass	PMPOA041N0	None	None	G1	S1	1B.1
Allium hickmanii Hickman's onion	PMLIL02140	None	None	G2	S2	1B.2
Ambystoma californiense California tiger salamander	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
Anniella pulchra northern California legless lizard	ARACC01020	None	None	G3	S3	SSC
Arctostaphylos edmundsii Little Sur manzanita	PDERI04260	None	None	G2	S2	1B.2
Arctostaphylos hookeri ssp. hookeri Hooker's manzanita	PDERI040J1	None	None	G3T2	S2	1B.2
Arctostaphylos montereyensis Toro manzanita	PDERI040R0	None	None	G2?	S2?	1B.2
Arctostaphylos pajaroensis Pajaro manzanita	PDERI04100	None	None	G1	S1	1B.1
Arctostaphylos pumila sandmat manzanita	PDERI04180	None	None	G1	S1	1B.2
Astragalus tener var. tener alkali milk-vetch	PDFAB0F8R1	None	None	G2T2	S2	1B.2
Astragalus tener var. titi coastal dunes milk-vetch	PDFAB0F8R2	Endangered	Endangered	G2T1	S1	1B.1
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Bombus caliginosus obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	
Bombus occidentalis western bumble bee	IIHYM24250	None	None	G2G3	S1	
Bryoria spiralifera twisted horsehair lichen	NLTEST5460	None	None	G3	S1S2	1B.1
Buteo regalis ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL
Castilleja ambigua var. insalutata pink Johnny-nip	PDSCR0D403	None	None	G4T2	S2	1B.1
Central Dune Scrub Central Dune Scrub	CTT21320CA	None	None	G2	S2.2	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Central Maritime Chaparral Central Maritime Chaparral	CTT37C20CA	None	None	G2	S2.2	
Centromadia parryi ssp. congdonii Congdon's tarplant	PDAST4R0P1	None	None	G3T2	S2	1B.1
Charadrius alexandrinus nivosus western snowy plover	ABNNB03031	Threatened	None	G3T3	S2S3	SSC
Chorizanthe minutiflora Fort Ord spineflower	PDPGN04100	None	None	G1	S1	1B.2
Chorizanthe pungens var. pungens Monterey spineflower	PDPGN040M2	Threatened	None	G2T2	S2	1B.2
Clarkia jolonensis Jolon clarkia	PDONA050L0	None	None	G2	S2	1B.2
Coelus globosus globose dune beetle	IICOL4A010	None	None	G1G2	S1S2	
Collinsia multicolor San Francisco collinsia	PDSCR0H0B0	None	None	G2	S2	1B.2
Cordylanthus rigidus ssp. littoralis seaside bird's-beak	PDSCR0J0P2	None	Endangered	G5T2	S2	1B.1
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G3G4	S2	SSC
Coturnicops noveboracensis yellow rail	ABNME01010	None	None	G4	S1S2	SSC
Cypseloides niger black swift	ABNUA01010	None	None	G4	S2	SSC
Danaus plexippus pop. 1 monarch - California overwintering population	IILEPP2012	None	None	G4T2T3	S2S3	
Delphinium californicum ssp. interius Hospital Canyon larkspur	PDRAN0B0A2	None	None	G3T3	S3	1B.2
Delphinium hutchinsoniae Hutchinson's larkspur	PDRAN0B0V0	None	None	G2	S2	1B.2
Delphinium umbraculorum umbrella larkspur	PDRAN0B1W0	None	None	G3	S3	1B.3
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Eremophila alpestris actia California horned lark	ABPAT02011	None	None	G5T4Q	S4	WL
Ericameria fasciculata Eastwood's goldenbush	PDAST3L080	None	None	G2	S2	1B.1
Eriogonum nortonii Pinnacles buckwheat	PDPGN08470	None	None	G2	S2	1B.3
Erysimum ammophilum sand-loving wallflower	PDBRA16010	None	None	G2	S2	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Erysimum menziesii Menzies' wallflower	PDBRA160R0	Endangered	Endangered	G1	S1	1B.1
Eucyclogobius newberryi tidewater goby	AFCQN04010	Endangered	None	G3	S3	SSC
Euphilotes enoptes smithi Smith's blue butterfly	IILEPG2026	Endangered	None	G5T1T2	S1S2	
Falco mexicanus prairie falcon	ABNKD06090	None	None	G5	S4	WL
Fritillaria liliacea fragrant fritillary	PMLIL0V0C0	None	None	G2	S2	1B.2
Gilia tenuiflora ssp. arenaria Monterey gilia	PDPLM041P2	Endangered	Threatened	G3G4T2	S2	1B.2
Hesperocyparis goveniana Gowen cypress	PGCUP04031	Threatened	None	G1	S1	1B.2
Hesperocyparis macrocarpa Monterey cypress	PGCUP04060	None	None	G1	S1	1B.2
Horkelia cuneata var. sericea Kellogg's horkelia	PDROS0W043	None	None	G4T1?	S1?	1B.1
Horkelia marinensis Point Reyes horkelia	PDROS0W0B0	None	None	G2	S2	1B.2
Lasiurus cinereus hoary bat	AMACC05030	None	None	G5	S4	
Lasthenia conjugens Contra Costa goldfields	PDAST5L040	Endangered	None	G1	S1	1B.1
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
Layia carnosa beach layia	PDAST5N010	Endangered	Endangered	G2	S2	1B.1
Legenere limosa legenere	PDCAM0C010	None	None	G2	S2	1B.1
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Lupinus tidestromii Tidestrom's lupine	PDFAB2B3Y0	Endangered	Endangered	G1	S1	1B.1
Malacothamnus palmeri var. involucratus Carmel Valley bush-mallow	PDMAL0Q0B1	None	None	G3T2Q	S2	1B.2
Malacothrix saxatilis var. arachnoidea Carmel Valley malacothrix	PDAST660C2	None	None	G5T2	S2	1B.2
Meconella oregana Oregon meconella	PDPAP0G030	None	None	G2G3	S2	1B.1
Microseris paludosa marsh microseris	PDAST6E0D0	None	None	G2	S2	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Monardella sinuata ssp. nigrescens northern curly-leaved monardella	PDLAM18162	None	None	G3T2	S2	1B.2
Monolopia gracilens woodland woollythreads	PDAST6G010	None	None	G3	S3	1B.2
Monterey Cypress Forest Monterey Cypress Forest	CTT83150CA	None	None	G1	S1.2	
Monterey Pine Forest Monterey Pine Forest	CTT83130CA	None	None	G1	S1.1	
Monterey Pygmy Cypress Forest Monterey Pygmy Cypress Forest	CTT83162CA	None	None	G1	S1.1	
Northern Bishop Pine Forest Northern Bishop Pine Forest	CTT83121CA	None	None	G2	S2.2	
Northern Coastal Salt Marsh Northern Coastal Salt Marsh	CTT52110CA	None	None	G3	S3.2	
Oceanodroma homochroa ashy storm-petrel	ABNDC04030	None	None	G2	S2	SSC
Oncorhynchus mykiss irideus pop. 9 steelhead - south-central California coast DPS	AFCHA0209H	Threatened	None	G5T2Q	S2	
Pelecanus occidentalis californicus California brown pelican	ABNFC01021	Delisted	Delisted	G4T3T4	S3	FP
Phrynosoma blainvillii coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
Pinus radiata Monterey pine	PGPIN040V0	None	None	G1	S1	1B.1
Piperia yadonii Yadon's rein orchid	PMORC1X070	Endangered	None	G1	S1	1B.1
Plagiobothrys chorisianus var. chorisianus Choris' popcornflower	PDBOR0V061	None	None	G3T1Q	S1	1B.2
Plagiobothrys uncinatus hooked popcornflower	PDBOR0V170	None	None	G2	S2	1B.2
Potentilla hickmanii Hickman's cinquefoil	PDROS1B0U0	Endangered	Endangered	G1	S1	1B.1
Ramalina thrausta angel's hair lichen	NLLEC3S340	None	None	G5	S2?	2B.1
Rana boylii foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	G3	S3	SSC
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Reithrodontomys megalotis distichlis Salinas harvest mouse	AMAFF02032	None	None	G5T1	S1	
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S2	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Rosa pinetorum pine rose	PDROS1J0W0	None	None	G2	S2	1B.2
Sidalcea malachroides maple-leaved checkerbloom	PDMAL110E0	None	None	G3	S3	4.2
Stebbinsoseris decipiens Santa Cruz microseris	PDAST6E050	None	None	G2	S2	1B.2
Taricha torosa Coast Range newt	AAAAF02032	None	None	G4	S4	SSC
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Thamnophis hammondii two-striped gartersnake	ARADB36160	None	None	G4	S3S4	SSC
Tortula californica California screw moss	NBMUS7L090	None	None	G2G3	S2S3	1B.2
Trifolium buckwestiorum Santa Cruz clover	PDFAB402W0	None	None	G2	S2	1B.1
Trifolium hydrophilum saline clover	PDFAB400R5	None	None	G2	S2	1B.2
Trifolium polyodon Pacific Grove clover	PDFAB402H0	None	Rare	G1	S1	1B.1
Trifolium trichocalyx Monterey clover	PDFAB402J0	Endangered	Endangered	G1	S1	1B.1
Valley Needlegrass Grassland Valley Needlegrass Grassland	CTT42110CA	None	None	G3	S3.1	

Record Count: 94

APPENDIX C

Species Observed

Table C-1. Plant Species Observed

Scientific Name	Common Name	Native	Species Status / Notes
Vascular Plants nomenclature follows *The Jepson Manual* and http://ucjeps.berkeley.edu/interchange.html.			
LYCOPHYTES			
Selaginellaceae	**Spike-moss family**		
Selaginella bigelovii	Bigelow's moss fern	yes	
PTERIDOPHYTES			
Dennstaedtiaceae	**Bracken family**		
Pteridium aquilinum	bracken fern	Yes	
Dryopteridaceae	**Wood fern family**		
Dryopteris arguta	coastal wood fern		
Pteridaceae	**Brake family**		
Adiantum jordanii	California maiden-hair		
Pentagramma triangularis	goldback fern	Yes	
GYMNOSPERMS			
Cupressaceae	**Cypress family**		
Cupressus macrocarpa	Monterey cypress	Yes	Planted specimens
Pinaceae	Pine family		
Pinus pinea	Italian stone pine	No	
Pinus radiata	Monterey pine	Yes*	
ANGIOSPERMS (DICOTS)			
Aizoaceae	**Fig-marigold family**		
Carpobrotus chilensis	ice plant	No	Cal-IPC: moderate
Anacardiaceae	**Sumac family**		
Toxicodendron diversilobum	poison oak	Yes	
Apiaceae	**Carrot family**		
Conium maculatum	poison hemlock	No	Cal-IPC: moderate
Daucus pusillus	rattle snake weed	Yes	
Lomatium parvifolium	small-leaved lomatium	Yes	CNPS Rank 4.2
Sanicula crassicaulis	gamble weed	Yes	
Sanicula laciniata	coast sanicle	Yes	
Araceae	**Arum family**		
Zantedeschia aethiopica	calla lily	No	
Araliaceae	**Ginseng family**		
Hedera helix	English ivy	No	Cal-IPC: high
Asteraceae	**Sunflower family**		
Achillea millefolium	yarrow	Yes	
Achyrachaena mollis	blow-wives	Yes	
Anthemis cotula	mayweed	No	Cal-IPC: moderate

Scientific Name	Common Name	Native	Species Status / Notes
Artemisia californica	California sagebrush	Yes	
Artemisia douglasiana	mugwort	Yes	
Baccharis pilularis var. *consanguinea*	coyote brush	Yes	
Carduus pycnocephalus	Italian thistle	No	Cal-IPC: moderate
Carduus tenuiflorus	winged thistle	No	Cal-IPC: limited
Centaurea melitensis	tocolote	No	Cal-IPC: moderate
Cirsium occidentale	cobweb thistle	Yes	
Corethrogyne filaginifolia	California aster	Yes	
Deinandra corymbosa	coast tarweed	Yes	
Delairea odorata	German ivy	No	Cal-IPC: High
Dimorphotheca ecklonis	African daisy	No	
Ericameria ericoides	mock heather	Yes	
Ericameria fasciculata	Eastwood's goldenbush	Yes	CNPS Rank 1B.1
Erigeron canadensis	horseweed	Yes	
Erigeron foliosus	Leafy fleabane	Yes	
Eriophyllum confertifolium	golden yarrow	Yes	
Gamochaeta ustulata	featherweed	Yes	
Hesperevax sparsiflora	erect dwarf cudweed	Yes	
Heterotheca grandiflora	telegraph weed	Yes	
Hypochaeris glabra	smooth cat's ear	No	Cal-IPC: limited
Hypochaeris radicata	rough cat's ear	No	Cal-IPC: moderate
Lessingina pectinata var. *pectinata*	valley lessingia	Yes	
Logfia gallica	narrow-leafed filago	No	
Madia sativa	Coastal tarweed	Yes	
Pseudognaphalium californicum	lady's tobacco	Yes	
Pseudognaphalium luteoalbum	cudweed	No	
Senecio vulgaris	ragwort	No	
Sonchus oleraceus	sow thistle	No	
Stephanomeria sp.	wire lettuce	na	No flower or fruit structures
Taraxacum officinale	dandelion	No	
Tragopogon porrifolius	purple salsify	No	
Uropappus lindleyi	silver puffs	Yes	
Boraginaceae	**Borage family**		
Amsinckia menziesii	Small flowered fiddleneck	Yes	
Cryptantha leiocarpa	coast cryptantha	Yes	
Phacelia brachyloba	short lobed phacelia	Yes	
Pholistoma auritum var. *auritum*	blue fiesta flower	Yes	
Plagiobothrys nothofulvos	rusty popcorn flower	Yes	

Scientific Name	Common Name	Native	Species Status / Notes
Brassicaceae	**Mustard family**		
Descuriana pinnata	western tansy mustard	Yes	
Hirschfeldia incana	summer mustard	No	
Lobularia maritima	Sweet alyssum	No	Cal-IPC: limited
Raphanus sativus	wild radish	No	
Sisymbrium officinale	hedge mustard	No	
Teesdalia nudicaulis	Barestem teesdalia	No	
Caprifoliaceae	**Honeysuckle family**		
Lonicera interrupta	Chaparral honeysuckle		
Sambucus nigra	black elderberry	Yes	
Symphoricarpos mollis	creeping snowberry	Yes	
Caryophyllaceae	**Pink family**		
Cardionema ramosissimum	sand mat	Yes	
Cerastium glomeratum	mouseear chickweed	No	
Silene gallica	catchfly	No	
Spergula arvensis	corn spurry	No	
Stellaria media	chickweed	No	
Cistaceae	**Rock-rose family**		
Cistus incanus	hairy rockrose	No	
Cistus monspeliensis	resinous rockrose	No	
Helianthemum scoparium	broom rose	Yes	
Crassulaceae	**Stonecrop family**		
Crassula tillaea	pygmy weed	No	
Dudleya sp.	varietals		No flowers
Cucurbitaceae	**Gourd family**		
Marah fabaceus var. *fabaceus*	wild cucumber	Yes	
Ericaceae	**Heath family**		
Arbutus menziesii	Pacific madrone	Yes	
Arctostaphylos montereyensis	Toro manzanita	Yes	CNPS Rank 1B.2
Arctostaphylos pumila	sandmat manzanita	Yes	CNPS Rank 1B.2
Arctostaphylos sp.	varietals	No	Ornamental in landscape
Arctostaphylos tomentosa ssp. *bracteosa*	bristly-twig manzanita	Yes	
Arctostaphylos tomentosa ssp. *tomentosa*	woolly-leafed manzanita	Yes	
Euphorbiaceae	**Spurge family**		
Croton californicus	croton	Yes	
Euphorbia peplus	petty spurge	No	
Fabaceae	**Pea family**		
Acacia sp.	Acacia	No	
Acacia longifolia	golden wattle	No	

Scientific Name	Common Name	Native	Species Status / Notes
Acacia melanoxylon	blackwood acacia	No	Cal-IPC: limited
Acmispon americanus	Spanish lotus	Yes	
Acmispon glaber	deer weed	Yes	
Acmispon strigosus	strigose lotus	Yes	
Acmispon wrangelianus	Chilean trefoil	Yes	
Genista monspessulana	French broom	No	Cal-IPC: high
Lathyrus vestitus var. *vestitus*	common pacific pea	Yes	
Lupinus arboreus	yellow bush lupine	Yes	
Lupinus bicolor	miniature lupine	Yes	
Lupinus chamissonis	dune lupine	Yes	
Lupinus nanus	sky lupine	Yes	
Melilotus alba	white sweetclover	No	
Medicago polymorpha	bur clover	No	Cal-IPC: limited
Trifolium angustifolium	narrow leaved clover	No	
Trifolium arvense	rabbitfoot clover	No	
Trifolium campestre	hop clover	No	
Trifolium dubium	shamrock clover	No	
Trifolium hirtum	rose clover	No	Cal-IPC: moderate
Trifolium subterraneum	sub clover	No	
Trifolium wormskioldii	coast clover	Yes	
Vicia americana var. *americana*	American vetch	Yes	
Vicia sativa	spring vetch	No	
Vicia villosa	hairy vetch	No	Cal-IPC: limited
Fagaceae	**Oak family**		
Quercus agrifolia	coast live oak	Yes	
Garryaceae	**Silk tassel family**		
Garrya elliptica	Coast silk tassel	Yes	
Geraniaceae	**Geranium family**		
Erodium cicutarium	red-stemmed filaree	No	Cal-IPC: limited
Erodium botrys	filaree	No	
Erodium moschatum	white stemmed filaree	No	
Geranium bicknellii	Bicknell's cranesbill	Yes	
Geranium dissectum	cut-leaved geranium	No	
Geranium molle	dove's foot geranium	No	
Grossilariaceae	**Gooseberry Family**		
Ribes speciosum	fuchsia-flowered gooseberry	Yes	
Lamiaceae	**Mint Family**		
Clinopodium douglasii	yerba buena	Yes	
Lamium amplexicaule	henbit	No	

Scientific Name	Common Name	Native	Species Status / Notes
Monardella sinuata ssp. *nigresce*	Curly-leaved monardella	Yes	CNPS Rank 1B.2; observed on airport property but outside study areas
Salvia mellifera	black sage	Yes	
Salvia spathacea	pitcher sage	Yes	
Stachys bullata	hedge nettle	Yes	
Malvaceae	**Mallow family**		
Malva parviflora	cheeseweed	No	
Montiaceae	**Miner's lettuce Family**		
Claytonia parviflora	miner's lettuce	Yes	
Claytonia perfoliata	miner's lettuce	Yes	
Myrsinaceae	**Myrsine Family**		
Lysimachia arvensis	scarlet pimpernel	No	
Myrtaceae	**Myrtle family**		
Callistemon citrinus	crimson bottlebrush	No	Escaped cultivar
Eucalyptus globulus	blue gum	No	
Onagraceae	**Evening primrose family**		
Camissoniopsis cheiranthifolia	beach primrose	Yes	
Camissonipsis micrantha	miniature suncup	Yes	
Clarkia purpurea ssp. *purpurea*	farewell to spring	Yes	
Clarkia purpurea ssp. *quadrivulnera*	purple clarkia	Yes	
Orobanchaceae	**Broomrape family**		
Castilleja exserta ssp. *exserta*	purple owl's clover	Yes	
Cordylanthus rigidus ssp. *littoralis*	seaside bird's beak	Yes	State Endangered
Pedicularis densiflora	Indian warrior	Yes	
Oxalidaceae	**Woodsorrel family**		
Oxalis corniculata	creeping wood sorrel	No	
Oxalis pes-caprae	Bermuda buttercup	No	
Papaveraceae	**Poppy family**		
Eschscholzia californica	California poppy	Yes	
Phrymaceae	lopseed family		
Mimulus aurantiacus	sticky monkey flower	Yes	
Plantaginaceae	**Plantain family**		
Plantago erecta	California plantain	Yes	
Plantago lanceolata	English plantain	No	Cal-IPC: limited
Plantago coronopus	cut leaf plantain	No	
Polemoniaceae	**Phlox family**		
Navarretia hamata	hooked navarretia	Yes	
Polygalaceae	**Milkwort family**		
Polygala californica	California milkwort	Yes	

Scientific Name	Common Name	Native	Species Status / Notes
Polygonaceae	**Buckwheat family**		
Chorizanthe angustifolia	narrow leaf spineflower	Yes	
Chorizanthe diffusa	diffuse spineflower	Yes	
Chorizanthe pungens var. *pungens*	Monterey spineflower	Yes	Federally Threatened CNPS Rank 1B.2
Eriogonum parvifolium	dune buckwheat	Yes	
Lastarriaea coriacea	leather spineflower	Yes	
Polygonum aviculare	Wire grass	No	
Pterostegia drymarioides	fairy mist	Yes	
Rumex acetosella	sheep sorrel	No	Cal-IPC: moderate
Rumex pulcher	fiddle dock	No	
Ranunculaceae	**Buttercup Family**		
Ranunculus californica	California buttercup	Yes	
Thalictrum fendleri	Fendler's meadow rue	Yes	
Rhamnaceae	**Buckthorn family**		
Ceanothus rigidus	Monterey ceanothus	Yes	CNPS Rank 4.2
Ceanothus dentatus	sandscrub ceanothus	Yes	
Ceanothus thrysiflorus	blueblossum	Yes	Landscape varietal
Frangula californica	coffeeberry	Yes	
Rosaceae	**Rose family**		
Adenostoma fasciculatum	chamise	Yes	
Cotoneaster pannosus	cotoneaster	No	Cal-IPC: moderate
Heteromeles arbutifolia	toyon	Yes	
Fragaria chiloensis	beach strawberry	Yes	
Horkelia cuneata var. *cuneata*	coast horkelia	Yes	
Prunus ilicifolia	holly leaf cherry	Yes	
Rosa californica	California wild rose	Yes	
Rubus ursinus	California blackberry	Yes	
Rubiaceae	**Madder family**		
Galium aparine	goose grass	Yes	
Galium californicum ssp. *californicum*	California bedstraw	Yes	
Galium porrigens	climbing bedstraw	Yes	
Saxifragaceae	**Saxifrage family**		
Lithophragma affine	Common woodland star	Yes	
Salicaceae	**Willow Family**		
Salix lasiolepis	arroyo willow	Yes	
Solanaceae	**Nightshade family**		
Solanum nigrum	black nightshade	No	
Solanum umbelliferum	bluewitch	Yes	

Scientific Name	Common Name	Native	Species Status / Notes
Urticaceae	**Nettle family**		
Urtica urens	Dwarf nettle	No	
ANGIOSPERMS (MONOCOTS)			
Agavaceae	**Century plant family**		
Agave americana	Century plant	No	
Chlorogalum pomeridianum	soap plant	Yes	
Cyperaceae	**Sedge family**		
Carex tumulicola	Foothill sedge	Yes	
Cyperus eragrostis	tall flat sedge	Yes	
Eleocharis macrostachya	common spikerush	Yes	
Juncaceae	**Rush family**		
Juncus balticus	rush	Yes	
Juncus bufonius	toad rush	Yes	
Juncus mexicanus	Mexican rush	Yes	
Juncus patens	spreading rush	Yes	
Juncus phaeocephalus	rush	Yes	
Liliaceae	**Lily family**		
Fritillaria affinis	checker lily	Yes	
Melanthiaceae	**False hellebore family**		
Toxicoscordion fremontii	Fremont's star lily	Yes	
Orchidaceae	**Orchid family**		
Piperia yadonii	Yadon’s piperia	Yes	Federally Endangered CNPS Rank 1B.1
Poaceae	**Grass family**		
Aira caryophyllea	silver European hairgrass	No	
Avena barbata	slender wild oats	No	Cal-IPC: moderate
Avena fatua	Wild oats	No	
Briza maxima	rattle snake grass	No	Cal-IPC: limited
Briza minor	Quaking grass	No	
Bromus diandrus	ripgut brome	No	Cal-IPC: moderate
Bromus hordeaceus	soft chess brome	No	Cal-IPC: limited
Bromus madritensis	Foxtail brome	No	
Bromus rubens	Red brome	No	Cal-IPC: high
Cordaderia sellowana	white pampas grass	No	Cal-IPC: high
Cynodon dactylon	Bermuda grass	No	
Distichlis spicata	salt grass	Yes	
Ehrharta calycina	Veldt grass	No	Cal-IPC: high
Ehrharta erecta	Panic veldt grass	No	Cal-IPC: moderate
Elymus glaucus	blue wild rye	Yes	
Elymus triticoides	creeping wild-rye	Yes	

Scientific Name	Common Name	Native	Species Status / Notes
Festuca bromoides	Brome fescue	No	
Festuca myuros	rattail fescue	No	Cal-IPC: moderate
Festuca perennis	Italian ryegrass	No	
Holcus lanatus	Velvet grass	No	Cal-IPC: moderate
Hordeum murinum ssp. *glaucum*	foxtail	No	
Melica imperfecta	melic grass	Yes	
Pennisetum clandestinum	kikuyu grass	No	
Poa annua	Annual blue grass	No	
Poa secunda ssp. *secunda*	one-sided bluegrass	Yes	
Polypogon monspelliensis	Rabbitfoot grass	Yes	
Stipa pulchra	purple needle-grass	Yes	
Rusaceae	**Butcher's-broom family**		
Maianthemum racemosum	Feathery false lily	Yes	
Themidaceae	**Brodiaea family**		
Dichelostemma capitatum	blue dicks	Yes	
Triteleia hyacinthine	white brodiaea	Yes	

Notes: Cal-IPC = California Invasive Plant Council

Cal-IPC Ratings Explanations:

High = These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

Moderate = These species have substantial and apparent-but generally not severe-ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

Limited = These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

Table C-2. Wildlife Species Observed

Scientific Name	Common Name
BIRDS	
Wading Birds	
Ardia herodias	great blue heron
Ardea alba	great egret
Dabbling Ducks	
Anus platyrhynchos	mallard duck
Diurnal Raptors	
Cathartes aura	turkey vulture
Circus cyaneus	northern harrier
Accipiter cooperii	Cooper's hawk
Buteo jamaicensis	red-tailed hawk
Falco sparverius	American kestrel
Upland Game Birds	
Callipepla californica	California quail
Plovers, Oysercatchers, Stilts, and Avocets	
Charadrius vociferous	killdeer
Pluvialis squatarola	black-bellied plover
Skuas, Jaegers, and Gulls	
Larus occidentalis	western gull
Larus californicus	California gull
Pigeons and Doves	
Zenaida macroura	mourning dove
Streptopelia decaocto	Eurasian colored dove
Columba livia	rock pigeon
Owls	
Bubo virginianus	great horned owl
Tyto alba	barn owl
Hummingbirds	
Calypte anna	Anna's hummingbird
Woodpeckers	
Colaptes auratus	northern red-shafted flicker
Melanerpes formicivorus	acorn woodpecker
Tyrant Flycatchers	
Contopus sordidulus	western wood-pewee
Sayornis saya	Say's phoebe
Sayornis nigricans	black phoebe
Jays, Crows, and Allies	
Aphelocoma californica	California scrub jay

Scientific Name	Common Name
Corvus brachyrhynchos	American crow
Larks	
Eremophila alpestris	horned lark
Swallows	
Hirundo rustica	barn swallow
Tachycineta bicolor	tree swallow
Chickadees, Nuthatches, and Allies	
Baeolophus inornatus	oak titmouse
Psaltriparus minimus	bush tit
Poecile rufescens	chestnut-backed chickadee
Sitta carolinensis	white-breasted nuthatch
Certhia americana	brown creeper
Wrens	
Thryomanes bewickii	Bewick's wren
Troglodytes aedon	house wren
Dipper and Wrentit	
Chamaea fasciata	wrentit
Kinglets, Old World Warblers, and Gnatcatchers	
Regulus calendula	ruby-crowned kinglet
Thrushes	
Sialia mexicana	western bluebird
Toxostoma redivivum	California thrasher
Mimids	
Mimus polyglottos	northern mockingbird
Waxwings, Silky-Flycatchers, and Starlings	
Sturnus vulgaris	European starling
Wood-warblers	
Vermivora celata	orange-crowned warbler
Dendroica townsendi	Towsend's warbler
Emberizine Sparrows and Allies	
Zonotrichia leucophrys	white-crowned sparrow
Passer domesticus	house sparrow
Zonotrichia atricapella	golden crowned sparrow
Melospiza melodia	song sparrow
Pipilo crissalis	California towhee
Pipilo maculates	spotted towhee
Junco hymalis	dark-eyed junco
Icterids	
Sturnella neglecta	western meadowlark

Scientific Name	Common Name
Agelaius phoeniceus	red-winged blackbird
Euphagus cyanocephalus	Brewer's blackbird
Finches and Old World Sparrows	
Carpodacus mexicanus	house finch
Carduelis psaltria	lesser goldfinch
Carduelis tristis	American goldfinch
MAMMALS	
Canidae	
Canis latrans	coyote
Raccoons, Skunks, and Weasels	
Procyon lotor	common raccoon
Lagomorphs	
Sylvilagus bachmanii	brush rabbit
Rodents	
Sciurus griseus	Western gray squirrel
Spermophilus beecheyii	California ground squirrel
Ruminantia	
Odocoileus hemionus californicus	black-tailed deer
REPTILES	
Elgaria coerulea	Northern alligator lizard
Sceloporus occidentalis	western fence lizard
AMPHIBIANS	
Rana draytonii	California red-legged frog
Psuedacris regilla	Pacific chorus frog
GASTROPODS	
Helminthoglypta umbilicata	Big Sur shoulderband snail
Heliix aspersa	common garden snail
Oxychilus cellarius	cellar glass snail
ARACHNIDS	
Natalia Romanova	black widow

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APPENDIX D

Photo Documentation

Photo D-1. Representative view of the North Access Road Study Area at the terminus in the city of Del Rey Oaks. Photo taken September 28, 2017.

Photo D-2. Representative view of the Highway 68 Frontage Road Study Areas. Photo taken September 28, 2017.

Photo D-3. Representative view of a proposed non-aviation development area. Photo taken September 28, 2017.

Photo D-4. Representative view of seaside bird's beak that was observed in the Highway 68 Frontage Road and non-aviation development areas. Photo taken September 28, 2017.

Photo D-5. Representative view of a proposed non-aviation development area on the north side of the airport property. Photo taken April 28, 2017.

Photo D-6. Representative view of the Terminal Study Area. Photo taken September 27, 2017.

Photo D-7. Representative view of the proposed GA Relocation Study Area and associated new ARFF Runway Access Road. Photo taken April 28, 2017.

Photo D-8. Representative view of small-leaved lomatium that was observed in several of the study areas. Photo taken March 30, 2018.

APPENDIX E

Monterey Regional Airport Master Plan
Tree and Vegetation Type Inventory

SWCA®
ENVIRONMENTAL CONSULTANTS
Sound Science. Creative Solutions.®

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March 23, 2018

Judi Krauss
Coffman Associates
4835 E. Cactus Road, Suite 235
Scottsdale, AZ, 85254

Re: Monterey Regional Airport Master Plan Tree and Vegetation Type Inventory / SWCA Project No. 37212

Dear Ms. Krauss:

Thank you for retaining SWCA Environmental Consultants to work with Coffman Associates and the Monterey Peninsula Airport District (MPAD) on the Monterey Regional Airport Master Plan Environmental Impact Report and Environmental Assessment project (project). We have completed the tree and vegetation type inventory for the anticipated project impact areas and have compiled the data obtained during the inventory surveys. The following report includes maps of the surveyed trees and a series of tables that summarize the survey data. In order to best present the data, SWCA created four maps and accompanying tables. Maps were prepared for the two southside improvement designs, the northside access road and general aviation relocation site, and the soil deposition area (Option 2). Upon request, SWCA will send Coffman Associates, MPAD, and/or other project team members the edited geographic information system (GIS) data that was used to create the attached maps and tables.

The methods used to collect the data included conducting pedestrian surveys of the anticipated impact areas and using the Global Positioning System (GPS) to mark the trees. The SWCA biologist utilized a Trimble® Geo/XT GPS Unit to map each tree located in or directly adjacent to the project limits that were provided by Coffman Associates and the project engineers. Each mapped tree was identified to species and measured for diameter at breast height (dbh). The dbh of most trees were measured at 4.5 feet above ground level on the uphill side of the tree. In some cases, the trees branched lower than 4.5 feet above the ground. In these cases, the diameter was measured below the branch. This typically occurred with the coast live oak (*Quercus agrifolia*) trees. In cases where an individual tree had multiple branches at or below dbh that originate from one root mass, the dbh of the largest branch was measured and the dbh of the remaining branches were estimated based on the dbh of the largest branch. If the surveyor could not confirm that the branches of a multi-branched clump were originating from one root mass, each branch was measured and mapped as an individual tree. Please feel free to contact me at tbelt@swca.com or (805) 543-7095, extension 6808, with any questions regarding the attached maps and tables.

Sincerely,

Travis Belt
Senior Biologist

Attachments: Tree and Vegetation Type Inventory Tables and Maps

ATTACHMENT A

Southside Terminal Area

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Table A-1. Number of Trees to be Removed from the Southside Terminal Area

Tree Species	Parking/Circulation	Terminal Area	Total
coast live oak	35	0	**35**
Monterey pine	32	32	**64**
Monterey cypress	2	0	**2**
Acacia sp.	3	0	**3**
Other (*Schinus*, etc)	9	2	**11**
Total	**81**	**34**	**115**

Table A-2. Average Diameter at Breast Height of Trees to be Removed from the Southside Terminal Area

Tree Species	Parking/Circulation	Terminal Area	Total
coast live oak	10.7	N/A	**10.7**
Monterey pine	19.8	13.3	**16.6**
Monterey cypress	17.8	N/A	**17.8**
Acacia sp.	15.5	N/A	**15.5**
Other (*Schinus*, etc)	12.4	11.9	**12.2**
Total	**15.2**	**13.2**	**14.6**

Table A-3. Number of Trees and their Average Diameter at Breast Height in Inches to be Removed from the State Route 68 Frontage Road

Tree Species	# of Trees	Average DBH (inches)
coast live oak	66	10.3
Monterey pine	150	16.9
Monterey cypress	22	20.1
Acacia sp.	2	7.0
Total	**240**	**15.3**

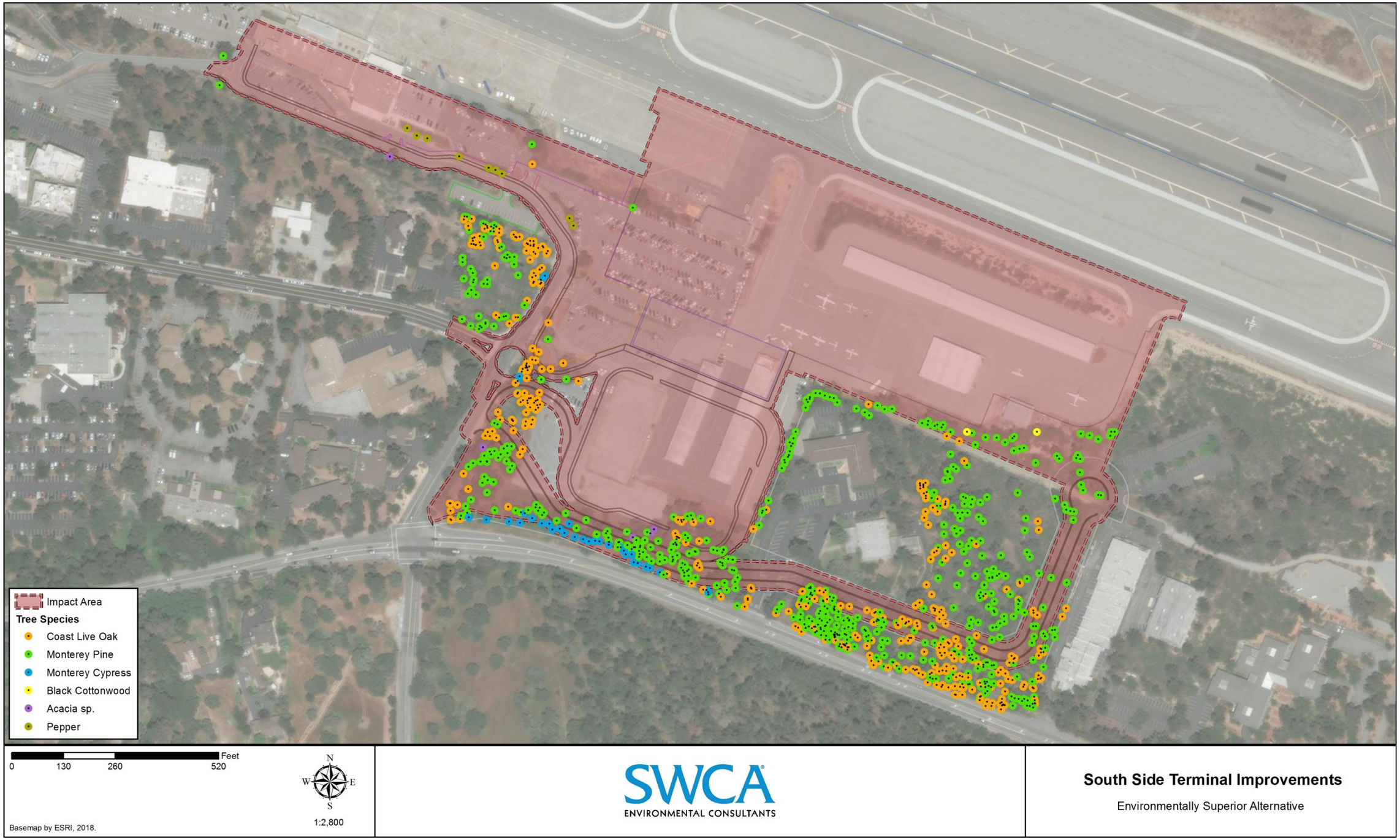

Figure A-1. Southside Terminal Area Environmentally Superior Alternative tree impact map.

PROPOSED PROJECT

Table A-4. Number of Trees to be Removed from the Southside Terminal Area

Tree Species	Parking/Circulation	Terminal Area	Total
coast live oak	66	0	**66**
Monterey pine	37	30	**67**
Monterey cypress	2	0	**2**
Acacia sp.	1	0	**1**
Other (*Schinus*, etc)	9	2	**11**
Total	**115**	**32**	**147**

Table A-5. Average Diameter at Breast Height in Inches of Trees to be Removed from the Southside Terminal Area

Tree Species	Parking/Circulation	Terminal Area	Total
coast live oak	9.3	N/A	**9.3**
Monterey pine	16.2	13.5	**14.9**
Monterey cypress	17.8	N/A	**17.8**
Acacia sp.	27.5	N/A	**27.5**
Other (*Schinus*, etc)	12.4	11.9	**12.2**
Total	**16.6**	**12.7**	**16.3**

Table A-6. Number of Trees and their Average Diameter at Breast Height in Inches to be Removed from the State Route 68 Frontage Loop Road

Tree Species	# of Trees	Average DBH (inches)
coast live oak	83	9.5
Monterey pine	165	16.5
Monterey cypress	6	29.1
Acacia sp.	4	8.2
Total	**258**	**14.4**

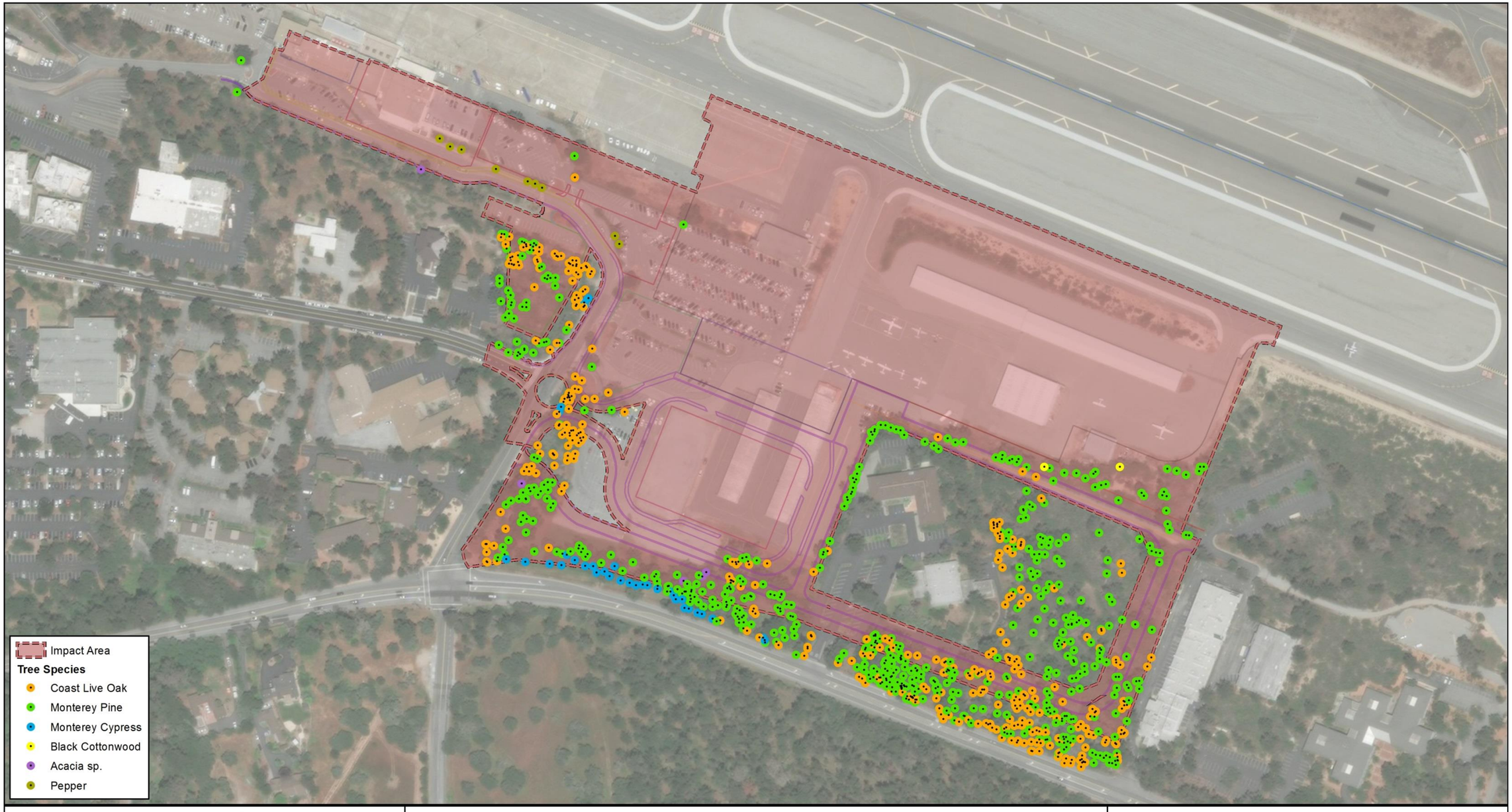

Figure A-2. Southside Terminal Area Proposed Project tree impact map.

ATTACHMENT B

North Access Road and General Aviation Relocation Project Areas

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Table B-1. Number of Trees and their Average Diameter at Breast Height in Inches to be Removed from the North Access Road and General Aviation Relocation Area

Tree Species	# of Trees	Average DBH (inches)
coast live oak	128	9.3
Monterey pine	32	22.0
Monterey cypress	N/A	N/A
Italian stone pine	1	12.0
Eucalyptus globulus	5	32.2
Acacia sp.	1	11.2
Total	**167**	**17.3**

PROPOSED PROJECT

Table B-2. Number of Trees and their Average Diameter at Breast Height in Inches to be Removed from the North Access Road

Tree Species	# of Trees	Average DBH (inches)
coast live oak	128	9.3
Monterey pine	32	22.0
Monterey cypress	N/A	N/A
Eucalyptus globulus	5	32.2
Acacia sp.	1	11.2
Total	**166**	**18.7**

Note: The only change from the Environmentally Superior Alternative (Table B-1, above) is the omission of one Italian stone pine from the General Aviation Relocation Area. It is omitted from Table B-2 due to the Proposed Project phasing.

Table B-3. Number of Trees and their Average Diameter at Breast Height in Inches to be Removed from the General Aviation Relocation Area

Tree Species	# of Trees	Average DBH (inches)
Italian stone pine	1	12
Total	**1**	**N/A**

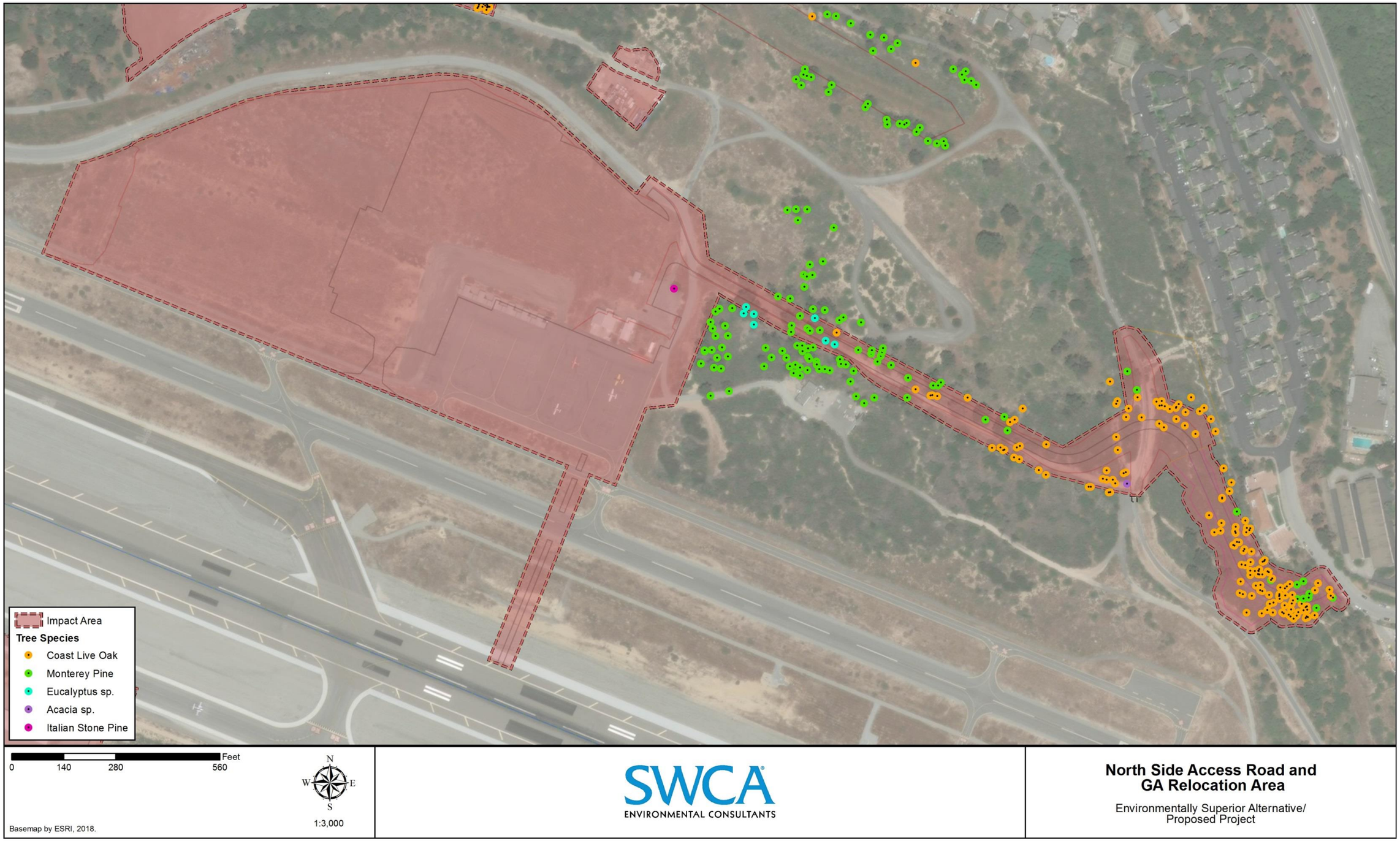

Figure B-1. North Access Road and General Aviation Relocation Area tree impact map.

ATTACHMENT C

Soil Deposition Area (Option 2)

ENVIRONMENTALLY SUPERIOR ALTERNATIVE AND PROPOSED PROJECT

Table C-1. Number of Trees and their Average Diameter at Breast Height in Inches to be Removed from the Soil Deposition Area (Option 2)

Tree Species	# of Trees Removed	Average DBH (inches)
coast live oak	428	8.1
Monterey pine	59	16.0
Eucalyptus sp.	1	21.6
Italian stone pine	1	11.0
Acacia sp.	3	7.1
Total	**492**	**12.76**

Note: The Soil Deposition Area (Option 2) is consistent between the Environmentally Superior Alternative and the Proposed Project.

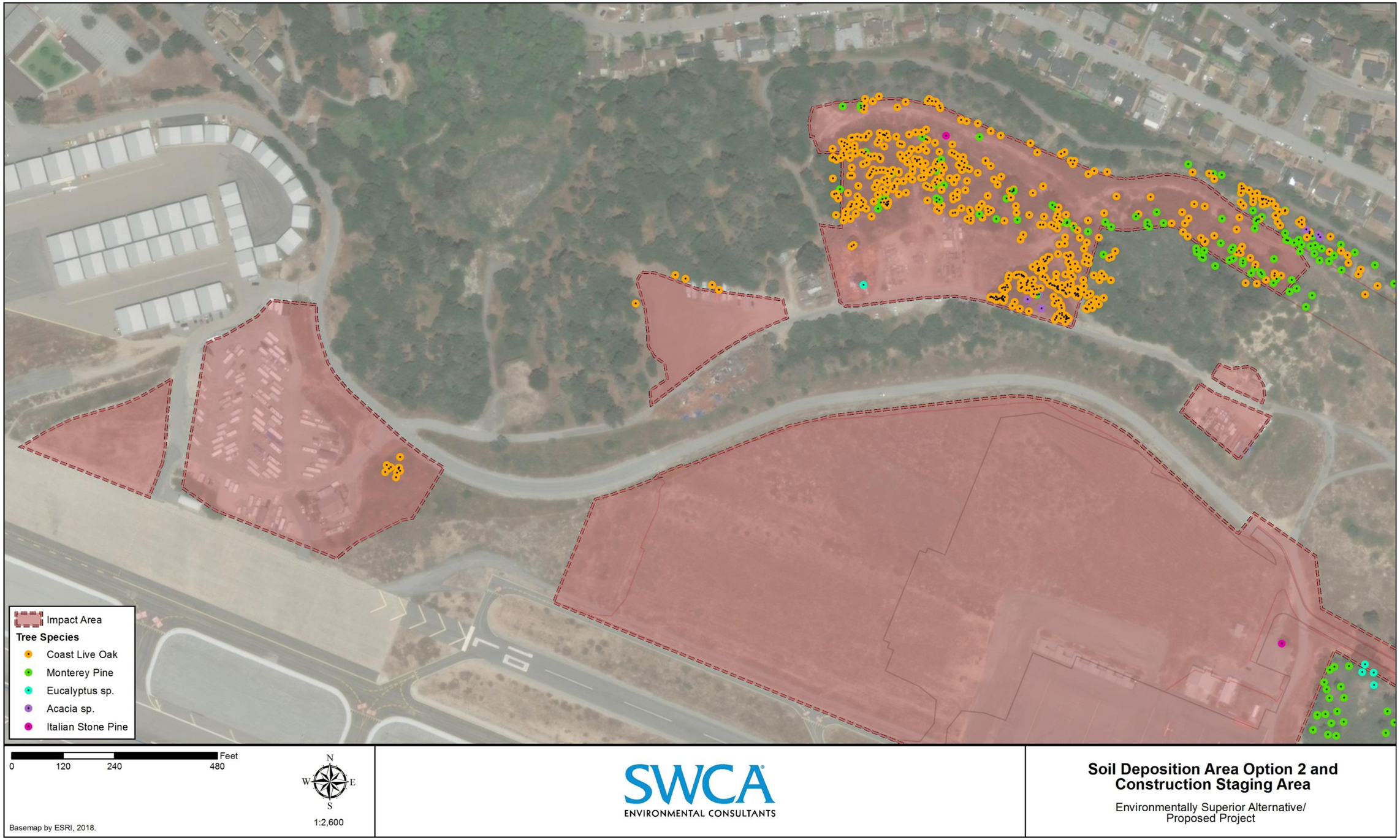

Figure C-1. Soil Deposition Area (Option 2) tree impact map.

ATTACHMENT D

Vegetation Types

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Table D-1. Acres by Vegetation Type to be Removed from the Southside Terminal Area

Vegetation Type	Parking/Circulation	Terminal	Total
Grassland/Ruderal	0.8	0	**0.8**
Shrubland	0	2.9	**2.9**
Total	**0.8**	**2.9**	**3.7**

Table D-2. Acres by Vegetation Type to be Removed from the State Route 68 Frontage Road

Tree Species	Acres to be Removed
Grassland/Ruderal	1.8
Shrubland	2.0
Total	**3.8**

Table D-3. Acres by Vegetation Type to be Removed from the North Access Road and General Aviation Relocation Area

Tree Species	Acres to be Removed
Grassland/Ruderal	10.3
Shrubland	5.9
Total	**16.2**

Note: The North Access Road and General Aviation Relocation areas are consistent between the Environmentally Superior Alternative and the Proposed Project.

Table D-4. Acres by Vegetation Type to be Removed from the Northside Construction Staging Area

Tree Species	Acres to be Removed
Grassland/Ruderal	1.1
Shrubland	0
Total	**1.1**

Note: The Northside Construction Staging Area is consistent between the Environmentally Superior Alternative and the Proposed Project.

Table D-5 Acres by Vegetation Type to Be Removed from the Soil Deposition Area (Option 2)

Tree Species	Acres to be Removed
Grassland/Ruderal	11.2
Shrubland	7.4
Total	**18.6**

Note: The Soil Deposition Area (Option 2) is consistent between the Environmentally Superior Alternative and the Proposed Project.

PROPOSED PROJECT

Table D-6. Acres by Vegetation Type to be Removed from the Southside Terminal Area

Vegetation Type	Parking/ Circulation	Terminal	Total
Grassland/Ruderal	0.4	0	**0.4**
Shrubland	0.8	2.9	**3.7**
Total	**1.2**	**2.9**	**4.1**

Table D-7. Acres by Vegetation Type to be Removed from the State Route 68 Frontage Loop Road Area

Tree Species	Acres to be Removed
Grassland/Ruderal	1.8
Shrubland	2.7
Total	**4.5**

Table D-8. Acres by Vegetation Type to be Removed from the North Access Road and General Aviation Relocation Area

Tree Species	Acres to be Removed
Grassland/Ruderal	10.3
Shrubland	5.9
Total	**16.2**

Note: The North Access Road and General Aviation Relocation areas are consistent between the Environmentally Superior Alternative and the Proposed Project.

Table D-9. Acres by Vegetation Type to be Removed from the Northside Construction Staging Area

Tree Species	Acres to be Removed
Grassland/Ruderal	1.1
Shrubland	0
Total	**1.1**

Note: The Northside Construction Staging Area is consistent between the Environmentally Superior Alternative and the Proposed Project.

Table D-10 Acres by Vegetation Type to Be Removed from the Soil Deposition Area (Option 2)

Tree Species	Acres to be Removed
Grassland/Ruderal	11.2
Shrubland	7.4
Total	**18.6**

Note: The Soil Deposition Area (Option 2) are consistent between the Environmentally Superior Alternative and the Proposed Project.

MONTEREY
REGIONAL AIRPORT

Appendix G

CULTURAL RESOURCES SURVEY REPORT AND HISTORIC RESOURCES ASSESSMENT

CULTURAL RESOURCES SURVEY REPORT FOR THE MONTEREY REGIONAL AIRPORT MASTER PLAN AND ASSOCIATED DEVELOPMENT PROJECTS, MONTEREY COUNTY, CALIFORNIA

APRIL 2018

PREPARED FOR

Coffman Associates

PREPARED BY

SWCA Environmental Consultants

CULTURAL RESOURCES SURVEY REPORT FOR THE MONTEREY REGIONAL AIRPORT MASTER PLAN AND ASSOCIATED DEVELOPMENT PROJECTS, MONTEREY COUNTY, CALIFORNIA

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SWCA Project No. 37212

SWCA Cultural Resources Report No. 18-175

April 2018

Archaeological and other heritage resources can be damaged or destroyed through uncontrolled public disclosure of information regarding their location. This document contains sensitive information regarding the nature and location of archaeological sites, which should not be disclosed to the general public or unauthorized persons.

Information regarding the location, character, or ownership of a cultural resource is exempt from the Freedom of Information Act pursuant to 54 USC 307103 (National Historic Preservation Act) and 16 USC Section 470(h) (Archaeological Resources Protections Act).

MANAGEMENT SUMMARY/ABSTRACT

Purpose and Scope: SWCA Environmental Consultants (SWCA) was retained by Coffman Associates to conduct a cultural resources survey in support of the Monterey Regional Airport (MRY) Airport Master Plan (AMP) in Monterey, Monterey County, California.

This study includes archival research, a cultural resources survey of the project area, and the preparation of this technical report, which documents the results of the inventory and provides management recommendations.

The intent of this Cultural Resources Survey Report (CRSR) is to identify potential cultural resources within and adjacent to the study area and, in turn, assist in the project's requirements to achieve National Historic Preservation Act (NHPA) Section 106 and California Environmental Quality Act (CEQA) compliance as it relates to cultural resources. For the purposes of this report, the study area comprises 182 acres and includes project-specific and programmatic development areas on the airport property.

Dates of Investigation: On June 2, 2014, staff at the Northwest Information Center (NWIC) at Sonoma State University, Rohnert Park, California, conducted a California Historical Resources Information System (CHRIS) records search of the entire airport property. SWCA obtained supplemental records search results on October 22, 2015. The field survey was conducted on April 26, 27, and 28, 2017, and March 17 and 18, 2018.

Investigation Constraints: The study area was entirely accessible; however, areas of dense vegetation and development precluded a comprehensive surface examination. Approximately 50 percent of the study area had zero to less than 25 percent visibility. The remainder of the study area had poor to good (25 to 75 percent) visibility. Total survey coverage included 137 acres of the 182-acre study area. Paved areas and those obscured by existing improvements were not subject to pedestrian survey (approximately 45 acres of the overall 182-acre study area).

Findings of the Investigation: Archival research revealed that the entire study area has been subject to some level of cultural resources study, including both architectural surveys and evaluations, archaeological surveys, archaeological monitoring, and archaeological data recovery. Several historic-era buildings are located within the study area; however, all but one (P-27-1459, Tarpy's Restaurant) have been determined ineligible for either the California Register of Historical Resources (CRHR) or the National Register of Historic Places (NRHP). Likewise, only one previously identified archaeological site is within the study area, which is the prehistoric component of P-27-1459 (CA-MNT-1438/H).

A portion of CA-MNT-1438/H was encountered during construction monitoring for the MRY Runway Safety Area (RSA) Improvement Project. As the portion of the archaeological site could not be avoided, it was assumed eligible for the NRHP/CRHR, and Pacific Legacy, Inc. undertook a data recovery program to mitigate impacts to the site. Following mitigation through data recovery, the portion of the site within the RSA's direct Area of Potential Effects (APE) (which overlaps with the current study area) was entirely destroyed by project-related excavations. Data recovery excavations revealed a diverse prehistoric assemblage with multiple subsurface features, and human remains. In addition, all site associated soils were excavated and relocated to an area on the airport known to not contain archaeological resources. (Holm et al. 2016). Although this location is outside of any currently proposed projects associated with the AMP, it is within the study area.

Cultural resources survey of the study area revealed the airport is heavily disturbed from its original construction and subsequent historic and modern development. Dozens of historic-era buildings, structures, and access routes associated with mid-twentieth century development of the airport resulted in

extensive earth movement and modification of the native landscape. Historic aerials and maps depict a vast network of no longer extant historic features in the northern and northeastern portions of the study area (SWCA 2014) that have been demolished and removed from the airport property. Remnants of this earlier development include existing roads and access routes. In addition, the field survey identified a concrete foundation and associated concrete debris in the northern portion of the study area, designated MRY-HIST-001. Historic archaeological site MRY-HIST-001 consists of the foundational remnants of a target shooting range facility (personal communication with Chris Morello, MRY Project Manager, via email on April 10, 2018). The foundation is partially demolished, as evidenced by concrete debris piles adjacent to the site. Although partially obscured by dense vegetation, the visible portion of the foundation measures approximately 100 feet (northwest/southeast) by 35 feet (northeast/southwest) (Appendix C).

Historic archaeological site MRY-HIST-001 is not associated with any significant events or people (Criterion A/1 and B/2), the foundation is a typical example of construction type and material (Criterion C/2), the site does not have the ability to provide additional information regarding the history of the airport or region beyond what is already well-documented (Criterion D/4), and the site lacks integrity. As such, the site does not constitute a historical resource or historical property and warrants no further consideration.

In addition, dozens of isolated historic-era cans and bottles and miscellaneous historic-era debris (e.g., metal, glass, plastic) were observed throughout the study area; the majority was likely related to recreational use or mid-twentieth century development within the airport property. In addition, two abandoned mid-century automobiles were encountered in the southern portion of the study area, within the potential acquisition property along State Route (SR) 68. Due to the lack of context, the isolated historic debris and automobiles do not warrant formal documentation beyond their mention in this report.

Aside from the multi-component cultural resource, P-24-1459, which includes the CRHR- and NRHP-eligible Tarpy's Restaurant and archaeological site CA-MNT-1438/H, no significant cultural resources are known to occur within the study area.

Recommendations: Although no new, significant cultural resources were identified within the study area as a result of pedestrian survey and archival research, as with previous cultural resources studies conducted on the airport property, archaeological survey is problematic in this area due to dense vegetation cover and existing developments (e.g., runway and taxiways, buildings, roads). The pedestrian survey of the study area was conducted in a good faith effort, which included manual ground clearing at regular intervals in areas of low visibility; however, the lack of visibility and, in some cases, impenetrable vegetation creates inherent issues with negative findings. As such, mitigation measures, including worker awareness training, standard inadvertent discovery protocol, and the preparation of an archaeological monitoring plan in areas of dense vegetation are recommended for future proposed development(s) associated with the AMP. With the implementation of the proposed mitigation measures, impacts to previously unidentified cultural resources can potentially be avoided and/or reduced.

Disposition of Data: This report will be filed at the Northwest Information Center, Monterey Regional Airport, Federal Aviation Administration, Coffman Associates, and SWCA. All field notes and records related to the current project are on file at the San Luis Obispo office of SWCA.

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INTRODUCTION

SWCA Environmental Consultants (SWCA) was retained by Coffman Associates to conduct a cultural resources survey in support of the Monterey Regional Airport (MRY) Airport Master Plan (AMP) in Monterey, Monterey County, California (Figure 1).

This study includes archival research, a cultural resource survey of the study area, and preparation of this technical report, which documents the results of the inventory and provides management recommendations.

The intent of this Cultural Resources Survey Report (CRSR) is to identify cultural resources within and adjacent to the study area, and, in turn, assist in the project's requirements to achieve National Historic Preservation Act (NHPA) Section 106 and California Environmental Quality Act (CEQA) compliance as it relates to archaeological resources. For the purposes of this CRSR, the study area comprises all areas proposed for either long- or short-term development as outlined in the AMP (Figure 2). The format of this report follows the *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format* (California Office of Historic Preservation 1990).

Project Personnel

Cultural Resources Team Leader Leroy Laurie, B.S., and Cultural Resources Specialist Chad Jackson, B.S., conducted the cultural resources surveys. Mr. Laurie co-authored the report with Principal Investigator Heather Gibson, Ph.D., Registered Professional Archaeologist (RPA); Dr. Gibson exceeds the Secretary of the Interior's Professional Qualification Standards in history and archaeology. Geographic Information Systems (GIS) Specialist Kevin Howen, B.A., created the graphics for this report, and Jaimie Jones was the technical editor.

PROJECT DESCRIPTION

Proposed AMP short-term development projects (occurring within 10 years) will be evaluated within an Environmental Impact Report (EIR) at a project-specific level, while future long-term development projects (occurring within 20 years) will be evaluated to the level of detail feasible based on available project information (i.e., at a programmatic level). Proposed long-term development projects would likely develop in phases over a long period of time, and future environmental analysis could be required prior to their approval and construction. One primary aspect of the proposed AMP is a multi-component airport safety enhancement project. This project is known as the Airport Safety Enhancement Project for Taxiway "A" Relocation & Associated Building Relocations (Airport Safety Enhancement Project). Due to the need for federal funding and approval, a federal Environmental Assessment (EA) is also being prepared consistent with the requirements of the National Environmental Policy Act (NEPA). The Federal Aviation Administrative (FAA) is the lead agency for the EA.

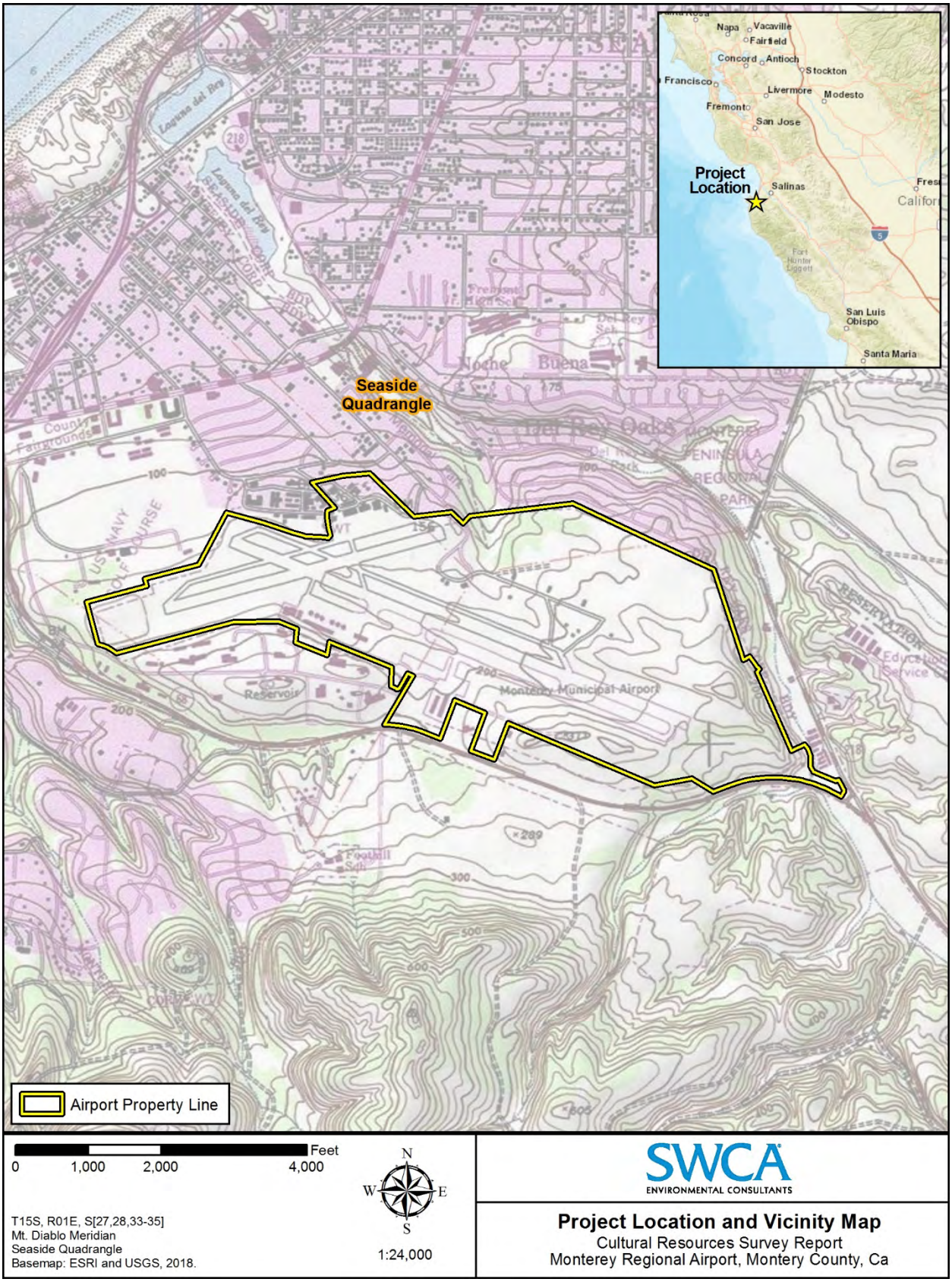

Figure 1. Project location and vicinity map.

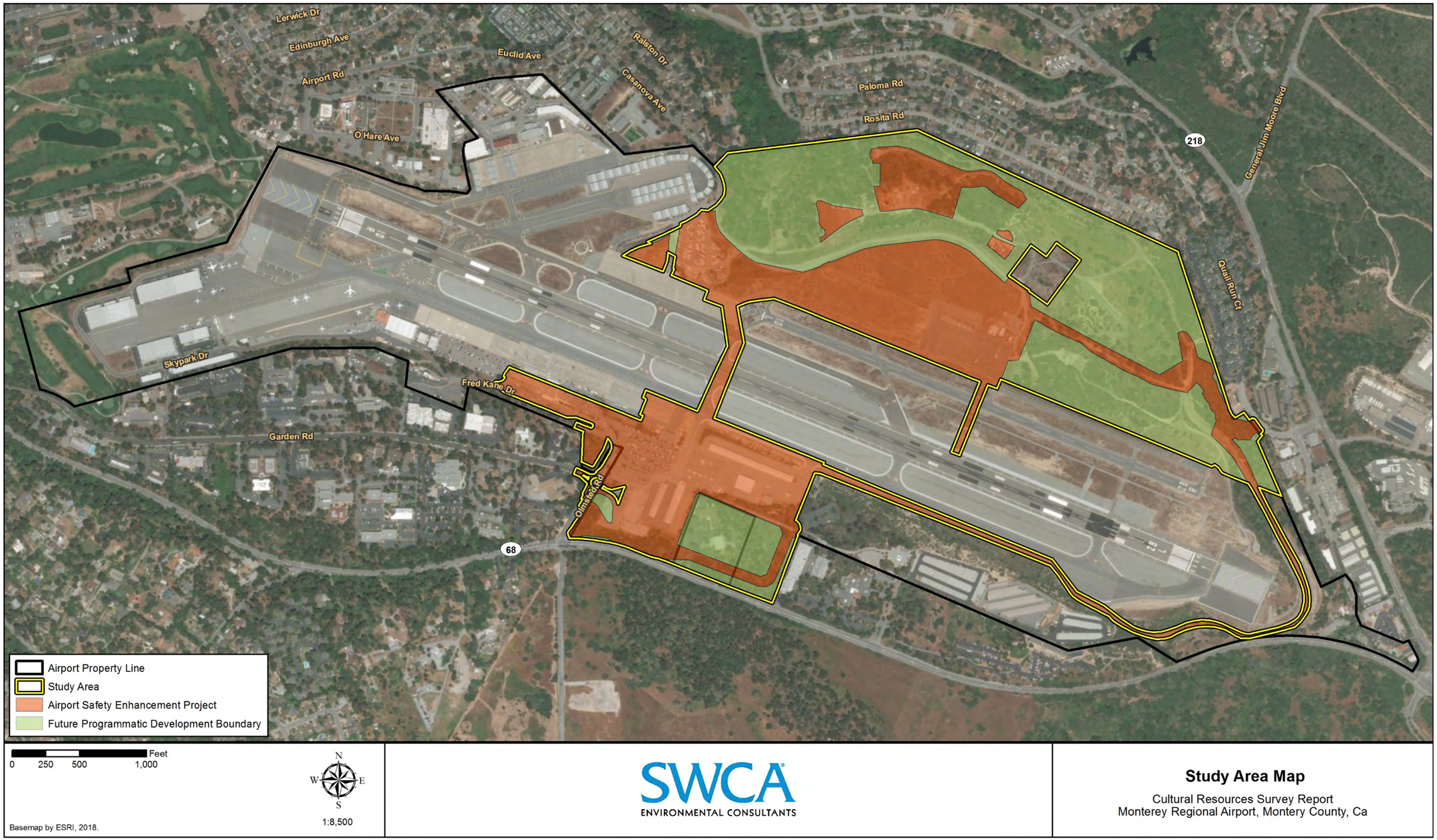

Figure 2. Study area map.

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The proposed Airport Safety Enhancement Project includes the following and would be phased over approximately 10 years:

- Relocate 44 general aviation (GA) hangars and a fuel tank from the southeast side of the airport to the north side of the airport.
- Add up to seven new GA hangars on the north side of the airport.
- Relocate the existing aircraft rescue and firefighting (ARFF) building and construct an ARFF service road.
- Relocate the commercial terminal and necessary apron pavement (and associated parking and roadway improvements).
- Close Taxiway "K" at its connection with the new commercial terminal apron.
- Implement a 52.5-foot southerly shift of 1,850 linear feet of Taxiway "A" and associated lighting, signage, and markings.
- Remark hold lines on Taxiway "A" at Taxiway Connectors "G" and "J" to a 250-foot separation from the Runway 10L-28R centerline.
- Install taxiway "islands" at Taxiway Connectors "G" and "J."
- Construct replacement vehicular parking along Fred Kane Drive.

Other proposed short-term AMP projects include:

- Acquire a 5.5-acre private parcel near the proposed commercial terminal complex.
- Construct a State Route (SR) 68 frontage road.

Proposed long-term AMP projects include:

- Construct 106 new GA hangars on the north side of the airport.
- Redevelop the existing GA (small aircraft) hangar area (no increase in use intensity).
- Redevelop the existing airport industrial area (no increase in use intensity).
- Construct non-aviation uses on the north side of the airport (north of Airport Road).
- Construct non-aviation uses on the south side of the airport (north of SR 68).
- Upgrade the perimeter fence.
- Construct a consolidated maintenance building
- Acquire runway protection zone (RPZ) land (20 acres).
- Acquire RPZ avigation easement (14 acres).
- Extend Taxiway "B" to the Runway 28L threshold and construct geometry improvements for Taxiways "K" and "L."

One additional AMP project is construction of a new "north side" road, which would extend from Del Rey Gardens Drive in Del Rey Oaks (off SR 218) to the northeast side of the airport. Access to the north side of the airport is currently provided via Airport Road, which runs through the Casanova Oak Knoll (CONA) neighborhood, located northwest of the airport. The new "north side" road would provide

additional access to the north side of the airport and would allow access through the CONA neighborhood for areas east of Gate 22 to be discontinued.

STUDY AREA

The project study area includes all short- and long-term MRY project components and comprises 182 acres. Note: the proposed RPZ acquisitions are not included in the study area as no proposed development is planned in these locations (see Figure 2).

Project Location

The proposed project is located at MRY in Monterey, Monterey County, California (see Figure 1). The airport is a commercial service aviation facility located immediately south of Fremont Street and between SR 68 and SR 218. The airport property includes 498.58 acres of developed and undeveloped land. The study area for this project includes 182 acres (see Figure 2).

REGULATORY SETTING

This section identifies federal and state legislation, in addition to local statutes, ordinances, and guidelines that govern the identification and treatment of cultural resources, as well as the analysis of project-related effects to these resources. The lead agency must consider these requirements when making decisions on projects that may affect cultural resources. The current project was undertaken in conformance with these regulations.

Federal Regulations

National Historic Preservation Act of 1966

Enacted in 1966 and amended most recently in 2014, the NHPA (54 United States Code [USC] 300101 et seq.) instituted a multifaceted program, administered by the Secretary of the Interior, to encourage sound preservation policies of the nation's cultural resources at the federal, state, and local levels. The NHPA authorized the expansion and maintenance of the NRHP, established the position of State Historic Preservation Officer, and provided for the designation of State Review Boards. The NHPA also created a mechanism to certify local governments to carry out the goals of the NHPA, assisted Native American tribes to preserve their cultural heritage, and created the Advisory Council on Historic Preservation (ACHP).

SECTION 106

Section 106 of the NHPA (54 USC 306108) states that federal agencies with direct or indirect jurisdiction over federally funded, assisted, or licensed undertakings must take into account the effect of the undertaking on any historic property that is included in or eligible for inclusion in the NRHP, and that the ACHP must be afforded an opportunity to comment, through a process outlined in the ACHP regulations in 36 Code of Federal Regulations (CFR) 800, on such undertakings. The Section 106 process involves identification of significant historic resources within an "area of potential effect [APE]; determination if the undertaking will cause an adverse effect on historic resources; and resolution of those adverse effects through execution of a Memorandum of Agreement." In addition to the ACHP, interested members of the

public, including individuals, organizations, and agencies (such as the California Office of Historic Preservation) are provided with opportunities to participate in the process.

NATIONAL REGISTER OF HISTORIC PLACES

The NRHP was established by the NHPA as "an authoritative guide to be used by Federal, State, and local governments, private groups and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment" (36 CFR 60.2). The NRHP recognizes properties that are significant at the national, state, and local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, and association.

Significance

A property is eligible for the NRHP if it is significant under one or more of the following criteria:

- **Criterion A:** It is associated with events that have made a significant contribution to the broad patterns of our history;
- **Criterion B:** It is associated with the lives of persons who are significant in our past;
- **Criterion C:** It embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; and/or
- **Criterion D:** It has yielded, or may be likely to yield, information important in prehistory or history. Ordinarily cemeteries, birthplaces, or graves of historic figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, and properties that are primarily commemorative in nature, are not considered eligible for the NRHP, unless they satisfy certain conditions. In general, a resource must be 50 years of age to be considered for the NRHP, unless it satisfies a standard of exceptional importance.

Integrity

In addition to meeting these criteria, a property must retain historic integrity, which is defined in National Register Bulletin 15 as the "ability of a property to convey its significance" (National Park Service 1990). In order to assess integrity, the National Park Service recognizes seven aspects or qualities that, considered together, define historic integrity. To retain integrity, a property must possess several, if not all, of these seven qualities, which are defined in the following manner in National Register Bulletin 15:

- **Location:** the place where the historic property was constructed or the place where the historic event occurred;
- **Design:** the combination of elements that create the form, plan, space, structure, and style of a property;
- **Setting:** the physical environment of a historic property;
- **Materials:** the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property;
- **Workmanship:** the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory;

- **Feeling:** a property's expression of the aesthetic or historic sense of a particular period of time; and/or
- **Association:** the direct link between an important historic event or person and a historic property.

State Regulations

The California Office of Historic Preservation, a division of the California Department of Parks and Recreation, is responsible for carrying out the duties described in the California Public Resources Code (PRC) and maintaining the California Historic Resources Inventory and California Register of Historical Resources (CRHR). The state-level regulatory framework also includes CEQA, which requires the identification and mitigation of substantial adverse impacts that may affect the significance of eligible historical and archaeological resources.

California Environmental Quality Act

CEQA requires a lead agency to analyze whether historic and/or archaeological resources may be adversely impacted by a proposed project. Under CEQA, a "project that may cause a substantial adverse change in the significance of a historic resource is a project that may have a significant effect on the environment" (PRC Section 21084.1). Answering this question is a two-part process: first, the determination must be made as to whether the proposed project involves cultural resources. Second, if cultural resources are present, the proposed project must be analyzed for a potential "substantial adverse change in the significance" of the resource.

HISTORICAL RESOURCES

According to State CEQA Guidelines Section 15064.5, for the purposes of CEQA, historical resources are:

(1) A resource listed in, or formally determined eligible…for listing in the CRHR (PRC 5024.1, California Code of Regulations [CCR] Title 14, Section 4850 et seq.).

(2) A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significance in a historic resources survey meeting the requirements of PRC Section 5024.1(g).

(3) Any object, building, structure, site, area, place, record, or manuscript that the lead agency determines to be eligible for national, state, or local landmark listing; generally, a resource shall be considered by the lead agency to be historically significant (and therefore a historic resource under CEQA) if the resource meets the criteria for listing on the CRHR (as defined in PRC Section 5024.1, Title 14 CCR, Section 4852).

Resources nominated to the CRHR must retain enough of their historic character or appearance to convey the reasons for their significance. Resources whose historic integrity (as defined above) does not meet NRHP criteria may still be eligible for listing in the CRHR.

According to CEQA, the fact that a resource is not listed in or determined eligible for listing in the CRHR or is not included in a local register or survey shall not preclude the lead agency from determining that the resource may be a historical resource (PRC Section 5024.1). Pursuant to CEQA, a project with an effect that may cause a substantial adverse change in the significance of a historical resource may have a significant effect on the environment (State CEQA Guidelines Section 15064.5[b]).

Substantial Adverse Change and Indirect Impacts to Historical Resources

The State CEQA Guidelines specify that a "substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (State CEQA Guidelines Section 15064.5). Material impairment occurs when a project alters in an adverse manner or demolishes "those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion" or eligibility for inclusion in the NRHP, CRHR, or local register. In addition, pursuant to State CEQA Guidelines Section 15126.2, the "direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects."

The following guides and requirements are of particular relevance to this study's analysis of indirect impacts to historic resources. Pursuant to State CEQA Guidelines (Section 15378), study of a project under CEQA requires consideration of "the whole of an action, which has the potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." State CEQA Guidelines (Section 15064(d)) further define direct and indirect impacts:

(1) A direct physical change in the environment is a physical change in the environment, which is caused by and immediately related to the project.

(2) An indirect physical change in the environment is a physical change in the environment which is not immediately related to the project, but which is caused indirectly by the project. If a direct physical change in the environment in turn causes another change in the environment, then the other change is an indirect physical change in the environment.

(3) An indirect physical change is to be considered only if that change is a reasonably foreseeable impact, which may be caused by the project.

ARCHAEOLOGICAL RESOURCES

In terms of archaeological resources, PRC Section 21083.2(g) defines a "unique archaeological resource" as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

(1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

(2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.

(3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If it can be demonstrated that a proposed project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (PRC Sections 21083.2[a], [b], and [c]). CEQA notes that, if an archaeological resource is neither a unique archaeological resource nor a historical resource, the effects of the project on those resources shall not be considered to be a significant effect on the environment (State CEQA Guidelines Section 15064.5[c][4]).

California Register of Historical Resources

Created in 1992 and implemented in 1998, the CRHR is "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Sections 21083.2 and 21084.1). Certain properties, including those listed in or formally determined eligible for listing in the NRHP and California Historical Landmarks numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historical resources surveys, or designated by local landmarks programs, may be nominated for inclusion in the CRHR. According to PRC Section 5024.1(c), a resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on NRHP criteria:

- **Criterion 1:** It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- **Criterion 2:** It is associated with the lives of persons important in our past.
- **Criterion 3:** It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- **Criterion 4:** It has yielded, or may be likely to yield, information important in history or prehistory.

Resources nominated to the CRHR must retain enough of their historic character or appearance to convey the reasons for their significance. Resources whose historic integrity does not meet NRHP criteria may still be eligible for listing in the CRHR.

Treatment of Human Remains

The disposition of burials falls first under the general prohibition on disturbing or removing human remains under California Health and Safety Code (CHSC) Section 7050.5. More specifically, remains suspected to be Native American are treated under CEQA in 14 CCR 15064.5; PRC Section 5097.98 illustrates the process to be followed in the event that remains are discovered. If human remains are discovered during construction, no further disturbance to the site shall occur, and the County Coroner must be notified (14 CCR 15064.5; PRC 5097.98).

Local Regulations

Monterey Peninsula Airport District

The Monterey Peninsula Airport District (MPAD) was created in March 1941 by the California State Legislature, pursuant to Senate Bill No. 1300. It was created as the public entity responsible for managing and operating the airport and its land. MPAD is overseen by a five-member Board of Directors, who are elected to serve 4-year terms. MPAD extends to include the cities of Monterey, Pacific Grove, Carmel-by-the-Sea, and Del Rey Oaks, as well as portions of Sand City and Seaside.

NATURAL SETTING

The project study area is at an elevation of approximately 200 feet above mean sea level. Of the 182-acre study area, approximately 45 acres are paved with existing runway and taxiways, buildings, and roads. A review of the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) Soils Survey revealed soils at this area of the airport consist of Baywood fine sand (2–15% slopes), which is a deep excessively drained soil occurring on slopes and stabilized dunes formed by windblown sand (NRCS 2015). Typically, Baywood fine sand supports chaparral and oak woodland communities.

Fauna that historically inhabited the project area included black-tailed deer (*Odocoileus hemionus columbianus*), bobcat (*Lynx rufus*), black-tailed jackrabbit (*Lepus californicus*), cottontail rabbit (*Sylvilagus* spp.), black bear (*Ursus americanus*), and grizzly bear (*Ursus horribilis*), as well as other small mammals, reptiles, amphibians, and birds. Shellfish such as California mussel (*Mytilus californianus*) and Pacific littleneck clam (*Protothaca staminea*) have been available near the project area on the coast. Marine mammals in the vicinity include California sea lion (*Zalophus californianus*), harbor seal (*Phoca vitulina*), and sea otter (*Enhydra lutris*).

CULTURAL SETTING

Prehistoric Overview

Understanding the prehistoric setting of the region helps predict the frequency and types of archaeological resources that may be identified. Knowing each period's characteristic artifact types allows one to assign an age to and interpret newly discovered resources. Based on geologic setting, biological setting, and geographic locations of previously recorded cultural resources, many areas are sensitive for the discovery of prehistoric archaeological resources. The six prehistoric periods of Central Coast occupation and cultural development are Paleo-Indian, Millingstone, Early, Middle, Middle-Late Transition, and Late (Jones et al. 2007:134).

Paleo-Indian Period (pre-8000 cal B.C.)

To date, sites or isolated artifacts that confirm habitation of the Central Coast region before 8000 cal (calibrated radiocarbon date) before Christ (B.C.) (during the end of the Pleistocene) have not been identified. However, human presence in the Central Coast region before 8000 cal B.C. (perhaps as long as 13,000 years ago) is suggested by discoveries of fluted projectile points from the southern portion of the Central Coast at Nipomo and at CA-SLO-1429 near Santa Margarita (Jones et al. 2007:135). While undated, the style of these points suggests a Paleo-Indian age.

Millingstone Period (8000 to 3500 cal B.C.)

Millingstone period deposits of the Early Holocene are characterized by the initial appearance of handstones and milling slabs ("milling stones"), which are associated with seed processing. Flaked tools are also apparent in these assemblages, including large side-notched points and cobble-core tools. Faunal remains suggest that Millingstone subsistence featured a wide range of animals such as shellfish, fish, birds, and land mammals including deer and rabbits, but in terms of volume, Millingstone diets consisted of 70 to 84 percent marine-derived food, particularly shellfish. At least 42 Central Coast sites feature a Millingstone period occupation. Although these are found over a wide range of geographical settings (open rocky coasts, sloughs, bays, and the interior valleys of the Coast Ranges), most known Millingstone occupations in the region occur on the coast (Jones et al. 2007:136).

Early Period (3500 to 600 cal B.C.)

The Early period of the Middle Holocene reflects new settlements that began circa 3500 to 3000 cal B.C. Breschini and Haversat (2004) have suggested that the Early period begins in 4000 cal B.C. and should be divided into two subphases. Phase I features the retention of Millingstone characteristics, while Phase II (2000 cal B.C. to 600 cal B.C.) features a pronounced increase in stemmed points and the introduction of mortars and pestles and Class L beads (rectangular Olivella beads). This split is supported by the assemblages of at least four Monterey County sites and may be supported as more post-2000 cal B.C. deposits are discovered.

The Early period is characterized by a great frequency of large projectile points and other bifaces, including relatively narrow contracting-stemmed points, wider Rossi square-stemmed points, and side-notched points of the type found in Millingstone deposits. The use of cobble-core tools continues through this period but in lower frequencies. Portable mortar and pestles appear in Early period assemblages but are infrequent. Burials from site CA-MNT-391 show a preference for flexed (bent) position and contained Rossi square-stemmed projectile points, fish gorges, and Class L beads. Bipointed bone gorges associated with line fishing appear during the Early period, and fish remains are more apparent in Early period assemblages than in Millingstone assemblages (Jones et al. 2007:138). Most Early period faunal assemblages feature deer, although a site at Morro Bay (CA-SLO-165) contains a large number of rabbit bones and site CA-MNT-391 has a preponderance of sea otters.

Middle Period (600 cal B.C. to cal A.D. 1000)

The Middle period of the Early Holocene manifestation of the Hunting Culture features the continuation of the contracting-stemmed points and the disappearance of the square-stemmed and large-notched types. The Olivella bead Type G2 (a saucer type) outnumbers the L type during this period. Ground stone features both handstones and milling slabs and mortar and pestles. Bone gorges are still apparent, and circular shell fishhooks appear for the first time. Fish remains are markedly more apparent in Middle period assemblages than in Early period ones. Mammal remains from Middle period sites vary from site to site and include northern fur seals and sea otters. In some Middle period sites, rabbit remains predominate, while, in others, deer remains prevail. Grooved stone net weights are seen in Middle period assemblages. Burials continue to show the flexed position and are sometimes accompanied by bone flutes. Bone tubes and large quantities of Type G2 beads are present in burials of this period. Type G1 Olivella saucer beads also appear. Shell bead types can be chronological indicators when types are compared within a region. At the end of this period, small leaf-shaped projectile points appear, indicating the advent of bow and arrow use (Bennyhoff and Hughes 1987).

Middle-Late Transition (cal A.D. 1000 to 1250)

Marked changes in Central Coast assemblage and settlement patterns occur after circa Anno Domini (A.D.) 1000, at the beginning of the Late Holocene. Assemblages feature a large number of the arrow points that appear at the end of the Middle period, as well as a new bead type, the Class K cupped Olivella bead. These developments help identify assemblages from this period. Fewer stemmed points appear in assemblages, but Class G1 and G2 beads are still found in assemblages of this period. Overall, the Hunting Culture that includes the Early, Middle, and Middle-Late Transition periods sees an increase in the exploitation of fish. The exploitation of shellfish is apparent at all coastal sites but seems to decrease, while the hunting of vertebrates increases. Radiocarbon dates indicate that the exploitation of acorns may have occurred during the Hunting Culture (Jones et al. 2007:138).

Late Period (cal A.D. 1250 to 1769)

Late period assemblages are distinct from those of previous periods because of a preponderance of Desert side-notched and Cottonwood projectile points, small bifacial bead drills, bedrock mortars, hopper mortars, Class E lipped Olivella beads and Class K beads, and steatite disk beads. However, Breschini and Haversat (2004) put forth that Desert side-notched points appeared after contact in the Monterey Peninsula area. Sites in the Santa Cruz area and the Monterey Peninsula feature thin, rectangular Class M beads and small, serrated arrow points. Circular shell fishhooks persist through the Late period (Breschini and Haversat 2004; Jones et al. 2007:140). Inland Late period sites are more prevalent in the archaeological record than coastal Late period sites. Many Late period sites that have been recorded feature bedrock mortars and associated middens, which may indicate a greater reliance on plant-based foods. Prehistoric inhabitants of California processed plant-based foods such as seeds (including acorns) in bedrock mortars. However, the Monterey Peninsula features dense deposits of whole abalone shells from this period that have been interpreted as abalone collecting and processing sites used by inland inhabitants (Jones et al. 2007:140). Residential features (circular house floors approximately 3 to 4 meters in diameter) have been recorded on the coast and inland.

Ethnographic Overview

The numerous Costanoan social groups in this region were organized by tribelets, each of which could have several villages or a main village with a number of camps (Levy 1978:487). Tribelets were also political units that were structured by similarities in language and ethnicity, each holding claim to a designated portion of territory. Topographic features, such as rivers, watersheds, and ridgelines, defined tribelet territories and the boundaries were strictly respected.

The study area was historically occupied by the tribelets of the Costanoan linguistic group (Levy 1978). Descendants of Costanoan speakers prefer to be called by the name of the tribelet from which they are descended, such as Mutsun or Rumsen. When their heritage is mixed or the specifics have been lost over generations, descendants prefer the use of the native term *Ohlone*, rather than the European-imposed term Costanoan (“coastal dwellers”) (Margolin 1978).

Costanoan territory extended between the Carquinez Strait and San Pablo Bay on the north, southward along the coast beyond Monterey Bay to Carmel Valley, and inland to the coast range (Levy 1978:485). Neighboring groups included the Coast Miwok north across the Carquinez Strait, the Miwok and Northern Valley Yokuts to the east, and the Salinan and Esselen to the south.

Spanish mission records, diaries, and journals provide most of the information about the Costanoans because little ethnographical research has been conducted in the twentieth century (Levy 1978:495). The most thorough study, by Milliken (1995), used mission records, and Margolin (1978) reconstructed Native American life in the Bay Area.

Linguistically, these tribelets belong to the Utian, or Miwok-Costanoan language family, part of a hypothesized larger Penutian linguistic stock (Mithun 2001:309). The Costanoan family is broken down into four branches: the Karkin, in the Carquinez Strait area; the Northern Costanoan, consisting of the Chocheno (with four dialects), Ramaytush, Tamyen, and Awaswas languages; the Soledad, seen only in Cholon; and the Southern Costanoan branch, consisting of Rumsen (with Carmel and Monterey dialects) and Mutsun (Mithun 2001:535). Speakers of these languages and dialects, in various configurations, have been treated as tribes in the past (Levy 1978:Figure 1) in accordance with anecdotal reports. Through detailed examination of mission records, marriage patterns, and dialect variation seen in personal names, Milliken (1995:229) delineated 43 separate political entities (tribelets) in the San Francisco Bay, Santa

Cruz, and inland area, with another six or so tribelets in the south Monterey Bay and Carmel Valley region.

According to historic accounts, the *kalenta ruk* tribelet of the Mutsun branch occupied the Monterey Peninsula near the study area (Levy 1978:485). The Spanish designation for this tribelet was San Carlos. Mutsun speakers occupied the lands inland from the coast around the Pajaro and upper Salinas rivers, and numbered approximately 2,700 in 1770.

Each tribelet's territory contained a main village and smaller satellite villages. The villages were typically situated along a river or stream for easy access to water (Levy 1978:487). Coastal people did not build right on the shoreline, but usually on an overlooking bluff. Dwellings were domed structures consisting of a tule- or grass-covered framework of poles, with a rectangular doorway and central hearth (Levy 1978:492). The forest-dwelling Rumsen group also constructed conical houses of split redwood and redwood bark. Villages often contained specific enclosures for dancing. Assembly halls in the center of the settlement were common; some halls were large enough to contain the entire village population of 200 people. Each community had a sweat lodge, placed near a stream. The Costanoans either buried or cremated the deceased, sometimes depending on firewood availability. There is no mention of cemeteries associated with villages (Levy 1978:490–491).

The rich resources of the ocean, bays, valleys, and mountains provided Ohlone-speaking peoples with food and all their material needs (Levy 1978:491–492). The primary food staple was the acorn, supplemented by a great variety of animal and plant resources. Depending on species availability and desirability, Costanoans used four oak species, including coast live, valley, tanbark, and black. Collected nuts included buckeye, laurel, pine nuts, and hazelnuts. Seeds from dock, chia, and other salvias; tarweed; and holly-leaf cherry were collected and ground into meal. Vegetal resources also included several berry-producing plants, wild onions, carrots, tule roots, and greens of clover and other annuals. Large and small game, including deer, elk, antelope, bear, mountain lion, raccoon, ground squirrels, woodrat, mouse, mole, dog, rabbit, and jackrabbit, plus seals and stranded whales were part of their diet. Migrating waterfowl were an important resource, and included geese, ducks, and coots. Pigeons, quails, and hawks were also consumed, but not eagles, owls, ravens, or turkey vultures. Rivers and streams provided freshwater fish, including steelhead, salmon, and sturgeon, while the ocean provided shark, sardine, and lampreys. Costanoan diet also included a variety of insects and reptiles, but not amphibians.

For hunting and gathering natural resources, Costanoans used a wide array of tools, implements, and enclosures. Among those used for hunting land mammals and birds were bows and arrows, traps and snares, deer-head disguises, bolas, nets and net sinkers, and enclosures/blinds. Communal hunting drives were used to catch rabbits, whereas nets and poisons were used to harvest fish. Tule watercraft were used for transportation and for hunting fish and waterfowl on enclosed bays and marshes. Many plants were collected using wooden tools: long poles for dislodging acorns and pinecones, fire-hardened digging sticks for obtaining roots, and beaters for dislodging seeds. Once collected, seeds, roots, and nuts were placed in burden baskets and transported for processing or storage (Levy 1978:491).

Costanoans used a variety of tools to process food resources. These tools included portable stone mortars and pestles, bedrock mortars, hopper mortars, anvils, woven strainers and winnowers, leaching and boiling baskets, woven drying trays, and knives. Various foods were baked in earthen ovens. Wooden paddles were carved for stirring food in the boiling baskets. There were shell spoons, basket dippers, and mush bowls for serving food, and woven water jugs and storage containers for keeping food afterwards.

The presence of exotic items such as obsidian, steatite, and shell indicates Costanoan tribelets traded with coastal groups and mountain tribes (Levy 1978:493). Dietary items were also traded with the Plains Miwok, Sierra Miwok, and Yokuts. Costanoans provided mussels, abalone shells, dried abalone, and salt

to the Yokuts and Olivella shells to the Miwok. They received pine nuts from the Yokuts, but other food resources received by the Costanoan tribelets are unrecorded.

The Native American population in this region came into contact with European culture at the beginning of Spain's land exploration and settlement in A.D. 1769. Traditional lifeways were altered drastically during the late 1700s to early 1800s when the Spanish placed their capital at Monterey, built forts at Monterey and San Francisco, and established seven Franciscan missions to convert native peoples to Christianity and the European way of life. Large-scale epidemics soon swept through the mission population and remaining villages (Milliken 1995). Subsequent Spanish colonial towns at Santa Cruz and Yerba Buena (San Francisco), followed by large Mexican land grants, separated Costanoans from their harvesting grounds and hunting parks. Many surviving Native Americans were pulled away from their own villages to the new Euro-American settlements. It is estimated that the combined Costanoan population fell from a pre-contact total of 10,000 down to 2,000 by the end of the mission period in 1834 (Levy 1978:486). During the mission period, the dwindling Costanoan population also intermarried with other interior tribes at the missions, mixing their cultural identities.

During the late 1800s, several Native American communities of mixed heritage remained in rural areas, with Pleasanton, Monterey, and San Juan Bautista the best known (Levy 1978:487). Even these groups continued to shrink as young people married into other groups and moved away. Estimates of the total remaining population of people with recognizable Costanoan descent were fewer than 300 in 1973 (Levy 1978:487). According to Levy: "In 1971 descendants of the Costanoan united in a corporate entity, the Ohlone Indian Tribe, and received title to the Ohlone Indian Cemetery where their ancestors who died at Mission San José are buried" (Levy 1978:487).

Since that time, other descendants of Costanoan tribelets, notably the Rumsen and Mutsun groups, have organized political and cultural heritage organizations that are active locally and statewide. All are concerned with revitalizing aspects of their culture, learning the language through notes collected by anthropologist John Harrington, and preserving the natural resources that played a vital role in traditional culture. Some Costanoan groups also are seeking federal recognition of their tribe, petitioning the Bureau of Indian Affairs with reconstructed tribal histories and genealogies, records that will be a great resource for future generations of Costanoans. These groups include the Amah-Mutsun Band of Mission Indians, Costanoan Band of Carmel Mission Indians, Costanoan Rumsen Carmel Tribe, Indian Canyon Mutsun Band of Costanoan, and Muwekma Ohlone Tribe.

Historic Overview

Post-contact history for the state of California generally is divided into three periods: the Spanish period (1769–1822), the Mexican period (1822–1848), and the American period (1848–present). Although there were brief visits by Spanish, Russian, and British explorers between 1529 and 1769, the beginning of Spanish settlement in California occurred in 1769 with the establishment of Mission San Diego de Alcalá. This was the first of 21 missions established between 1769 and 1823. After the end of the Mexican Revolution against the Spanish crown (1810–1821), all Spanish holdings in North America (including both Alta and Baja California) became part of the newly formed Mexican Empire, and shortly thereafter, a constitutionally based United Mexican States. Under Mexican rule, the authority of the California missions gradually declined, culminating with their secularization. The Mexican period is marked by an extensive era of land grants, most of which were in the interior of the state, and by exploration by American fur trappers west of the Sierra Nevada Mountains.

With the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican–American War, California became a territory of the United States. The discovery of gold in 1848 at Sutter's Mill near Sacramento and the resulting Gold Rush era influenced the history of the state and the nation. The rush of

tens of thousands of people to the gold fields also had a devastating impact on the lives of indigenous Californians, with the introduction and concentration of diseases, the loss of land and territory (including traditional hunting and gathering locales), violence, malnutrition, and starvation. Thousands of settlers and immigrants continued to pour into the state, particularly after the completion of the transcontinental railroad in 1869.

With continued growth, California continues to be a national leader in agriculture and poultry production, ranching (cattle and sheep), and aerospace and communications industries, as well as the film and entertainment business. The wealth of California's natural resources (e.g., lumber, petroleum deposits, minerals, fish) also continues to contribute to its growth and development.

Monterey County

Juan Rodríguez Cabrillo was the first European to sail along today's Monterey County coast in 1542 (Hoover et al. 2002:225; Gudde 1998:246). Sixty years passed after Cabrillo's 1542 voyage, before Sebastián Vizcaíno harbored in the bay in 1602 near the present city of Monterey. In 1769, Gaspar de Portolá was sent from Mexico City to locate the port described by Vizcaíno, and the Spanish presidio and mission (San Carlos de Monterey) were established in 1770. The mission was the second established in California, after San Diego de Alcalá in 1769, but the following year it was moved south to its present site in Carmel. Renamed San Carlos Borromeo de Carmelo, it served as headquarters for the mission chain from 1770 until 1803. It is also the resting place for Father Junípero Serra, founder of the California missions (Johnson 1979:83).

Monterey County was one of California's original 27 counties, established in 1850. The governmental seat was initially located in the town of Monterey, but was relocated to Salinas in 1873, where it has remained. The town of Monterey was named the capital of "Las Californias" (upper and lower California) in 1774, and 3 years later became the official capital of Alta (upper) California. The city remained the capital during Spanish and Mexican rule. Many of the Spanish colonial structures built around Monterey's Old Town Historic District are listed on the NRHP. The Larkin House, built in 1834, is a National Historic Landmark, and the Cooper-Molera adobe, built in 1826, is one of the largest extant adobe buildings remaining in northern California. Several other historic buildings give the town an old Spanish/Mexican appearance.

There are two Franciscan missions in the Salinas Valley area—Mission San Antonio de Padua in the community of Jolon and Mission Nuestra Señora de la Soledad in the city of Soledad. Mission San Antonio is now within the Fort Hunter Liggett Military Installation, southwest of King City in southern Monterey County. It was established in 1771, the third mission to be founded after those at San Diego and Monterey. Mission San Antonio was moved to its present location in 1773. The mission in the town of Soledad was founded in 1791, the thirteenth of the 21 missions established by the Spanish.

Monterey Bay has a long history as a military focus, fishery, and seaside resort. Although the Spanish Presidio is long gone, the Naval Postgraduate School, a Coast Guard station, and the Defense Language Institute now grace its shores. Slightly east of the bay, the U.S. Army established Ford Ord in 1917 as a maneuver and field artillery target range. The base was closed in 1994 and is now the home of the California State University, Monterey Bay.

Monterey Regional Airport

The same patterns of development that drove early development in Monterey—such as the growth of tourism and the defense- and military-related presence in the area—figured prominently in the establishment and expansion of MRY. In the 1930s, land formerly held by Del Monte Properties was

deeded to the City of Monterey, and, with funding provided by the Great Depression-era Works Projects Administration, an airport was constructed; the original configuration included two runways and a hangar (SWCA 2014).

During World War II, MRY served as one of a number of auxiliary airfields to Naval Air Station Alameda. Following the war, commercial passenger flights resumed and in 1948, construction of a new terminal began. Inaugurated in the fall of 1950 and ultimately constructed for $245,000, the terminal spanned 15,000 square feet and was promoted as serving the communities of Monterey, Carmel, and Watsonville. Over the years, in order to accommodate growth at the airport, substantial additions were made to the terminal and the current footprint spans approximately 70,000 square feet (SWCA 2014).

PRE-FIELD RESEARCH

Records Search

On June 2, 2014, staff at the Northwest Information Center (NWIC) at Sonoma State University, Rohnert Park, California, conducted a California Historical Resources Information System (CHRIS) records search of the entire airport property and a 0.25-mile radius. SWCA obtained supplemental records search results on October 22, 2015. The purpose of the records searches was to identify previously recorded prehistoric or historic cultural resources, including isolated artifacts, archaeological sites, historical buildings, and structures that are in the study area. The results of the records searches are presented in Appendix A. The NWIC consulted the following sources of information, along with official maps and records:

- National Register of Historic Places
- California National Register of Determined Eligible Properties
- California State Historic Property Data Files
- California State Historical Landmarks
- California Points of Historical Interest
- California Office of Historic Preservation Archaeological Determinations of Eligibility
- California Department of Transportation (Caltrans) State and Local Bridge Surveys

Previous Cultural Resources Studies

The NWIC records search revealed that 22 cultural resources studies have been conducted within a 0.25-mile radius of the study area. Four of these previous studies—S-005882, S-029625, S-037231, and S–045490—directly overlap with the current study area (Figure 3; Table 1):

- S-005882 included archival research and a pedestrian survey of the northern portion of the airport property;
- S-029625 included archival research and a pedestrian survey for a proposed road improvement project;
- S-037231 included archival research and pedestrian survey for the Runway Safety Area (RSA) Improvement Project (SWCA 2010); and

- S-045490 (SWCA 2014) included archival research and a field survey to document built environment resources within and near the airport; however, it did not address archaeological resources (Appendix A).

Aside from P-27-1459 (discussed in the following section), none of these studies identified significant cultural resources within or adjacent to the study area.

In addition, SWCA reviewed technical reports recently prepared for data recovery, field survey, and construction monitoring efforts for multiple projects on the Airport, which were provided by Pacific Legacy, Inc.:

- *Cultural Resources Monitoring for the Solar Array Project, Airport District Property, Monterey County, California* (O'Neill 2017); and
- *Data Recovery Report for Portions of CA-MNT-1438/H, Monterey Peninsula Airport District, Monterey County* (Holm et al. 2016).

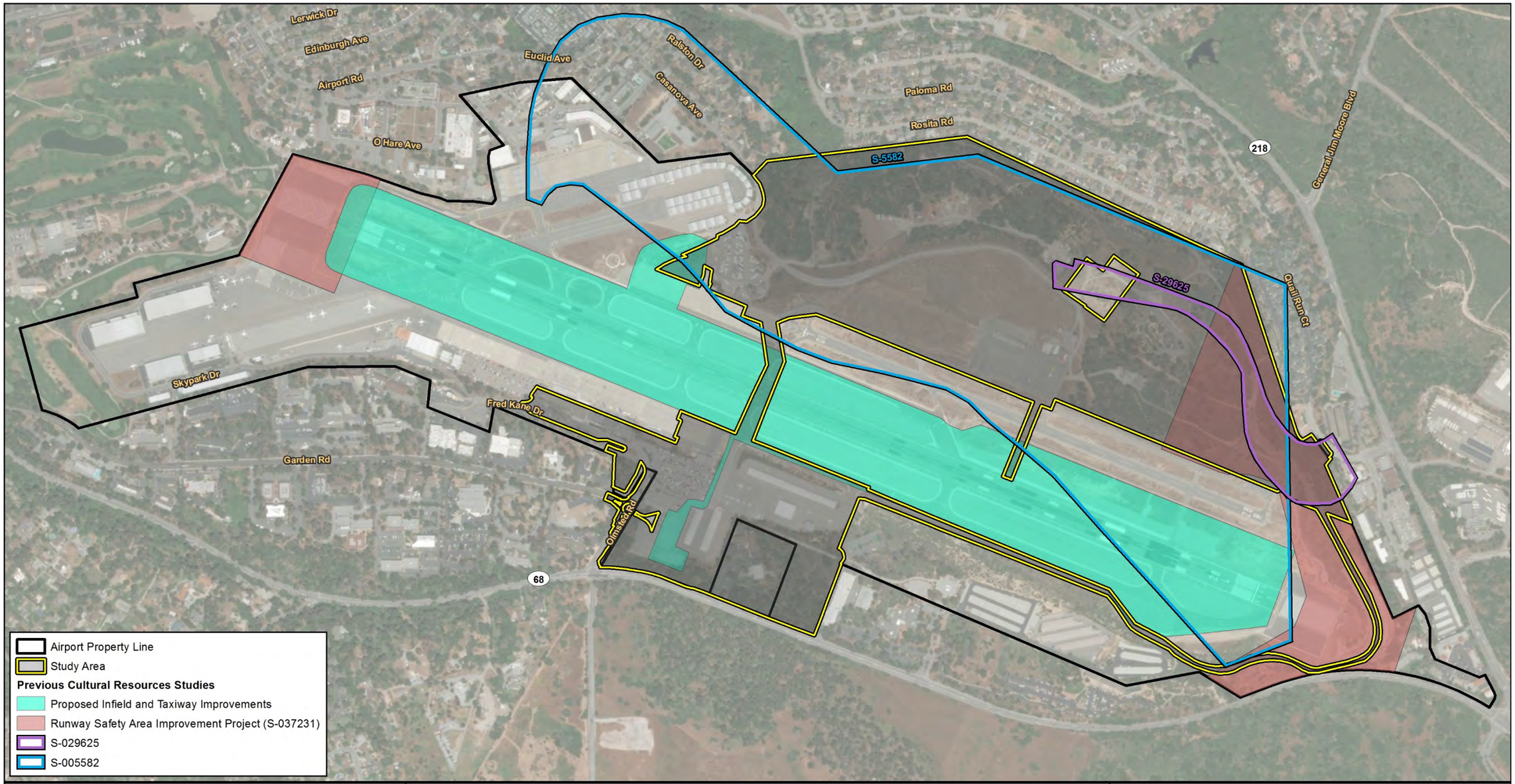

Figure 3. Previous cultural resources studies map.

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Table 1. Previously Conducted Cultural Resources Studies within 0.25 Mile of the Study Area

NWIC Report Number	Title of Study	Author	Year	Proximity to the Study Area
S-002164	The Monterey County Archaeological Resource Project: A Project-Specific Research Design.	Breschini, Gary S. and Trudy Haversat	1978	Outside
S-003343	Archaeological Aspects of Environmental Study of Jacks Peak County Park	Edwards, Rob	1973	Outside
S-003344	Archaeological Impact Report on Proposed Project Nos. 021121 and 032900 for the State of California, Department of Transportation, District 05	Hardesty, Eric	1974	Outside
S-003654	Preliminary Archaeological Reconnaissance of a Parcel Near the Junction of Highways 68 and 218, Monterey, Monterey County, California	Breschini, Gary S. and Trudy Haversat	1981	Outside
S-005413	Archaeological Resource Assessment of the Edward's Development Project Site, Monterey, California	Fazio, Maryanne	1977	Outside
S-005428	Cultural Resource Assessment of the Cañada de la Segunda Water Transmission Pipeline, Monterey County, California	Peaks, A.S.	1975	Outside
S-005511	Preliminary Archaeological Surface Reconnaissance of the Highway 68 Plan Line Area, Between York Road and Olmsted Road, East of Monterey, Monterey County, California	Breschini, Gary S.	1979	Outside
S-005632	Archaeological Reconnaissance for Encroachment Permit, 05-MON-68 5.9/6.0 (Caltrans)	Smith, C.	1982	Outside
S-005742	Cultural Resource Evaluation for Highway 68 Improvements and Entrance/Alignments for the Monterey Municipal Airport in the City of Monterey Alignments for the City of Monterey Municipal Airport in the City of Monterey	Cartier, R.	1982	Outside
S-005882	Cultural Resource Evaluation of the Monterey Peninsula Airport, Monterey, California	Edwards, R. and J.M. Cooper	1983	Within
S-006694	Cultural Resources Reconnaissance of the Monterra Ranch Project Area, Monterey County, California	Clark, Matthew R.	1984	Outside
S-007740	Archaeological Reconnaissance Report for Pacific Bell Projects NE 1841 T and NE 1843 T, Located from Olmstead Road to Torero Drive on Highway 68, and from Jackson Street to Del Monte Avenue, and Castroville to Boronda Road on Highway 183, Monterey County	Dietz, Stephen A.	1985	Outside
S-010551	Archaeological Survey Report, proposed signal at the intersection of Josselyn Canyon Road and Highway 68, 05-MON 68 P.M. 5.2 5351-356800	Waldron, Wendy	1988	Outside
S-010888	Preliminary Archaeological Reconnaissance for the Highway 218/68 Intersection Improvements, Del Rey Oaks, Monterey County, California	Breschini, G. and T. Haversat	1989	Outside
S-018008	CDF Project Review Report for Archaeological and Historical Resources, Monterey ECC (California Department of Forestry)	Serpa, Luke	1996	Outside
S-019983	An Examination of the Proposed Project Site for the Orosco Shopping Center in Del Rey Oaks, Monterey County, California	Breschini, G.S.	1997	Outside
S-022657	Archaeological Survey Along Onshore Portions of the Global West Fiber Optic Cable Project	Sawyer, I., et al.	2000	Outside

NWIC Report Number	Title of Study	Author	Year	Proximity to the Study Area
S-029625	Preliminary Archaeological Reconnaissance of the Del Rey Oaks North Access Road Project, Del Rey Oaks, Monterey County, California	Doane, M. and T. Haversat	2004	Outside
S-033545	Draft Comprehensive Management and Use Plan and Environmental Impact Statement, Juan Bautista de Anza National Historic Trail, Arizona and California	National Park Service	1994	Outside
S-037231	Cultural Resources Survey for the Proposed Monterey Peninsula Airport Runway Safety Area Improvement Project, Monterey, Monterey County, California	Hanes, P.G. and N.E. Sikes (SWCA Environmental Consultants)	2010	Outside
S-039271	Cultural Resources Investigation for AT & T Mobility CNU3619/FA#10087972 Highway 68 & Olmsted, Monterey, California 93940 (letter report)	Losee, Carolyn	2012	Outside
S-045490	Historic Resources Assessment and Survey Report, Monterey Regional Airport, Monterey, California	SWCA Environmental Consultants	2014	Within

Previously Recorded Archaeological Resources

The CHRIS records search revealed that three previously identified archaeological sites (P-27-88, P-27-90, and P-27-908) are within 0.25 mile of the study area, and one prehistoric archaeological resource (P-27-1459) is within the study area (Figure 4). P-27-88/CA-MNT-1799H is a historic trash dump, P-27-90/CA-MNT-1801H is the remnants of a historic structure, and P-27-908/CA-MNT-842 is a prehistoric midden with bedrock mortar features. All three are located outside of the airport property and south of SR 68.

Previously identified resource P-27-1459 originally consisted of the historic Ryan House (also identified as Rancho Saucito and currently as Tarpy's Restaurant), an NRHP- and CRHR-eligible resource (SWCA 2014). However, according to the NWIC, what was formerly and separately identified as P-27-000803 (CA-MNT-728)—a large prehistoric habitation site consisting of shell midden, a lithic scatter, and purportedly, human remains—was subsumed by P-27-1459. As such, they are now considered a single resource by the NWIC.

A portion of CA-MNT-1438/H was encountered during construction monitoring for the MRY RSA Improvement Project. As the portion of the archaeological site could not be avoided, it was assumed eligible for the NRHP/CRHR, and Pacific Legacy, Inc. undertook a data recovery program to mitigate impacts to the site. Following mitigation through data recovery, the portion of the site within the RSA's direct APE (which overlaps with the current study area) was entirely destroyed by project-related excavations. Data recovery excavations revealed a diverse prehistoric assemblage with multiple subsurface features, and human remains. In addition, all site-associated soils were excavated and relocated to an area on the airport known to not contain archaeological resources (Holm et al. 2016). This location is outside of any currently proposed projects associated with the AMP, but is within the study area (Figure 4).

Exact location of identified resources is not disclosed to protect resource integrity.

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Previously Recorded Built Environment Resources

In 2014, SWCA completed a historic resources survey and evaluation of MRY to identify airport properties that appeared eligible for national, state, or local designation, either individually or as part of a historic district (SWCA 2014). Methods included a CHRIS records search of the airport property, an intensive level survey and evaluation of built environment resources aged 45 years or older, and completion of a technical report summarizing the results. As a result of the study, 21 properties were subject to intensive-level survey. Research conducted in support of the study identified two principal themes of significance for the airport: (1) World War II era, defense-related development; and (2) the early history and development of aviation on the Monterey Peninsula. While a number of properties on the airport were found to reflect these themes of significance, only one of the surveyed properties appeared eligible for national, state, or local landmark listing: Tarpy's Roadhouse/Ryan House, constructed between 1919 and 1925 on the southeastern portion of the airport property (prior to the development of the airport). For airport-related properties, ineligibility was primarily due to significant alterations. With the exception of Tarpy's Roadhouse/Ryan House, none of the surveyed properties appear eligible for national, state, county, or local listing under other applicable criteria, either individually or as contributors to historic districts.

Since the entire airport was considered in 2014, five buildings have come of age: Buildings 72, 99, 102, 104, and 106, all of which were constructed in 1970. SWCA conducted a supplemental built environment study, which included evaluation of four of the five aforementioned buildings (the fifth, Building 72, was found to be demolished) (SWCA 2017). None of the four recently evaluated buildings are eligible on their own, or as contributing elements to a district, at a national, state, or local level for the NRHP or CRHR. Further, Tarpy's Roadhouse/Ryan House (P-27-1459), the only eligible resource identified during the 2014 study, is located approximately 175 feet from the study area and does not have the potential to be impacted by the future airport development.

In addition to historic resources identified on the airport property, the CHRIS records search revealed that one additional historic building (P-27-2846) is within 0.25 mile of the study area. This resource was recommended ineligible for the NRHP, is outside of the airport property, and warrants no further consideration for the AMP.

FIELD SURVEY

SWCA conducted an intensive-level pedestrian survey of the 182-acre study area (Figure 5). Mr. Laurie and Mr. Jackson examined all areas of exposed ground surface for prehistoric artifacts (e.g., chipped stone tools and production debris, stone milling tools), historic artifacts (e.g., metal, glass, ceramics), soil discoloration that might indicate the presence of a cultural midden, linear features, soil depressions, and other features indicative of the former presence of historic structures or buildings (e.g., foundations). Aside from paved areas, all areas were subject to pedestrian survey. Approximately 50 percent of the study area had zero to less than 25 percent visibility. The remainder of the study area had poor to good (25 percent to 75 percent) visibility. In areas of poor visibility, the ground was cleared using boot or trowel at regular 20-meter intervals to inspect the surface for the presence of cultural resources. Total survey coverage included 137 acres of the 182-acre study area (Figure 5). Paved areas and those obscured by existing improvements were not subject to pedestrian survey (approximately 45 acres of the overall 182-acre study area). Photo documentation of the study area is included in Appendix B.

FINDINGS

Archival research revealed that the entire study area has been subject to some level of cultural resources study, including both architectural surveys and evaluations, archaeological surveys, archaeological monitoring, and archaeological data recovery. Several historic-era buildings are located within the study area; however, all but one (P-27-1459, Tarpy's Restaurant) have been determined ineligible for either the NRHP or CRHR. Likewise, only one previously identified archaeological site is within the study area, which is the prehistoric component of P-27-1459 (CA-MNT-1438/H).

A portion of CA-MNT-1438/H was encountered during construction monitoring for the MRY RSA Improvement Project. As the portion of the archaeological site could not be avoided, it was assumed eligible for the NRHP/CRHR, and Pacific Legacy, Inc. undertook a data recovery program to mitigate impacts to the site. As previously stated, following mitigation through data recovery, the portion of the site within the RSA's direct APE (which overlaps with the current study area) was entirely destroyed by project-related excavations. Data recovery excavations revealed a diverse prehistoric assemblage with multiple subsurface features, and human remains. In addition, all site associated soils were excavated and relocated to an area on the airport known to not contain archaeological resources (Holm et al. 2016). This location is outside of any currently proposed projects associated with the AMP, but it is within the study area (Figure 6).

Cultural resources survey of the study area revealed the airport is heavily disturbed from its original construction and subsequent historic and modern development. Dozens of historic-era buildings, structures, and access routes associated with mid-twentieth century development of the airport resulted in extensive earth movement and modification of the native landscape. Historic aerials and maps depict a vast network of no longer extant historic features in the northern and northwestern portions of the study area (SWCA 2014) that have been demolished and removed from the airport property. Remnants of this earlier development include existing roads and access routes. In addition, the field survey identified a concrete foundation and associated concrete debris in the northern portion of the study area, designated MRY-HIST-001 (see Figure 6; Appendix C). Historic archaeological site MRY-HIST-001 consists of the foundational remnants of a target shooting range facility (personal communication with Chris Morello, MRY Project Manager, via email on April 10, 2018). The foundation is partially demolished, as evidenced by concrete debris piles adjacent to the site. Although partially obscured by dense vegetation, the visible portion of the foundation measures approximately 100 feet (northwest/southeast) by 35 feet (northeast/southwest) (see Appendix C).

Historic archaeological site MRY-HIST-001 is not associated with any significant events or people (Criterion A/1 and B/2), the foundation is a typical example of construction type and material (Criterion C/2), the site does not have the ability to provide additional information regarding the history of the airport or region beyond what is already well-documented (Criterion D/4), and the site lacks integrity. As such, the site does not constitute a historical resource or historical property and warrants no further consideration.

In addition, dozens of isolated historic-era cans and bottles and miscellaneous historic-era debris (e.g., metal, glass, plastic) were observed throughout the study area, the majority was likely related to recreational use or mid-twentieth century development within the airport property. In addition, two abandoned mid-century automobiles were encountered in the southern portion of the study area, within the potential acquisition property along SR 68. Due to the lack of context, the isolated historic debris and automobiles do not warrant formal documentation beyond their mention in this report.

Aside from the aforementioned multi-component cultural resource, P-24-1459, which includes the NRHP- and CRHR-eligible Tarpy's Restaurant and archaeological site CA-MNT-1438/H, no significant cultural resources are known to occur within the study area.

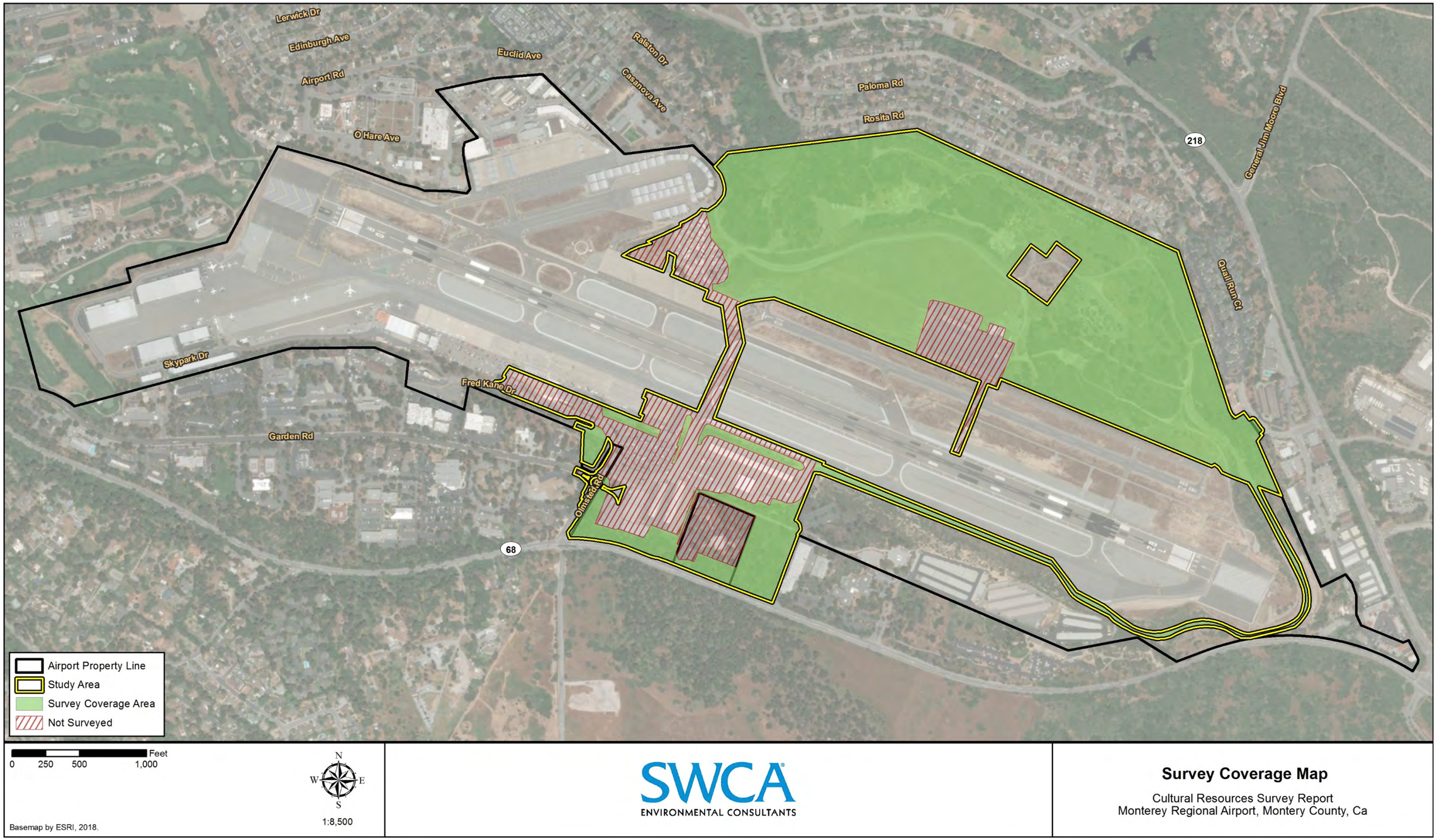

Figure 5. Survey coverage map.

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Exact location of identified resources is not disclosed to protect resource integrity.

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RECOMMENDATIONS

Although no new, significant cultural resources were identified within the study area as a result of pedestrian survey and archival research, as with previous cultural resources studies conducted on the airport property, archaeological survey is problematic in this area due to dense vegetation cover and existing developments (e.g., runway and taxiways, buildings, roads). The pedestrian survey of the study area was conducted in a good faith effort, which included manual ground clearing at regular intervals in areas of low visibility; however, the lack of visibility, and in some cases, impenetrable vegetation creates inherent issues with negative findings. As such, the following mitigation measures are recommended for future proposed development(s) associated with the AMP:

1. Prior to project implementation, a qualified archaeologist should conduct a cultural resource awareness training for all construction personnel, which should include the following:
   - Review the types of prehistoric and historic resources that may be uncovered;
   - Provide examples of common prehistoric and historic archaeological artifacts to examine;
   - Review what makes an archaeological resource significant to archaeologists and local native Americans;
   - Describe procedures for notifying involved or interested parties in case of a new discovery;
   - Describe reporting requirements and responsibilities of construction personnel;
   - Review procedures that shall be used to record, evaluate, and mitigate new discoveries; and
   - Describe procedures that would be followed in the case of discovery of disturbed as well as intact human burials and burial-associated artifacts.
2. In the event that cultural resources are exposed during project implementation, work should stop in the immediate vicinity, and an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards should be retained to evaluate the find and recommend relevant mitigation measures.
3. If human remains are encountered, then the procedures outlined by the California Native American Heritage Commission (NAHC), in accordance with CHSC Section 7050.5 and PRC Section 5097.98, would be followed. If the monitor determines that a discovery includes human remains:
   - All ground-disturbing work within the immediate vicinity of the find (50 feet) would halt.
   - The archaeologist would contact the Monterey County Coroner:
     – Monterey County Sheriff-Coroner
     1414 Natividad Road
     Salinas, CA 93906
     Phone: (831) 647-7792
   - As a courtesy, the archaeologist would also notify the NAHC:
     – Native American Heritage Commission
     915 Capitol Mall, Room 364
     Sacramento, California 95814
     Phone: (916) 373-3710
     Email: nahc@nahc.ca.gov
   - The coroner would have 2 working days to examine the remains after being notified in accordance with CHSC Section 7050.5. If the coroner determines that the remains are Native American and are not subject to the coroner's authority, the coroner has 24 hours to notify the NAHC of the discovery.

- The NAHC would immediately designate and notify the Native American Most Likely Descendant (MLD), who will have 48 hours after being granted access to the location of the remains to inspect them and make recommendations for treatment of them.

4. In areas of dense vegetation that have not been subject to extensive prior disturbance, SWCA recommends that an Archaeological Monitoring Plan be developed prior to project implementation (Figure 7). The Archaeological Monitoring Plan should include (but not be limited to) the following:
   - A list of personnel involved in the monitoring activities;
   - Description of how the monitoring shall occur;
   - Description of frequency of monitoring (e.g., full time, part time, spot checking);
   - Description of what resources are expected to be encountered;
   - Description of circumstances that would result in the halting of work at the project site;
   - Description of procedures for halting work on the site and notification procedures;
   - Description of monitoring reporting procedures; and
   - Provide specific, detailed protocols for what to do in the event of the discovery of human remains.

With the implementation of the proposed mitigation measures, impacts to previously unidentified cultural resources can be potentially be avoided and/or reduced.

Unanticipated Discovery of Human Remains

The discovery of human remains is always a possibility during ground disturbances; CHSC Section 7050.5 addresses these findings. This code section states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. The County Coroner must be notified of the find immediately. If the human remains are determined to be Native American, the County Coroner will notify the NAHC within 24 hours, which will determine and notify a Most Likely Descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

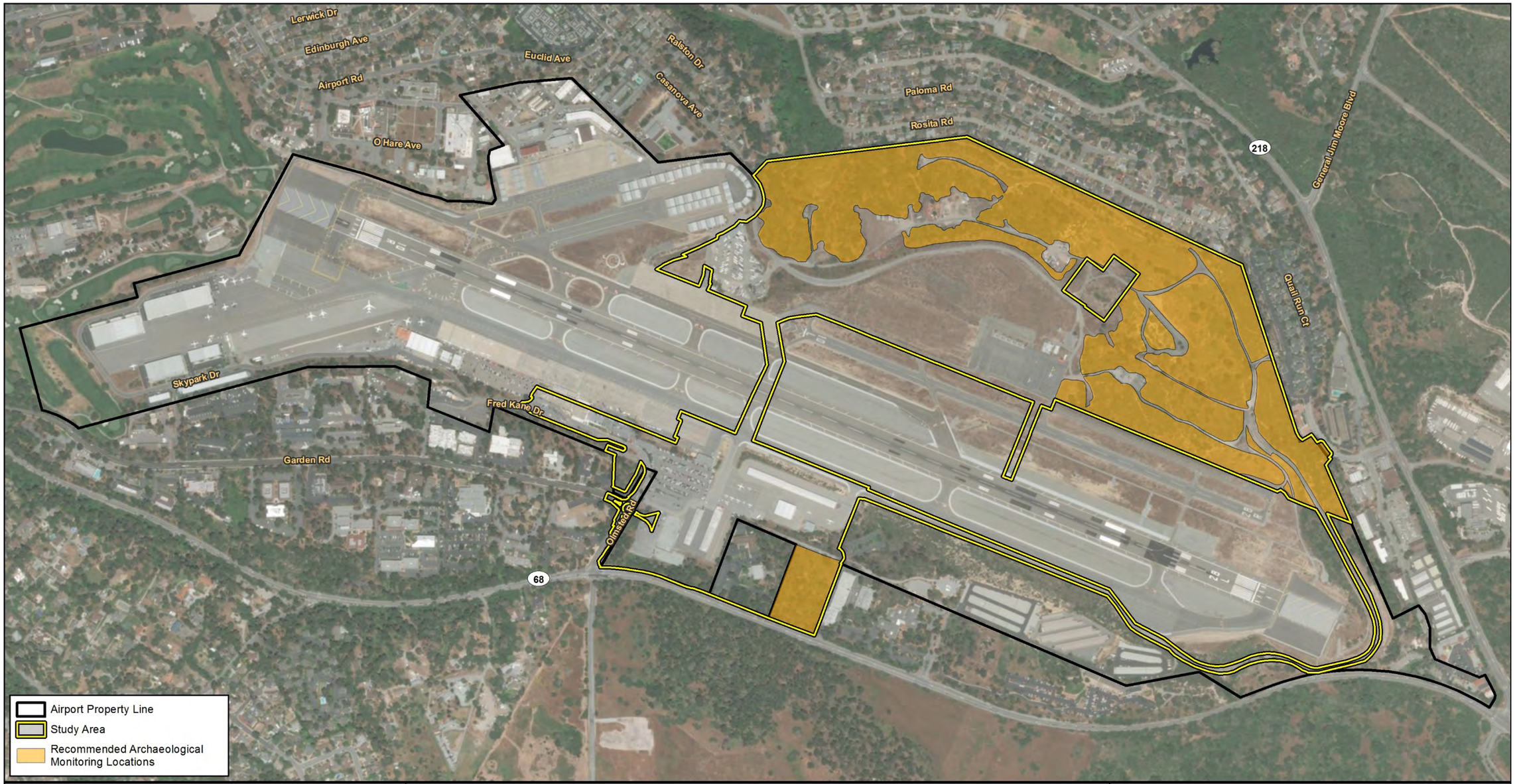

Figure 7. Recommended archaeological monitoring locations.

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2014 *Historic Resources Assessment and Survey Report, Monterey Regional Airport, Monterey, California*. Prepared for Coffman Associates by SWCA Environmental Consultants, San Luis Obispo, California.

2017 Supplemental Historic Resources Assessment for Monterey Regional Airport, Monterey County, California. Prepared for Coffman Associates by SWCA Environmental Consultants, San Luis Obispo, California.

U.S. Department of Agriculture National Resources Conservation Service (NRCS)

2015 Web Soil Survey. Available at: http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm. Accessed on November 11, 2015.

APPENDIX A

Records Search Results

Exact location of identified resources is not disclosed to protect resource integrity.

APPENDIX B

Photo Documentation

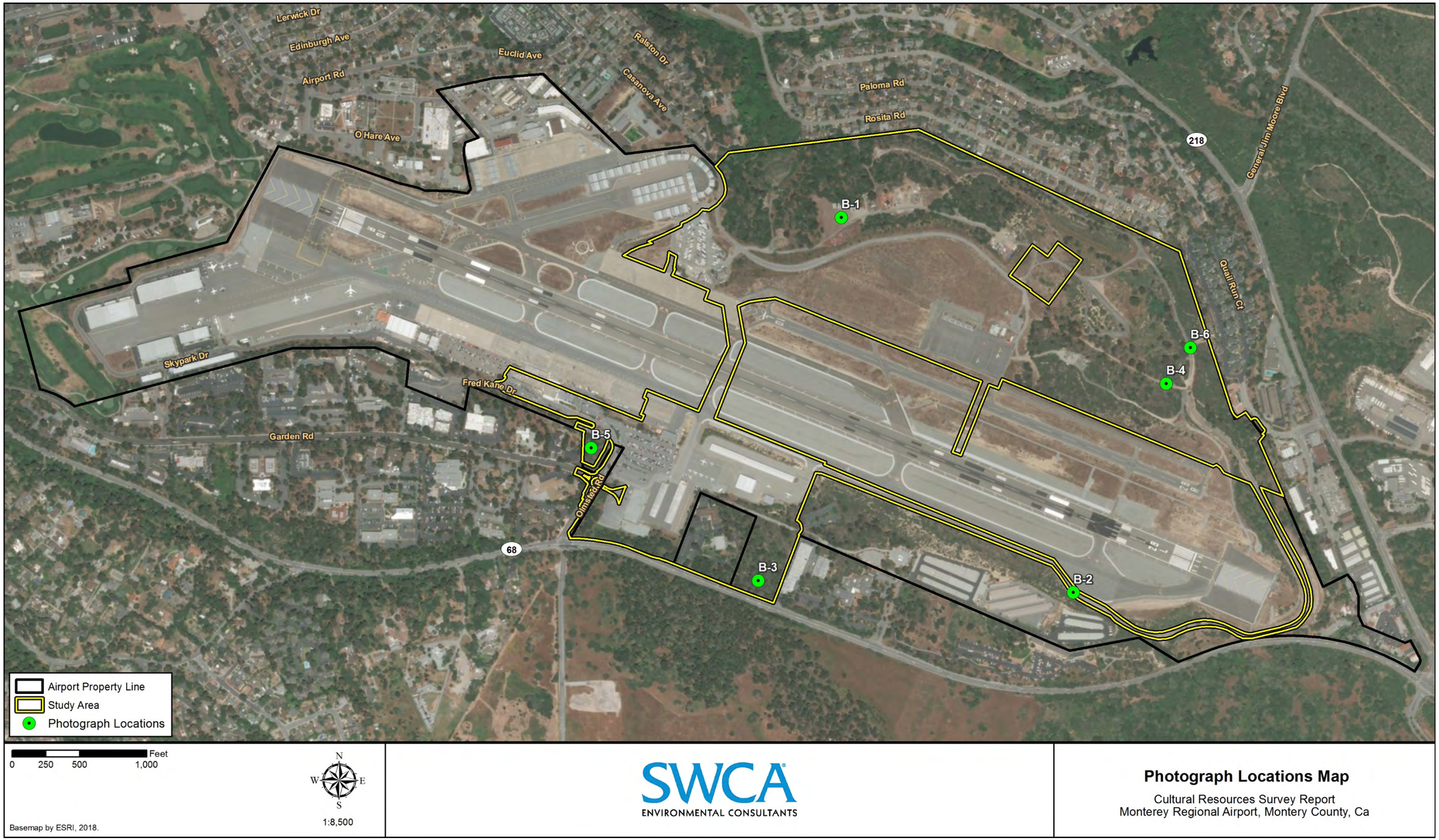

Figure B-1. Photograph locations map.

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Photograph B-1. View of a clearing in the central portion of the study area, facing northwest.

Photograph B-2. View of southern portion of the study area, facing west–northwest.

Photograph B-3. Typical vegetation on south side of study area near the airport entrance.

Photograph B-4. View of north access road, facing west.

Photograph B-5. Example of scraped away duff using either trowel or boot.

Photograph B-6. View of eastern portion of the study area, facing east.

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APPENDIX C

MRY-HIST-001 Archaeological Site Forms

Exact location of identified resources is not disclosed to protect resource integrity.

SWCA
ENVIRONMENTAL CONSULTANTS
Sound Science. Creative Solutions.

San Luis Obispo Office
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San Luis Obispo, CA 93401
Tel 805.543.7095 Fax 805.543.2367
www.swca.com

June 5, 2017

Judi Krauss
Coffman Associates
4835 East Cactus Road
Scottsdale, AZ 85254

RE: Supplemental Historic Resources Assessment for Monterey Regional Airport, Monterey County, California / SWCA No. 37212

Dear Mr. Krauss:

In support of the Airport Master Plan (AMP), SWCA Environmental Consultants (SWCA) was retained by Coffman Associates to provide environmental consulting services consisting of a supplemental Historic Resources Assessment for the Monterey Regional Airport (Airport), Monterey County, California (project). In 2014, SWCA prepared the *Historic Resources Assessment Report, Monterey Regional Airport, Monterey, California*. Since the preparation of that study, which evaluated historic-era buildings within the Airport property, five additional buildings are now older than 45 years of age and warrant evaluation. Guidance from the California Office of Historic Preservation recognizes that there is commonly a 5-year lag between resource identification and the date that planning decisions are made, and recommends that properties that are 45 years of age or older be recorded and evaluated. To provide Coffman Associates and the Airport with data for future planning efforts, SWCA conducted a focused survey and evaluation to determine if any of the five previously unrecorded properties are eligible for national, state, or local designation, and are potentially historical resources as defined in the California Environmental Quality Act. This memorandum should be reviewed in tandem with SWCA's 2014 study. In addition, for a complete review of background and setting information, please review the aforementioned report.

METHODS

On October 20, 2016, SWCA architectural historian Nelson White conducted an intensive-level pedestrian survey of the five additional buildings (Buildings 72, 99, 102, 104, and 106) newly over 45 years of age (Table 1). During the survey, Building 72 was found to be recently demolished and was therefore, not evaluated as part of this study. The remaining four buildings were documented with digital photographs and detailed field notes, which included project setting information, site characteristics, and general observations. Background research for the building evaluations relied on the contextual historic setting presented in SWCA's 2014 study.

CONCLUSIONS

None of the four recently evaluated buildings are eligible on their own, or as contributing elements to a district, at a national, state, or local level for the National Register of Historic Places or the California Register of Historical Resources (Table 1). No further cultural resources study is warranted for these buildings. For full documentation on each building's evaluation, please see the California Department of Parks and Recreation Series 523 forms included as Attachment A.

Table 1. Monterey Regional Airport, Supplemental Assessment Results

Building #	Description of Building	Year Built	Year Modified	Square Feet	Surveyed	DPR Form Prepared	Eligibility Status
72	Car Washes (demolished)	1970 (not extant)	N/A	3,513	Y	N	N/A
99	Maintenance Building	1970	N/A	1,504	Y	Y	Not eligible
102	Tenant Building	1970	1980	6,900	Y	Y	Not eligible
104	Tenant Building	1970	1980	7,350	Y	Y	Not eligible
106	Tenant Building	1970	N/A	32,260	Y	Y	Not eligible

If you have any questions, please feel free to contact me directly at (805) 543-7095, extension 6805, or via email me at llaurie@swca.com.

Sincerely,

Leroy Laurie
Cultural Resource Specialist

Attachments: Attachment A – California Department of Parks and Recreation Series 523 Forms (Buildings 99, 102, 104, and 106)

Attachment A:
California Department of Parks and Recreation Series 523 Forms
(Buildings 99, 102, 104, and 106)

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code | Reviewer | Date

Page 1 **of** 3 ***Resource Name or #:** Building No. 99

P1. Other Identifier: Tenant Building
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
***a. County:** Monterey
***b. USGS 7.5' Quad:** Seaside, CA **Date:** 1966 (PR 1981) **T** ; **R** **¼ of** **¼ of Sec** ; M.D. **B.M.**
c. Address: Monterey Regional Airport City: Monterey Zip: 93940
d. UTM: Zone: 10; 602750 mE/ 4050368 mN (G.P.S.)
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
Building No. 99 conists of two single-story airport maintenance buildings. The larger was constructed in 1970. The construction date of the smaller building is unknown. Clad in corrugated metal siding, the buildings are rectangular in plan. The larger features a side-gable roof while the smaller features a front gable. Fenestration on the larger building includes metal slider winders, a metal door, and two industrial metal sliding doors. The smaller building's fenestration consists of a pair of metal doors. The buildings are on the immediate north side of Sky Park Drive. Two wood portable shed structures are located to the south and east of the smaller building. The grouping backs up to a forested hillside immediately to the north. No alterations are known or readily apparent. The subject property is located on a level parcel located within the southern boundary of the Monterey Regional Airport, west of the terminal building, opposite Del Monte Aviation. The property appears to be in fair condition.

***P3b. Resource Attributes:** (List attributes and codes) HP8. Industrial Building. HP39. Other (Airport support structure).

***P4. Resources Present:** ☒Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #)
Southwest perspective, October 20, 2016

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both
1970. Source: Monterey Peninsula Airport District.

***P7. Owner and Address:**
Monterey Peninsula Airport District

***P8. Recorded by:** (Name, affiliation, and address)
Nelson White
SWCA Environmental Consultants
150 S. Arroyo Parkway, Second Floor
Pasadena, CA 91105

***P9. Date Recorded:**
November 7, 2016

***P10. Survey Type:** (Describe) Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") *Historic Resources Assessment and Survey Report, Monterey Regional Airport, Monterey, California, 2016 Update* (SWCA Environmental Consultants 2016).

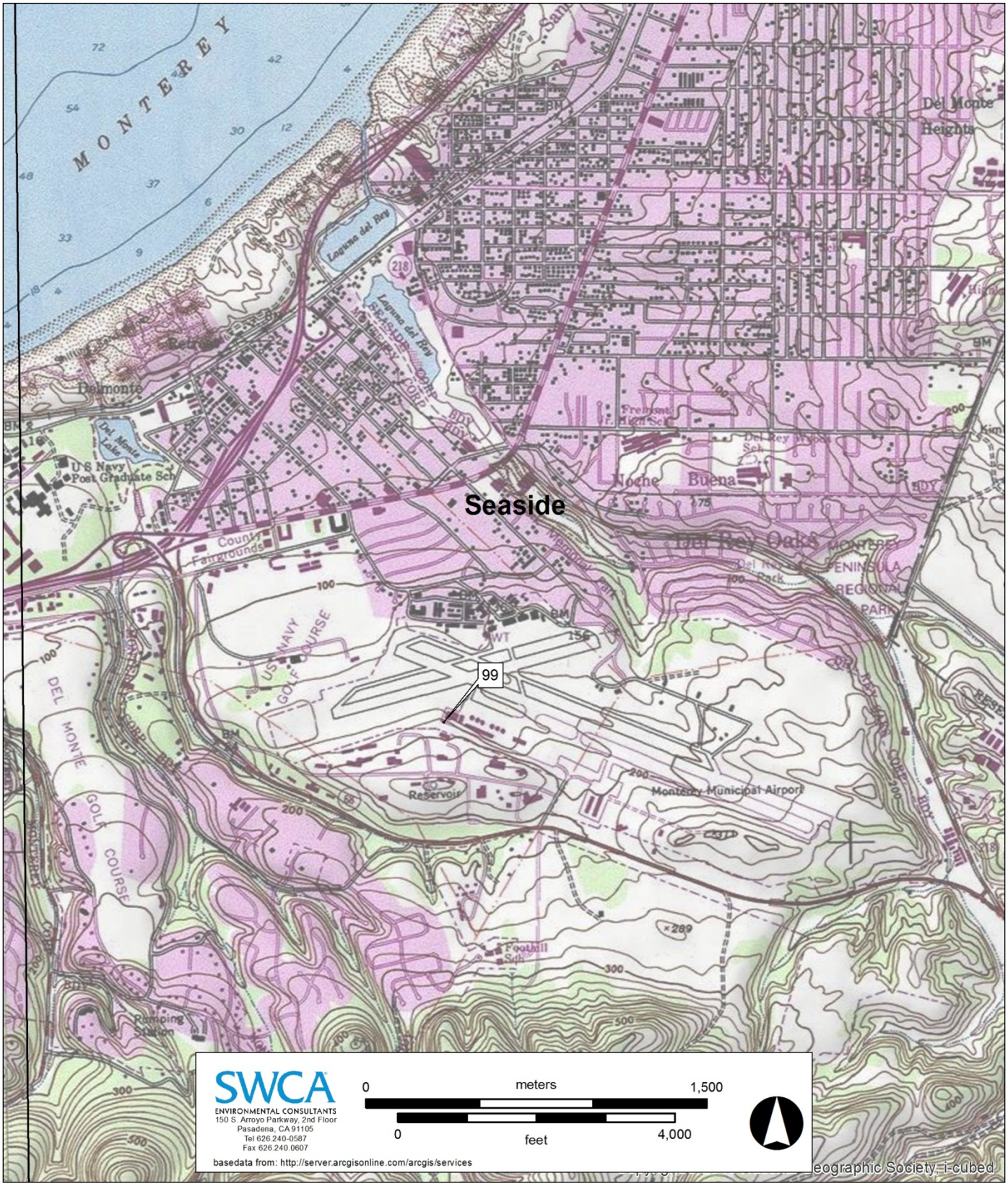
***Attachments:** ☐NONE ☒Location Map ☐Sketch Map ☐Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

DPR 523A (1/95) ***Required information**

State of California — The Resources Agency DEPARTMENT OF PARKS AND RECREATION	Primary # HRI#
LOCATION MAP	Trinomial

Page 2 **of** 3 ***Resource Name or #:** Building No. 99

***Map Name:** Seaside, CA ***Scale:** 1:24,000 ***Date of Map:** 2016



DPR 523J (1/95) ***Required information**

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

***Resource Name or #** (Assigned by recorder) Building No. 99

B1. Historic Name: None
B2. Common Name: Building No. 99
B3. Original Use: Industrial/Airport facility support B4. Present Use: Industrial/Airport facility support
***B5. Architectural Style:** Utilitarian/vernacular
***B6. Construction History:** (Construction date, alterations, and date of alterations) According to records on file with the Monterey Peninsula Airport District, the subject property was constructed in 1970. No further documentation was located.

***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:** **Original Location:**
***B8. Related Features:** None
B9a. Architect: Unknown b. Builder: Unknown
***B10. Significance: Theme:** N/A **Area:** N/A
Period of Significance: N/A **Property Type:** Industrial/Airport support **Applicable Criteria:** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Building No. 99 is not eligible individually or as a contributor to a historic district under national, state, county, or local eligibility criteria. Research did not reveal that the property had a direct association with a significant event/pattern of development or important person, nor does the building represent a distinctive or rare building type or style. In terms of the themes of significance specific to the Monterey Regional Airport—first, World War II and defense-related development and use, and, second, the postwar return to civilian/commercial use—the property does not convey the significance of either theme. The continuing use and expansion of the airport over the decades brought numerous alterations, as facilities were adapted to new uses and demand. Therefore, in terms of potential significance as contributors to a historic district, overall alterations and additions resulted in a loss of historic integrity for potential historic districts reflecting these themes.

B11. Additional Resource Attributes: (List attributes and codes) None
***B12. References:**

City of Monterey General Plan. Chapter 38, Article 15, Historic Zoning Ordinance.
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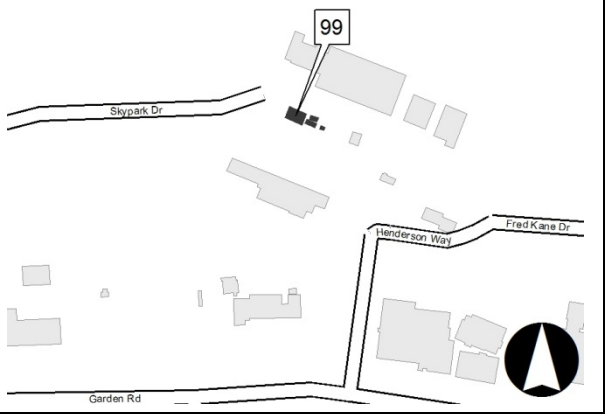
B13. Remarks:

***B14. Evaluators:** Nelson White, SWCA

***Date of Evaluation:** November 8, 2016

(This space reserved for official comments.)

(Sketch Map with north arrow required.)



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code | Reviewer | Date

 ***Resource Name or #:** Building No. 102

P1. Other Identifier: Tenant Building
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** Monterey
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad:** Seaside, CA **Date:** 1966 (PR 1981) **T** ; **R** **¼ of** **¼ of Sec** ; M.D. **B.M.**
c. Address: Monterey Regional Airport City: Monterey Zip: 93940
d. UTM: Zone: 10; 602874 mE/ 4050358 mN (G.P.S.)
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
Building No. 102 is a single-story tenant building. Constructed in 1970, the subject property houses auto window tinting and additional tenants. Clad in corrugated metal siding, the building is stepped shape in plan and exhibits a side-gabled roof hidden by a parapet-like extension. Fenestration includes metal slider windows, glass doors, and roll-up metal doors. The few building displays are generally placed near individual entryways. A wide, paved, shared driveway is located to the northwest of the building. The subject property is located on a sloped, triangular lot within the northernmost boundary of the Monterey Regional Airport. The property appears to be in fair condition.

***P3b. Resource Attributes:** (List attributes and codes) HP8. Industrial Building. HP39. Other (Airport support structure).

***P4. Resources Present:** ☒Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #)
Northeast perspective, October 20, 2016

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both
1970. Source: Monterey Peninsula Airport District.

***P7. Owner and Address:**
Monterey Peninsula Airport District

***P8. Recorded by:** (Name, affiliation, and address)
Nelson White
SWCA Environmental Consultants
150 S. Arroyo Parkway, Second Floor
Pasadena, CA 91105

***P9. Date Recorded:**
November 7, 2016

***P10. Survey Type:** (Describe) Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") *Historic Resources Assessment and Survey Report, Monterey Regional Airport, Monterey, California, 2016 Update* (SWCA Environmental Consultants 2014).

***Attachments:** ☐NONE ☒Location Map ☐Sketch Map ☐Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

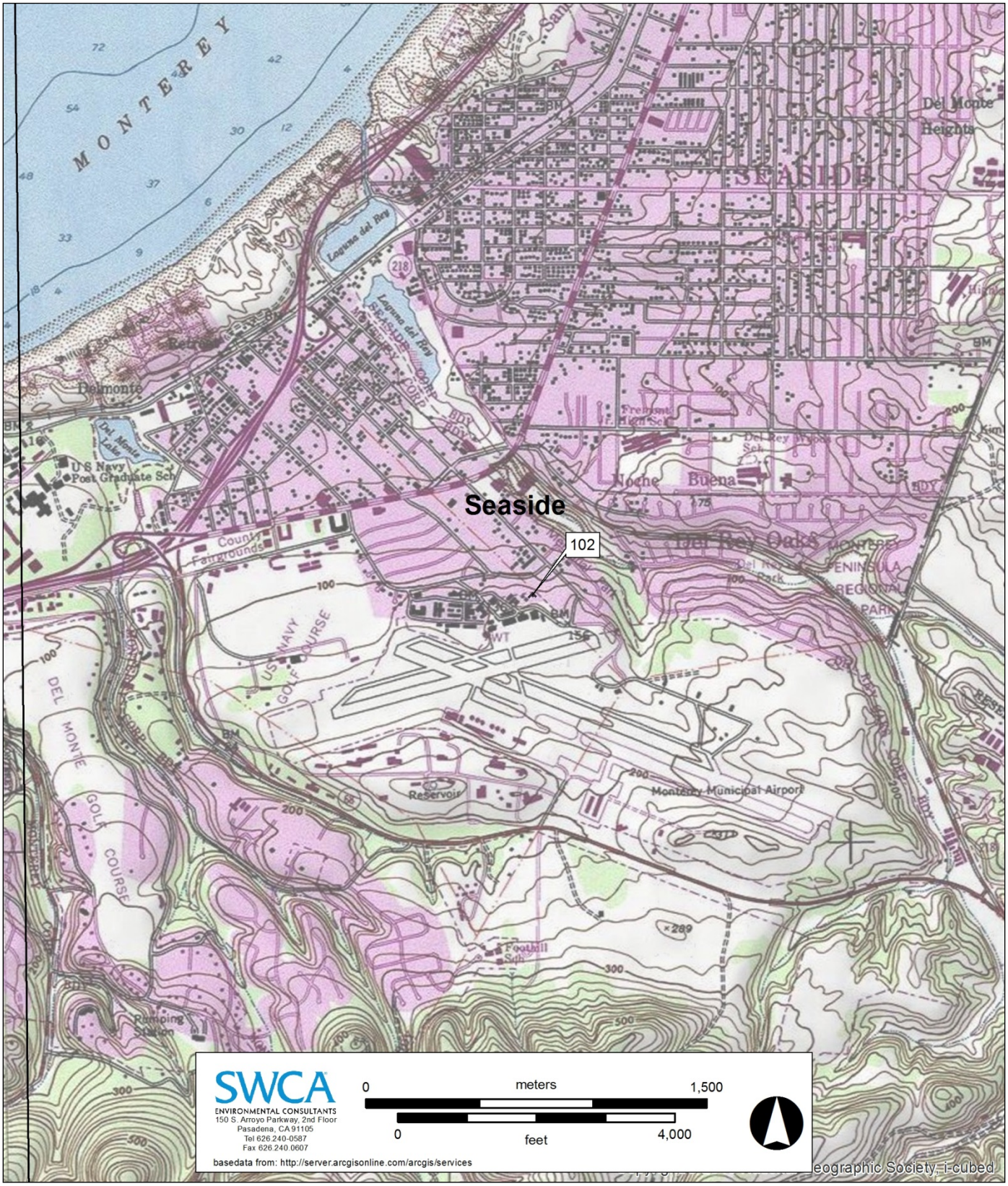
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

 ***Resource Name or #:** Building No. 102

***Map Name:** Seaside, CA ***Scale:** 1:24,000 ***Date of Map:** 2016



DPR 523J (1/95) ***Required information**

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

***Resource Name or #** (Assigned by recorder) Building No. 102

B1. Historic Name: None

B2. Common Name: Tenant Building No. 102

B3. Original Use: Industrial/Airport facility support B4. Present Use: Industrial/Airport facility support

***B5. Architectural Style:** Utilitarian/vernacular

***B6. Construction History:** (Construction date, alterations, and date of alterations) According to records on file with the Monterey Peninsula Airport District, the subject property was constructed in 1970 and modified in 1980. No other additional records were located to document the dates of other alterations.

***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:** **Original Location:**

***B8. Related Features:** None

B9a. Architect: Unknown b. Builder: Unknown

***B10. Significance: Theme:** N/A **Area:** N/A

Period of Significance: N/A **Property Type:** Industrial/Airport support **Applicable Criteria:** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Building No. 102 is not eligible individually or as a contributor to a historic district under national, state, county, or local eligibility criteria. Research did not reveal that the property had a direct association with a significant event/pattern of development or important person, nor does the building represent a distinctive or rare building type or style. In terms of the themes of significance specific to the Monterey Regional Airport—first, World War II and defense-related development and use, and, second, the postwar return to civilian/commercial use—the property does not convey the significance of either theme. The continuing use and expansion of the airport over the decades brought numerous alterations, as facilities were adapted to new uses and demand. Therefore, in terms of potential significance as contributors to a historic district, overall alterations and additions resulted in a loss of historic integrity for potential historic districts reflecting these themes.

B11. Additional Resource Attributes: (List attributes and codes) None

***B12. References:**

City of Monterey General Plan. Chapter 38, Article 15, Historic Zoning Ordinance.

Coffman Associates. 2014. *Draft Airport Master Plan, Monterey Regional Airport*. April 2014.

Federal Aviation Administration Airports Desk Reference. Available at: http://www.faa.gov/airports/environmental/environmental_desk_ref/media/desk_ref_chap14.pdf.

Harper, Marilyn M., et al. 2007. *World War II & the American Home Front: A National Historic Landmarks Theme Study*. US Department of the Interior, National Park Service: Washington, DC.

Milbrooke, Anne, et al. 1998. National Register Bulletin, *Guidelines for Evaluating and Documenting Historic Aviation Properties*. US Department of the Interior, National Park Service: Washington, DC.

Monterey County Zoning Ordinance, Title 21, Section 21.54.010.

Monterey Public Library, Vertical File, Monterey Regional Airport (various clippings).

Sanborn Fire Insurance Company Maps, Monterey, CA (various sheets).

Shettle, Jr., M.J. 1997. Historic California Posts Naval Auxiliary Air Station, Monterey. In *United States Naval Air Stations of World War Two – Volume Two, Western States*. Roswell, Georgia: Schaertel Publishing.

Van Nostrand, Jeanne. 1968. *A Pictorial and Narrative History of Monterey: Adobe Capital of California*. San Francisco: California Historical Society.

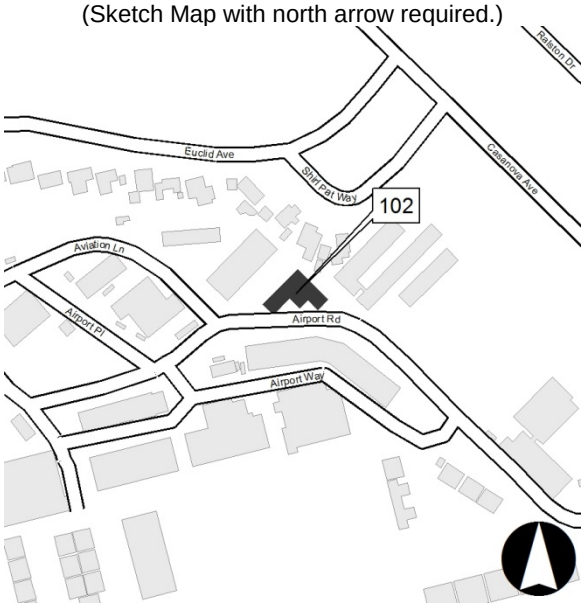
B13. Remarks:

***B14. Evaluators:** Nelson White, SWCA

***Date of Evaluation:** November 8, 2016

(This space reserved for official comments.)

(Sketch Map with north arrow required.)



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code | Reviewer | Date

Page 1 **of** 3 ***Resource Name or #:** Building No. 104

P1. Other Identifier: Tenant Building
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** Monterey
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad:** Seaside, CA **Date:** 1966 (PR 1981) **T** ; **R** **¼ of ¼ of Sec** ; M.D. **B.M.**
c. Address: Monterey Regional Airport City: Monterey Zip: 93940
d. UTM: Zone: 10; 602840 mE/ 4050376 mN (G.P.S.)
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
Building No. 104 is a single-story tenant building. Constructed in 1970, the subject property houses a motorcycle mechanic shop and construction companies. Clad in corrugated metal siding, the building is rectangular in plan and exhibits a side-gabled roof hidden by a parapet-like extension. Fenestration includes glass doors and roll-up metal doors. The building displays signage somewhat associated with the different entryways. Roll-up doors on the south elevation appear to continue alphabetical identication as letters F–J. Such letters are missing from the north elevation. A wide, paved, shared driveway is located to the southeast of the building. The subject property is located on a sloped, rectangular lot within the northernmost boundary of the Monterey Regional Airport.The property appears to be in fair condition.

***P3b. Resource Attributes:** (List attributes and codes) HP8. Industrial Building. HP39. Other (Airport support structure).

***P4. Resources Present:** ☒Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #)
Northeast perspective, October 20, 2016

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both
1970. Source: Monterey Peninsula Airport District.

***P7. Owner and Address:**
Monterey Peninsula Airport District

***P8. Recorded by:** (Name, affiliation, and address)
Nelson White
SWCA Environmental Consultants
150 S. Arroyo Parkway, Second Floor
Pasadena, CA 91105

***P9. Date Recorded:**
November 7, 2016

***P10. Survey Type:** (Describe) Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") *Historic Resources Assessment and Survey Report, Monterey Regional Airport, Monterey, California, 2016 Update* (SWCA Environmental Consultants 2014).

***Attachments:** ☐NONE ☒Location Map ☐Sketch Map ☐Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

DPR 523A (1/95) ***Required information**

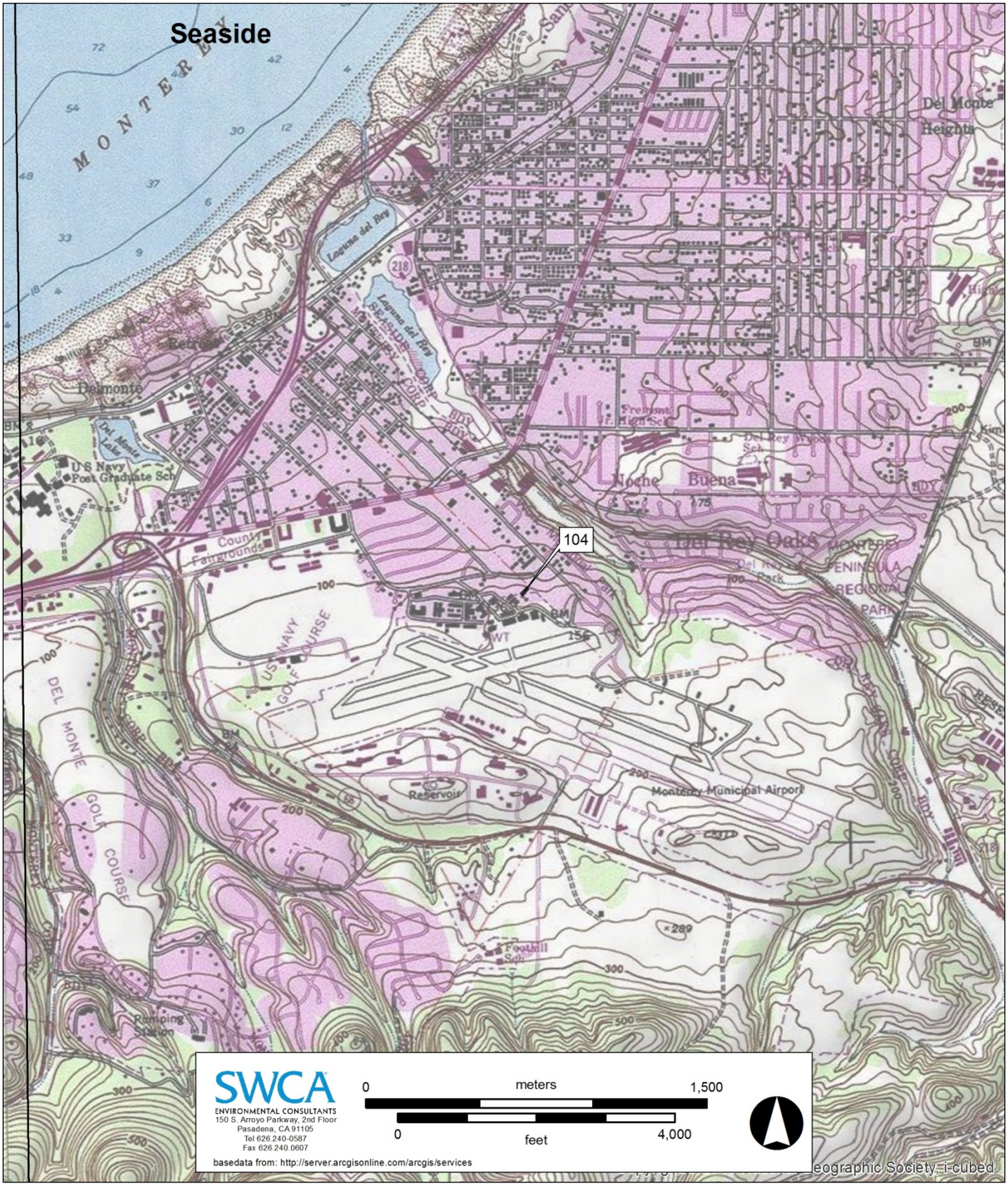
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

 ***Resource Name or #:** Building No. 104

***Map Name:** Seaside, CA ***Scale:** 1:24,000 ***Date of Map:** 2016



DPR 523J (1/95) ***Required information**

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

***Resource Name or #** (Assigned by recorder) Building No. 104

B1. Historic Name: None

B2. Common Name: Tenant Building No. 104

B3. Original Use: Industrial/Airport facility support B4. Present Use: Industrial/Airport facility support

***B5. Architectural Style:** Utilitarian/vernacular

***B6. Construction History:** (Construction date, alterations, and date of alterations) According to records on file with the Monterey Peninsula Airport District, the subject property was constructed in 1970 and modified in 1980. No other additional records were located to document the dates of other alterations.

***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:** **Original Location:**

***B8. Related Features:** None

B9a. Architect: Unknown b. Builder: Unknown

***B10. Significance: Theme:** N/A **Area:** N/A

Period of Significance: N/A **Property Type:** Industrial/Airport support **Applicable Criteria:** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Building No. 104 is not eligible individually or as a contributor to a historic district under national, state, county, or local eligibility criteria. Research did not reveal that the property had a direct association with a significant event/pattern of development or important person, nor does the building represent a distinctive or rare building type or style. In terms of the themes of significance specific to the Monterey Regional Airport—first, World War II and defense-related development and use, and, second, the postwar return to civilian/commercial use—the property does not convey the significance of either theme. The continuing use and expansion of the airport over the decades brought numerous alterations, as facilities were adapted to new uses and demand. Therefore, in terms of potential significance as a contributor to a historic district, overall alterations and additions resulted in a loss of historic integrity for potential historic districts reflecting these themes.

B11. Additional Resource Attributes: (List attributes and codes) None

***B12. References:**

City of Monterey General Plan. Chapter 38, Article 15, Historic Zoning Ordinance.

Coffman Associates. 2014. *Draft Airport Master Plan, Monterey Regional Airport*. April 2014.

Federal Aviation Administration Airports Desk Reference. Available at: http://www.faa.gov/airports/environmental/environmental_desk_ref/media/desk_ref_chap14.pdf.

Harper, Marilyn M., et al. 2007. *World War II & the American Home Front: A National Historic Landmarks Theme Study*. US Department of the Interior, National Park Service: Washington, DC.

Milbrooke, Anne, et al. 1998. National Register Bulletin, *Guidelines for Evaluating and Documenting Historic Aviation Properties*. US Department of the Interior, National Park Service: Washington, DC.

Monterey County Zoning Ordinance, Title 21, Section 21.54.010.

Monterey Public Library, Vertical File, Monterey Regional Airport (various clippings).

Sanborn Fire Insurance Company Maps, Monterey, CA (various sheets).

Shettle, Jr., M.J. 1997. Historic California Posts Naval Auxiliary Air Station, Monterey. In *United States Naval Air Stations of World War Two – Volume Two, Western States*. Roswell, Georgia: Schaertel Publishing.

Van Nostrand, Jeanne. 1968. *A Pictorial and Narrative History of Monterey: Adobe Capital of California*. San Francisco: California Historical Society.

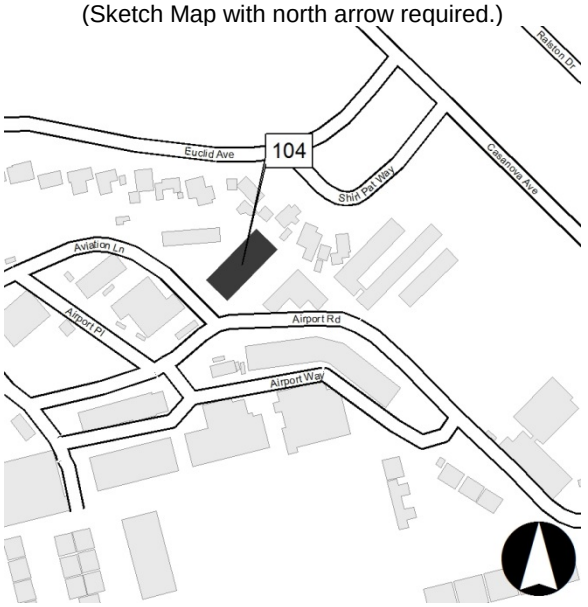
B13. Remarks:

***B14. Evaluators:** Nelson White, SWCA

***Date of Evaluation:** November 8, 2016

(This space reserved for official comments.)

(Sketch Map with north arrow required.)



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code | Reviewer | Date

 ***Resource Name or #:** Building No. 106

P1. Other Identifier: Tenant Building
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
***a. County:** Monterey
***b. USGS 7.5' Quad:** Seaside, CA **Date:** 1966 (PR 1981) **T** ; **R** **¼ of** **¼ of Sec** ; M.D. **B.M.**
c. Address: Monterey Regional Airport City: Monterey Zip: 93940
d. UTM: Zone: 10; 602807 mE/ 4050393 mN (G.P.S.)
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
Building No. 106 is a single-story tenant building. Constructed in 1970, the subject property houses plumbing and construction facilities. Clad in corrugated metal siding, the building is rectangular in plan and exhibits a side-gabled roof hidden by a parapet-like extension. Fenestration includes glass doors and roll-up metal doors. The building displays alphabetical signage associated with different roll-up doors identified as A–D. A wide, paved, shared driveway is located to the south of the building. There are no apparent alterations. The subject property is located on a level, corner lot within the northernmost boundary of the Monterey Regional Airport.The property appears to be in fair condition.

***P3b. Resource Attributes:** (List attributes and codes) HP8. Industrial Building. HP39. Other (Airport support structure).

***P4. Resources Present:** ☒Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #)
Northern perspective, October 20, 2016

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both
1970. Source: Monterey Peninsula Airport District.

***P7. Owner and Address:**
Monterey Peninsula Airport District

***P8. Recorded by:** (Name, affiliation, and address)
Nelson White
SWCA Environmental Consultants
150 S. Arroyo Parkway, Second Floor
Pasadena, CA 91105

***P9. Date Recorded:**
November 7, 2016

***P10. Survey Type:** (Describe) Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") *Historic Resources Assessment and Survey Report, Monterey Regional Airport, Monterey, California, 2016 Update* (SWCA Environmental Consultants 2014).

***Attachments:** ☐NONE ☒Location Map ☐Sketch Map ☐Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

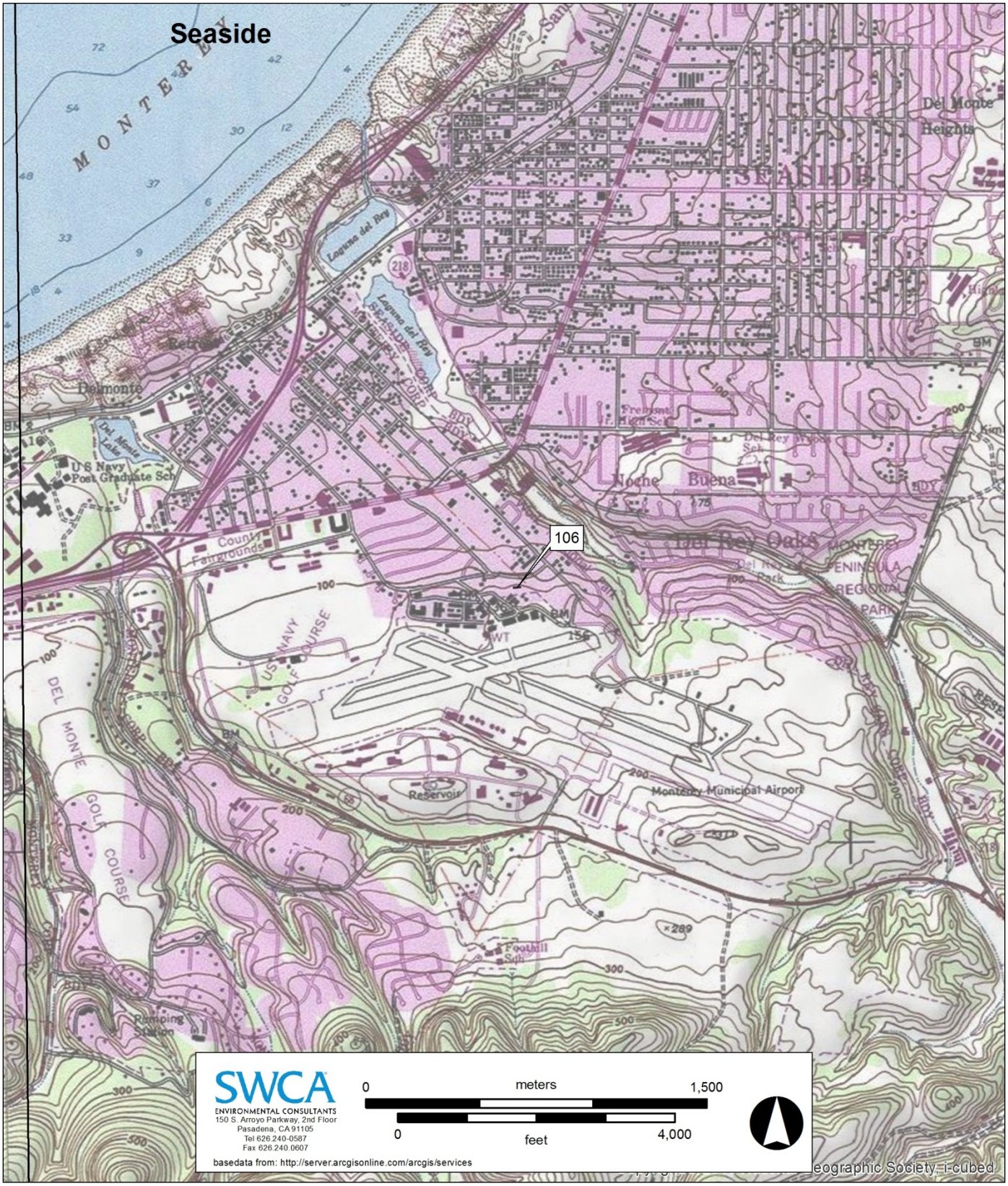
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

 ***Resource Name or #:** Building No. 106

***Map Name:** Seaside, CA ***Scale:** 1:24,000 ***Date of Map:** 2016



DPR 523J (1/95) ***Required information**

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

***Resource Name or #** (Assigned by recorder) Building No. 106

B1. Historic Name: None
B2. Common Name: Tenant Building No. 106
B3. Original Use: Industrial/Airport facility support B4. Present Use: Industrial/Airport facility support
***B5. Architectural Style:** Utilitarian/vernacular
***B6. Construction History:** (Construction date, alterations, and date of alterations) According to records on file with the Monterey Peninsula Airport District, the subject property was constructed in 1970. No other additional records were located.

***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:** **Original Location:**
***B8. Related Features:** None
B9a. Architect: Unknown b. Builder: Unknown
***B10. Significance: Theme:** N/A **Area:** N/A
Period of Significance: N/A **Property Type:** Industrial/Airport support **Applicable Criteria:** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Building No. 106 is not eligible individually or as a contributor to a historic district under national, state, county, or local eligibility criteria. Research did not reveal that the property had a direct association with a significant event/pattern of development or important person, nor does the building represent a distinctive or rare building type or style. In terms of the themes of significance specific to the Monterey Regional Airport—first, World War II and defense-related development and use, and, second, the postwar return to civilian/commercial use—the property does not convey the significance of either theme. The continuing use and expansion of the airport over the decades brought numerous alterations, as facilities were adapted to new uses and demand. Therefore, in terms of potential significance as contributors to a historic district, overall alterations and additions resulted in a loss of historic integrity for potential historic districts reflecting these themes.

B11. Additional Resource Attributes: (List attributes and codes) None
***B12. References:**

City of Monterey General Plan. Chapter 38, Article 15, Historic Zoning Ordinance.
Coffman Associates. 2014. *Draft Airport Master Plan, Monterey Regional Airport*. April 2014.
Federal Aviation Administration Airports Desk Reference. Available at: http://www.faa.gov/airports/environmental/environmental_desk_ref/media/desk_ref_chap14.pdf.
Harper, Marilyn M., et al. 2007. *World War II & the American Home Front: A National Historic Landmarks Theme Study*. US Department of the Interior, National Park Service: Washington, DC.
Milbrooke, Anne, et al. 1998. National Register Bulletin, *Guidelines for Evaluating and Documenting Historic Aviation Properties*. US Department of the Interior, National Park Service: Washington, DC.
Monterey County Zoning Ordinance, Title 21, Section 21.54.010.
Monterey Public Library, Vertical File, Monterey Regional Airport (various clippings).
Sanborn Fire Insurance Company Maps, Monterey, CA (various sheets).
Shettle, Jr., M.J. 1997. Historic California Posts Naval Auxiliary Air Station, Monterey. In *United States Naval Air Stations of World War Two – Volume Two, Western States*. Roswell, Georgia: Schaertel Publishing.
Van Nostrand, Jeanne. 1968. *A Pictorial and Narrative History of Monterey: Adobe Capital of California*. San Francisco: California Historical Society.

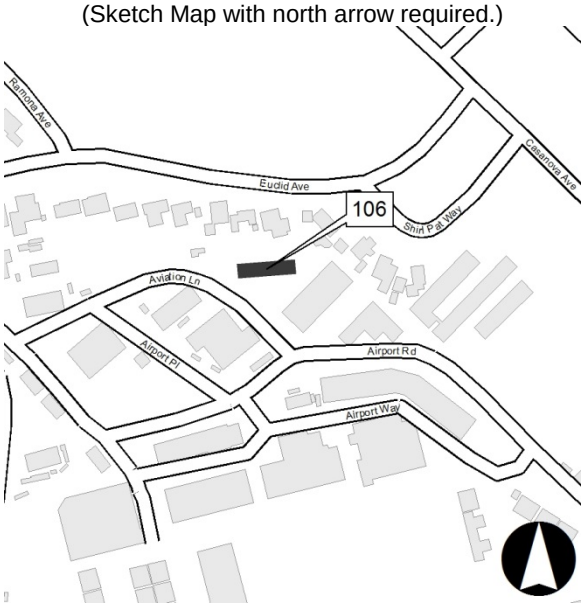
B13. Remarks:

***B14. Evaluators:** Nelson White, SWCA

***Date of Evaluation:** November 8, 2016

(This space reserved for official comments.)

(Sketch Map with north arrow required.)



MONTEREY
REGIONAL AIRPORT

Appendix H

NATIVE AMERICAN CONSULTATION

AGENDA FOR TRIBAL CONSULTATION

Board Room

October 4, 2016 at 1 PM

1. Mitigation under the CEQA process (Pre-Commitments not allowed)
2. Infield Rehabilitation Project (CEQA Review)
    a. Project Overview
    b. Tribal Consultation Comments/Questions
3. Monterey Regional Airport Master Plan NOP EIR (CEQA Review)
    a. Project Overview
    b. Tribal Consultation Comments/Questions
4. Protecting the Confidentiality of Resources Found (AB 52)

TRIBAL CONSULTATION MEETING SIGN-IN SHEET

Project:	Infield Rehabilitation Project and Airport Master Plan NOP for an EIR (CEQA REVIEW)	**Meeting Date:**	10/04/16
Facilitator:	Monterey Regional Airport Staff	**Place/Room:**	Board Room

Name	Title	Agency/Organization	Phone	E-Mail
Chris Morello	Senior Manager	MPAD		
LOUISE MIRANDA RAMIREZ	OCEN TRIBAL CHAIRWOMAN			
Shelley Glennon	Planning Manager - Environmental	MPAD		
Scott Huber (via teleconference)	District Counsel	Cota Cole LLP		

Monterey Peninsula Airport District (District) at **Monterey Regional Airport** (MRY)
Tribal Consultation Meeting Minutes

Date: October 4, 2016	
Present:	Chris Morello (MPAD), Louise J. Miranda Ramirez (OCEN), Shelley Glennon (MPAD), Scott Huber (District Counsel – via teleconference)
Projects:	Infield Rehabilitation Project and Airport Master Plan Initial Study/ NOP for an EIR (CEQA Review)
Meeting Location:	P&D Conference Room

I. Introduction

Attendance roll-call given: Shelley Glennon (SG) and Chris Morello (CM) with the Monterey Regional Airport (Airport), Scott Huber (SH), District Counsel, and Louise Ramirez (LR) with Ohlone/Costanoan-Esselen Nation (OCEN). Attendance sign-in sheet and meeting agenda provided to present attendees. The tribal consultation meeting was held as part of the CEQA review process and in compliance with Assembly Bill 52 (Chapter 532, Statutes of 2014) – *Tribal Cultural Resources and Consultation Requirements*.

II. Discussion

The tribal consultation meeting discussion was conducted in the order provided by the agenda items listed below.

Agenda Item 1: Mitigation under the CEQA process (Pre-Commitments not allowed).

SG presented discussion to focus on potential mitigation or other measures that can be taken to prevent any potential impacts to cultural resources, with an emphasis that staff is not able to make any pre-commitments when going through the CEQA process. SH emphasized the District will need to go through the environmental process to understand all the potential impacts of the project, so any mitigation measures discussed now, would potentially be considered premature. CM suggested further discussion on this intent as each project is presented.

Agenda Item 2: Infield Rehabilitation Project (CEQA Review)

The Airport provided LR with a project overview. LR invited for any comments/questions.

LR stated she understood the need for the project and asked that a OCEN monitor be present during any proposed soil movement. The Airport acknowledged her requested recommendation.

Agenda Item 3: Monterey Regional Airport Master Plan Initial Study/NOP EIR (CEQA Review)

The Airport provided LR with a project overview. LR invited for any comments/questions.

LR stated that she wanted to speak with the Native American Heritage Commission with regards to agency agreements early on in the process as she had not understood that pre-commitments were not allowed. The main concern is that her recommended mitigation measures would be

ignored, such as her recommendation for cultural resources found during the Runway Safety Area (RSA) project.

Further requests expressed:

1) All cultural resources be reburied rather than displayed at any museum; or

2) Cultural resources be given directly to OCEN since OCEN is planning on opening up a center to display their own cultural resources.

CM clarified the RSA project as follows: During the environmental review process of the RSA project, the Airport contacted the Native American Heritage Commission (NAHC) requesting a Sacred File search for traditional cultural resources. NAHC stated that the search failed to indicate the presence of Native American sacred lands or traditional cultural properties in the immediate vicinity and provided the Airport with a list of local tribes to contact for comment. All the tribes were contacted and none provided comment that cultural resources would be anticipated.

However, during the early stages of the RSA Construction Project, previously unrecorded archaeological materials were identified within the area of potential effects (APE) of the project. These materials included what appeared to be the residue of stone tool manufacture e.g. siltstone and chert flakes. The Federal Aviation Administration (FAA) acknowledged its responsibilities under 36 CFR 800 with the discovery of prehistoric materials during construction. Since FAA was the Lead Federal Agency for National Historic Preservation Act, Section 106 consultation with the California State Historic Preservation Officer was conducted. The FAA transmitted a Work and Treatment Plan (WTP) to all appropriate responsible parties in accordance with applicable sections of 36 CFR Part 800 Protection of Cultural Properties. That plan included standards for curation as provided for under the Archaeological Resources Protection Act (ARPA) in regulations at 36 CFR § 79 to ensure the preservation and accessibility of archaeological collections for future use and study. The FAA WTP required that archaeological material collected during this process be preserved in a curation facility as set forth in 36 CFR § 79.

With the knowledge learned from the RSA project, the Airport encourages tribal consultation early in the environmental process so that potential mitigation can be incorporated into the projects' CEQA environmental document.

The District Board of Directors are the approving body that will make the final decision on the environmental document including all mitigation measures. Staff will recommend mitigation measures in the CEQA environmental document after all analysis has been completed where appropriate.

SH clarified his opening statement discussed in agenda item 1:

1) Airport would like to get the tribe's recommendations early in the process;

2) The environmental process is required of the Airport prior to any agreements made; and

3) The tribe will provide to the Airport a written list of items they want provided/addressed for each project.

Agenda Item 4: Protecting the Confidentiality of Resources Found (AB 52)

The Airport is committed to protecting the confidentiality of cultural resources and therefore will not publish any confidential/sensitive information regarding these cultural resources or locations. SG stated the Airport would like to have agreed upon procedures with OCEN for protecting the confidentiality of any cultural resources found in order to prevent looting, vandalism or damage to cultural resources.

LR agreed with protecting the confidentiality of cultural resources found. LR is concerned that they don't receive copies of any confidential reports and would like the Airport, if possible, to provide those to them. No commitments were made by the Airport on this issue. It will be researched in more detail.

III. Conclusion

Discussion review: LR will provide the Airport with two lists to review and potentially address:

1) Current projects that were just discussed:
   A. The Infield Rehabilitation Project; and

   B. Monterey Airport Master Plan project.

2) Address follow-up questions from the RSA project cultural resources.

SG will send the meeting minutes to LR via certifiable mail and an electronic copy via email.

Finally, LR invited the Airport to attend a tribal gathering held at CSUMB on November 5th, 2016.

December 28, 2015

Louise J. Miranda Ramirez, Chairperson
Ohlone/Costanoan-Esselen Nation
P.O. Box 1301
Monterey, California 93942

RE: Notice of Preparation of an Environmental Impact Report & Notice of Scoping Meeting; Initial Study; Proposed Monterey Regional Airport – Airport Master Plan at Monterey Regional Airport in Monterey, California

Dear Ms. Ramirez:

Please review the enclosed ***Notice of Preparation for an Environmental Impact Report & Notice of Scoping Meeting,*** and ***Initial Study*** for the proposed ***Monterey Regional Airport – Airport Master Plan Project ("Project").***

Pursuant to Section 15082 of the State California Environmental Quality Act ("CEQA") Guidelines (Cal. Code Regs., tit. 14, § 15000 et seq.), the Monterey Peninsula Airport District ("District"), acting in its capacity as the owner and operator of Monterey Regional Airport, has determined that an Environmental Impact Report ("EIR") is the appropriate environmental document for the Project. The District will be the Lead Agency for the Project and will be responsible for the EIR preparation pursuant to CEQA and the State CEQA Guidelines.

Coordination with all responsible agencies will be provided in accordance with the Notice of Preparation statutes. Additionally, the Scoping Meeting will be held from 2:00PM-4:00PM at the 2nd Floor of the Airport Terminal Building- 200 Fred Kane Drive, Suite 200, Monterey, CA 93940 on Wednesday, February 3, 2016.

Please send any written comments or concerns regarding potential environmental impacts of the proposed Project addressed to me at: 200 Fred Kane Drive Suite 200, Monterey, CA 93940 or via email at sglennon@montereyairport.com by **Tuesday, February 16, 2015**. If you have any questions or need additional information, please feel free to contact me at (831) 648-7000 Ext. 209. Thank you for your consideration and timely response.

Sincerely,

Shelley Glennon
Planning Manager - Environmental

Enclosure

Ohlone/Costanoan-Esselen Nation

Previously acknowledged as
The San Carlos Band of
Mission Indians
The Monterey Band
And also known as
O.C.E.N. or Esselen Nation
P.O. Box 1301
Monterey, CA 93942

www.ohlonecostanoanesselennation.org.

January 11, 2016

Shelley Glennon
Planning Manager - Environmental
200 Fred Kane Drive, Suite 200
Monterey, CA 93940

Re: CA-MNT-728 - Notice of Preparation for an Environmental Impact Report and Notice of Scoping Meeting, and Initial Study for the proposed Monterey Regional Airport - Airport Master Plan Project -

Saleki Atsa,

Ohlone/Costanoan-Esselen Nation is an historically documented previously recognized tribe. OCEN is the legal tribal government representative for over 600 enrolled members of Esselen, Carmeleno, Monterey Band, Rumsen, Chalon, Soledad Mission, San Carlos Mission and/or Costanoan Mission Indian descent. Though other indigenous people may have lived in the area, the area is the indigenous homeland of our people. Included with this letter please find a territorial map by Taylor 1856; Levy 1973; and Milliken 1990, indentifying Tribal areas.

Ohlone/Costanoan-Esselen Nation objects to all excavation in known cultural lands, even when they are described as previously disturbed, and of no significant archaeological value. Please be advised that it is our first priority that our ancestor's remains be protected and undisturbed. We desire that all cultural and sacred burial items be left with our ancestors on site or where they are discovered. We ask for the respect that is afforded all of our current day deceased, by no other word these burial sites are cemeteries, respect for our ancestors as you would expect respect for your deceased family members in today's cemeteries. **Our definition of respect is no disturbance.**

I was assigned as the Most Likely Descendant for CA-MNT-728, by the Native American Heritage Commission, we continue to wait for follow through to rebury the remains of our Ancestors found on site. There has been no contact as to the return of artifacts found on CA-MNT-728 as agreed by the airport management. I have noticed with this report that there is a change in management and would like to establish a meeting to discuss these items as well as current *Potentially Significant Impact as reported in the "INITIAL STUDY FOR THE MONTEREY REGIONAL AIRPORT MASTER PLAN"* prepared by Coffman Associates, Inc. 4835 E. Cactus Road, suite 235 Scottsdale, AZ 85254 page 32, Cultural Resources.

OCEN's Tribal leadership desires to be provided with reports, surveys, including subsurface testing, and presence/absence testing. OCEN request to be included in mitigation and recovery programs, reburial of any of our ancestral remains, placement of all cultural items, and that a Native American Monitor of Ohlone/Costanoan-Esselen Nation, approved by the OCEN Tribal Council be used within our aboriginal territory.

We request consultation on projects affecting our aboriginal homelands. We look forward to hearing more information about this project; please feel free to contact me at (408) 629-5189. Nimasianexelpasaleki. Thank you for your attention to this matter.

Sincerely and Respectfully Yours,

Louise J. Miranda Ramirez, Chairperson
Ohlone/Costanoan-Esselen Nation
(408) 629-5189

Cc: OCEN Tribal Council
Katy Sanchez, Native American Heritage Commission

Distribution of Ohlone/Costanoan-Esselen Nation Tribal Rancherias, Districts, Landgrants and Historic Landmarks

OCEN DIRECT LINEAL DESCENT

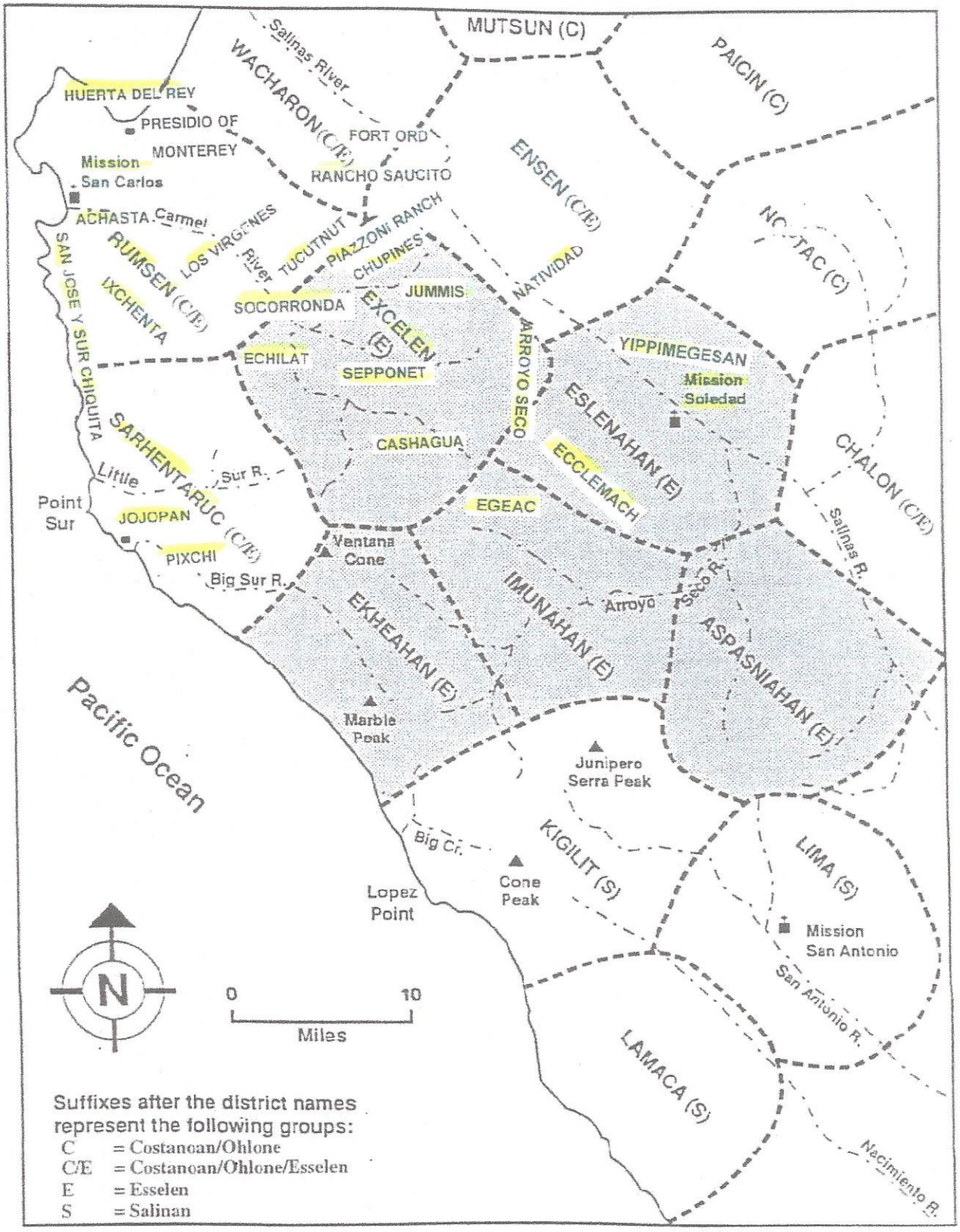


Figure 2:

Map after Taylor 1856; Levy 1973; Hester 1978; Milliken 1990

MONTEREY REGIONAL AIRPORT
Monterey County, California

INITIAL STUDY
FOR THE
MONTEREY REGIONAL AIRPORT MASTER PLAN

Prepared For:
Monterey Peninsula Airport District
200 Fred Kane Drive, Suite 200
Monterey, CA 93940

Prepared By:
Coffman Associates, Inc.
4835 E. Cactus Road, Suite 235
Scottsdale, AZ 85254

December 2015

Issues	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
V. CULTURAL RESOURCES Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in State CEQA Guidelines, Section 15064.5?	X	☐	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines, Section 15064.5?	X	☐	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	X	☐	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	X	☐	☐	☐
e) Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code, Section 21074?	X	☐	☐	☐

Impact Analysis

V a-e) Potentially Significant Impact. Cultural resources have been identified in the past on the airport property; and, additional historic, archaeological, or paleontological resources could be located on the property. In addition, there is the potential for human remains. Therefore, implementation of the proposed AMP could result in potential impacts to cultural resources that will need to be further evaluated in an EIR.

Tribal cultural resources include sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are listed on State or local historic registers or are otherwise significant per Public Resources Code, Section 21074. The potential for the proposed AMP to cause a substantial adverse change in the significance of tribal cultural resources will need to be further evaluated in an EIR.

Fly MONTEREY
Monterey Regional Airport

BOARD OF DIRECTORS

William Sabo | Chairman
Mary Ann Leffel
Carl Miller
Matthew Nelson
Richard Searle

December 28, 2015

Louise J. Miranda Ramirez, Chairperson
Ohlone/Costanoan-Esselen Nation
P.O. Box 1301
Monterey, California 93942

RE: Notice of Preparation of an Environmental Impact Report & Notice of Scoping Meeting; Initial Study; Proposed Monterey Regional Airport – Airport Master Plan at Monterey Regional Airport in Monterey, California

Dear Ms. Ramirez:

Please review the enclosed ***Notice of Preparation for an Environmental Impact Report & Notice of Scoping Meeting,*** and ***Initial Study*** for the proposed ***Monterey Regional Airport – Airport Master Plan Project ("Project").***

Pursuant to Section 15082 of the State California Environmental Quality Act ("CEQA") Guidelines (Cal. Code Regs., tit. 14, § 15000 et seq.), the Monterey Peninsula Airport District ("District"), acting in its capacity as the owner and operator of Monterey Regional Airport, has determined that an Environmental Impact Report ("EIR") is the appropriate environmental document for the Project. The District will be the Lead Agency for the Project and will be responsible for the EIR preparation pursuant to CEQA and the State CEQA Guidelines.

Coordination with all responsible agencies will be provided in accordance with the Notice of Preparation statutes. Additionally, the Scoping Meeting will be held from 2:00PM-4:00PM at the 2nd Floor of the Airport Terminal Building- 200 Fred Kane Drive, Suite 200, Monterey, CA 93940 on Wednesday, February 3, 2016.

Please send any written comments or concerns regarding potential environmental impacts of the proposed Project addressed to me at: 200 Fred Kane Drive Suite 200, Monterey, CA 93940 or via email at sglennon@montereyairport.com by **Tuesday, February 16, 2015**. If you have any questions or need additional information, please feel free to contact me at (831) 648-7000 Ext. 209. Thank you for your consideration and timely response.

Sincerely,

Shelley Glennon
Planning Manager - Environmental

Enclosure

NOTICE OF PREPARATION AND NOTICE OF SCOPING MEETING

DATE: December 28, 2015
SUBJECT: Notice of Preparation of an Environmental Impact Report and Notice of Scoping Meeting
PROJECT TITLE: Monterey Regional Airport – Airport Master Plan
APPLICANT: Monterey Peninsula Airport District
200 Fred Kane Drive
Monterey, California 93940

Notice is hereby given pursuant to Section 15082 of the State California Environmental Quality Act ("CEQA") Guidelines (Cal. Code Regs., tit. 14, § 15000 et seq.), that the Monterey Peninsula Airport District ("District"), acting in its capacity as the owner and operator of Monterey Regional Airport, has determined that an Environmental Impact Report ("EIR") is the appropriate environmental document for the Monterey Regional Airport Master Plan Project ("Project"). The District will be the Lead Agency for the Project and will be responsible for the EIR preparation pursuant to CEQA and the State CEQA Guidelines. The Project description, location, and an analysis of the probable environmental effects of the proposed project are contained in the attached materials.

As required by Section 15082 of the CEQA Guidelines, this Notice of Preparation ("NOP") has been prepared and distributed to solicit comments from potential Responsible and Trustee Agencies on Project-related concerns relevant to each agency's statutory responsibilities. Comments on the content and scope of the EIR also are solicited from any other interested parties (including other agencies and affected members of the public). The EIR will be the environmental document of reference for Responsible and Trustee Agencies when considering subsequent discretionary approvals.

The District requests that any potential Responsible or Trustee Agencies responding to this NOP reply in a manner consistent with Section 15082(b) of the State CEQA Guidelines, which allows for the submittal of any comments in response to this notice no later than 45 days after receipt of the NOP. The District will accept comments from these Agencies and others regarding this NOP through the close of business, February 16, 2016.

This NOP is available for viewing at www.montereyairport.com. In addition, a Scoping Meeting will be held from 2:00PM-4:00PM at the following location: 2nd Floor of the Airport Terminal Building 200 Fred Kane Drive, Suite 200, Monterey, CA 93940 on Wednesday, February 3, 2016.

Your agency and other interested parties are invited to attend and submit comments for consideration during preparation of the EIR. All comments and responses to this NOP must be submitted in writing to:

Shelley Glennon, Planning Manager – Environmental
200 Fred Kane Drive. Suite 200
Monterey, CA 93940
(831) 648-7000 Ext. 209
sglennon@montereyairport.com

Submitted by:

Mark Bautista, A.A.E
Deputy General Manager
Planning & Development Department
Monterey Peninsula Airport District

MONTEREY
REGIONAL AIRPORT

Appendix I

GEOTECHNICAL AND DRAINAGE TECHNICAL MEMORANDUMS

CORNERSTONE EARTH GROUP

TYPE OF SERVICES	Preliminary Geotechnical Investigation
PROJECT NAME	Monterey Peninsula Airport Terminal Building, Parking Structure, Apron Area, and North Side Improvement Areas
LOCATION	Salinas Highway (Highway 68) and Olmstead Road Monterey, California
CLIENT	Kimley-Horn and Associates, Inc.
PROJECT NUMBER	234-2-7
DATE	March 29, 2017

CORNERSTONE EARTH GROUP

Type of Services	**Preliminary Geotechnical Investigation**
Project Name	**Monterey Peninsula Airport Terminal Building, Parking Structure, Apron Area, and North Side Improvement Areas**
Location	**Salinas Highway (Highway 68) and Olmstead Road Monterey, California**
Client	**Kimley-Horn and Associates, Inc.**
Client Address	**765 The City Drive, Suite 200 Orange, California**
Project Number	**234-2-7**
Date	**March 29, 2017**

Prepared by **Matthew J. Schaffer, P.E.**
Project Engineer
Geotechnical Project Manager

Scott E. Fitinghoff, P.E., G.E.
Principal Engineer
Quality Assurance Reviewer

1259 Oakmead Parkway | Sunnyvale, CA 94085
T 408 245 4600 | F 408 245 4620

1270 Springbrook Road, Suite 101 | Walnut Creek, CA 94597
T 925 988 9500 | F 925 988 9501

www.cornerstoneearth.com

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Type of Services	**Preliminary Geotechnical Investigation**
Project Name	**Monterey Peninsula Airport Terminal Building, Parking Structure, Apron Area, and North Side Improvement Areas**
Location	**Salinas Highway (Highway 68) and Olmstead Road** **Monterey, California**

SECTION 1: INTRODUCTION

This preliminary geotechnical report was prepared for the sole use of Kimley-Horn and Associates, Inc. for the Monterey Peninsula Airport Terminal Building, Parking Structure, Apron Area, and North Side Improvements Areas project in Monterey, California. The location of the site is shown on the Vicinity Map, Figure 1. For our use we were provided the following documents:

- An autocad file showing existing elevations (datum unknown) for the airport,
- A google earth image and a topo map both showing preliminary fill placement and grading limits on the north side of airport and a cross section of the preliminary fill placement and grading.

1.1 PROJECT DESCRIPTION AND REQUIREMENTS

The project site is located north of Salinas Highway (Highway 68) at the Monterey Peninsula Airport in Monterey, California. The project is to include relocating the Monterey Peninsula Airport terminal building and apron area southeast of their present location and reconfiguring Taxiway A as part of the relocation project. The new terminal apron and terminal building will overlay the existing parking, hanger, and ramp areas on the south side of the airport. Due to the existing elevation differences between the parking, hanger, and ramp areas and the existing elevation of the taxiway and runways, we understand 10- to 12-foot cuts with retaining walls will be required to retain existing soils and transition the existing grade down to the existing taxiway and runway levels. The new terminal building will most likely be two levels to accommodate the elevation difference. To the west of the proposed apron area, ancillary 3-level at-grade parking structure and likely smaller structures are planned. Additionally, an access road will be constructed around the perimeter of the apron.

On the north side of the airport, a general aviation apron will be constructed adjacent to the existing apron and Navy Flying Club facilities. Hangers will also be relocated to this new apron area. Construction in this area will include placing 5 to 10 feet of fill to raise the site grades. Additionally, approximately 100,000 cubic yards of excess material generated from the planned cuts from the south side terminal and apron relocation will be placed on the north side of the airport.

Structural loads for the proposed terminal building are not know at this time, however are expected to be typical of this type of building.

1.2 SCOPE OF SERVICES

Our scope of services was presented in our proposal dated November 25, 2016 and consisted of field and laboratory programs to evaluate physical and engineering properties of the subsurface soils, engineering analysis to prepare preliminary recommendations for earthwork, pavements, building foundations, retaining walls, temporary cut slopes and shoring, and fill placement and slope configurations for fill placement on the north side of airport, and preparation of this report. Brief descriptions of our exploration and laboratory programs are presented below.

1.3 EXPLORATION PROGRAM

Field exploration consisted of 19 borings drilled on December 11 to 14, 2016, with truck-mounted, hollow-stem auger drilling equipment. The borings were drilled to depths ranging from 10½ to 40 feet. The borings were backfilled with cement grout in accordance with local requirements; exploration permits were obtained as required by local jurisdictions.

The approximate locations of our exploratory borings are shown on the Site Plan, Figure 2. Details regarding our field program are included in Appendix A.

1.4 LABORATORY TESTING PROGRAM

In addition to visual classification of samples, the laboratory program focused on obtaining data for preliminary pavement design, retaining wall design, foundation design, and seismic ground deformation estimates. Testing included moisture contents (ASTM D2216), dry densities (ASTM D2937), grain size analyses (sieve and hydrometer – ASTM D422), washed sieve analyses (ASTM D1140), Plasticity Index (ASTM D4318), Compaction Tests (ASTM D1557), and California Bearing Ratios (ASTM D1883). Details regarding our laboratory program are included in Appendix B.

1.5 PRELIMINARY CORROSION EVALUATION

Two samples from our borings were tested for saturated resistivity, pH, soluble sulfates, and chlorides. The laboratory data is presented in Appendix C of this report. The development of corrosion protection recommendations and/or designs should be performed by a corrosion engineer.

1.6 ENVIRONMENTAL SERVICES

Environmental services were not requested for this project. If environmental concerns are determined to be present during future evaluations, the project environmental consultant should review our geotechnical recommendations for compatibility with the environmental concerns.

SECTION 2: REGIONAL SETTING

2.1 GEOLOGICAL SETTING

The site is located within the coast range geomorphic province of central California. Throughout the Cenozoic Era, central California has been affected by tectonic forces associated with lateral or transform plate motion between the North American and Pacific crustal plates, producing a complex system of northwest-trending faults - the San Andreas Fault system (Page, 1998). Uplift, erosion and subsequent re-deposition of sedimentary rocks within this province have been driven primarily by the northwest directed, strike-slip movement of the tectonic plates and the associated northeast oriented compressional stress. The northwest-trending coastal mountain ranges are the result of an orogeny (formation of mountains by the process of tectonic uplift) believed to have been occurring since the Pleistocene epoch (approximately 2-3 million years before present).

The portion of the Santa Lucia Mountains where the site exists is within the Salina Block, which is bound by the San Andreas fault on the east, and by the San Gregorio - Palo Colorado fault to the west. The Salina block is composed of an elongate prism of granites and metamorphic rock types. The Salina basement complex is overlain primarily by marine sedimentary rocks of tertiary age and terrestrial rocks of Pliocene to Pleistocene age. The geologic formations in the vicinity of the site consist of granitic basement rocks overlain by a sequence of marine and terrestrial sedimentary rocks that have been deformed into a series of northwest trending folds by regional tectonic forces. A Regional Geologic Map based on Dibblee (2007) is presented as Figure 3.

2.2 REGIONAL SEISMICITY

The San Francisco Bay area region is one of the most seismically active areas in the Country. While seismologists cannot predict earthquake events, geologists from the U.S. Geological Survey have recently updated earlier estimates from their 2014 Uniform California Earthquake Rupture Forecast (Version 3) publication. The estimated probability of one or more magnitude 6.7 earthquakes (the size of the destructive 1994 Northridge earthquake) expected to occur somewhere in the San Francisco Bay Area has been revised (increased) to 72 percent for the period 2014 to 2043 (Aagaard et al., 2016). The faults in the region with the highest estimated probability of generating damaging earthquakes between 2014 and 2043 are the Hayward (33%), Rodgers Creek (33%), Calaveras (26%), and San Andreas Faults (22%). In this 30-year period, the probability of an earthquake of magnitude 6.7 or larger occurring is 22 percent along the San Andreas Fault and 33 percent for the Hayward or Rodgers Creek Faults. As seen with damage in San Francisco and Oakland due to the 1989 Loma Prieta earthquake that was centered about 50 miles south, significant damage can occur at considerable distances. Higher

levels of shaking and damage would be expected for earthquakes occurring at closer distances.

The faults considered capable of generating significant earthquakes are generally associated with the well-defined areas of crustal movement, which trend northwesterly. The table below presents the State-considered active faults within 25 kilometers of the site.

Table 1: Approximate Fault Distances

Fault Name	Distance	
	(miles)	(kilometers)
Monterey Bay-Tularcitos (Navy)	1.1	1.8
Rinconada	7.7	12.4
San Gregorio	9.3	15.0

The San Andreas fault is located approximately 40 kilometers to the northeast. The Chupines fault, which is not a State-considered fault, is located about 2.1 miles to the southeast. Fault distances for the Navy and Chupines faults were taken from Dibblee (2007). A regional fault map is presented as Figure 4, illustrating the relative distances of the site to significant fault zones.

SECTION 3: SITE CONDITIONS

3.1 SITE GEOLOGY

Published maps covering the regional geology in the general vicinity of the site include those by Clark et al. (1974, 1997), Greene (1977), and Dibblee (2007). These regional maps are based upon aerial photo interpretation, reconnaissance style mapping and field checking at sparsely distributed locations in the area and do not include site-specific data. Figure 3, Regional Geologic Map is a partial reproduction of the geologic map of Dibblee (2007), the most detailed mapping that has been done in the vicinity.

All the maps reviewed indicate that the site is underlain by Quaternary deposits which in turn overlie bedrock of the Miocene Monterey Formation, which is folded into a series of northwest trending anticinal and synclinal structures. Dibblee (2007) indicates the Airport property is underlain by three Quaternary age formations; “Dissected older alluvium” (“Qoa”) across much of the Airport property, Aromas sand (“Qar”) at the south property line, and “Older stabilized dune and drift sand” (“Qos”) capping the very top of the terrace in the eastern portion of the property.

3.2 SURFACE DESCRIPTION

3.2.1 North Side Improvements

This area of the project is located on the north side of the airport runway and taxiways. The proposed location of the general aviation apron and relocated hangers is adjacent to the Navy Flying Club facilities to the east, a taxiway to the south, and Airport Road beyond to the north. This area is a generally flat graded area sloping down to the west with approximately Elevation 216 feet at the east end and approximately Elevation 202 feet at the west end. Beyond the north side of the generally flat graded area, grades slope gradually down to Airport Road with a steeper approximately 3:1 (H:V) 6-foot drop down to Airport Road at the northwest corner of the graded area. This flat graded area proposed for the general aviation apron is generally covered in weeds and small shrub like plants. Borings EB-4 and EB-5 were performed in this area.

The proposed location for the approximately 100,000 cubic yards of material generated from the planned cuts on the south side of the airport is located to the south of Airport Circle and the residential buildings beyond, to the east of Airport Circle, and to the north and east of N Road and Airport Road beyond to the south. This area slopes up from the residential buildings and Airport Circle to the top of a previously placed berm that generally parallels Airport Circle. The top of berm is approximately 10 to 15 feet higher than Airport Circle and the residential buildings beyond and has gradients up to about 3½:1 to 4:1 (H:V). Grades slope down to the south approximately 7 to 10 feet from the top of berm in most locations with a similar gradient as the north side before sloping downward more gradually to the south and southwest to a flatter graded area that appears to be used as a staging area to the north of N Road. To the south of N Road grades slope up about 20 to 25 feet to Airport Road with gradients up to about 3.5:1 to 3:1 (H:V). Areas other than the staging area and roadways are generally covered with mature trees and shrubs. The top of berm is generally an unimproved pathway with evidence vehicular travel. Borings EB-1 and EB-2 were performed on the unimproved pathway along the berm and Boring EB-3 was performed within the staging area.

3.2.2 New Terminal Building, Parking Structure, and Apron Area

This area of the project is located on the south side of the main airport runway and is bounded by Olmsted Road, Salinas Highway (68), and other office/commercial buildings to the south and southeast. The existing Taxiway A and existing terminal apron are located along the northern extent of this project area running generally west to east. The taxiway and apron slope gradually up to the east with approximate Elevation 178 feet at our most westerly Boring EB-6 and approximate Elevation 213 feet at our most easterly Boring EB-9. Borings EB-6, EB-8, and EB-9 were performed on the existing Taxiway A and Boring EB-7 was performed on the existing terminal apron. The taxiway consisted of asphalt concrete and the apron consisted of Portland cement concrete.

To the south of the existing Taxiway A and terminal apron, the existing terminal building, long term parking lot, and an airport hanger area are located west to east, respectively. The existing terminal building is generally at the elevation of the terminal apron while the long term parking lot and airport hanger area have elevations range up to about 10 feet above the taxiway and

apron level along the northern extent of parking lot and hanger area. The parking lot and hanger area gradually slope up to the east and southeast, however grades are more gradual than Taxiway A to the north resulting in the most easterly portion of the hanger area only roughly about 2 feet above Taxiway A grades at the adjacent location. Between the long term parking area and hanger area a pavement ramp inclines up about 8 to 10 feet connecting Taxiway A below with the hanger area and associated areas above. Another ramp is located at the eastern extend of the hanger area, but as mentioned above, only ramps up about 2 feet as Taxiway A is close to the elevation of the hanger area at this extent. Borings EB-12, EB-14, and EB-15 were performed within the long term parking lot and Borings EB-10, EB-11, EB-13, EB-16, EB-17, and EB-19 were performed within the hanger area. The parking lot and hanger area consist of asphalt concrete. An airport fire station is located between the long term parking lot and terminal apron area with the upper level connecting to the parking lot and the lower level at the apron elevation. Landscaping consisting of grass and small shrubs is located in the sloped area between the parking lot and hanger area and the taxiway and apron below. Beyond the anticipated project boundary along the eastern and southeast border of the hanger area, grades slope up to the south and east to office/commercial building developments beyond.

Olmsted Way runs along the south end of the long term parking lot and connects Olmsted Road with the hanger area. An employee parking lot and staging area is located to the south of Olmsted Way and to the west of the southern portion of the hanger area. Grades in this area are generally level. Boring EB-18 was performed within the staging area, which may be the site for a new at-grade parking structure in the future. The parking lot consists of asphalt concrete and the staging area is covered in gravel/aggregate base material.

3.3 SUBSURFACE CONDITIONS

Nineteen borings were drilled as part of our geotechnical investigation for the new terminal building, apron area improvements, and improvements on the north side of the airport. Borings EB-1 to EB-5 were performed on the north side of the airport, Borings EB-6, EB-8, and EB-9 were performed on the existing taxiway, Boring EB-7 was performed on the existing terminal apron, and Borings EB-10 to EB-19 were performed in the existing long-term parking, employee parking, and hanger areas at the south side of airport. Borings EB-6 to EB-17 were located within areas of existing pavements and were cored prior to the borings being performed. A summary of the pavement core thicknesses and underlying aggregate base (AB) thicknesses at these boring locations are shown in Table 2.

Table 2: Summary of Pavement Core Thicknesses

Boring Number	Total Pavement Thickness[(1)]	AB Thickness[(1)]
EB-6	9¾" AC[(2)]	5" AB
EB-7	14½" PCC	4" AB
EB-8	12⅛" AC[(2)]	5" AB
EB-9	11¼" AC[(2)]	8" AB
EB-10	1½" AC	5" AB
EB-11	1½" AC	4" AB
EB-12	4¾" AC[(2)]	3½" AB
EB-13	2¾" AC	4" AB
EB-14	4½" AC[(2)]	No AB
EB-15	2½" AC	No AB
EB-16	2" AC	4" AB
EB-17	2¾" AC	5" AB

Note: [1] AC = Asphalt Concrete or Hot Mixed Asphalt (HMA), [1]AB = Aggregate Base, [1] (All pavement section thicknesses were measured by hand in the field and may vary).
[2] Pavement thickness included an overlay separated by pavement fabric. Overlay thickness was approximately 2 inches for EB-6, EB-8, and EB-12. Overlay thickness was about 2⅜ inches for EB-9 and 2¼ inches for EB-14.

3.3.1 Proposed Stockpile Soil Area – North Side of Airport

Borings EB-1 to EB-3 were performed in the area proposed for the approximately 100,000 cubic yards of cut material from the south side improvements. Borings EB-1 and EB-2 were performed along the top of the existing berm in the area. Below the ground surface, these borings encountered 11 to 12 feet of undocumented fill consisting of medium dense to very dense silty, clayey, and poorly graded sand with silt. Beneath the fill, native loose to dense silty, clayey, and poorly graded sands with variable amounts of silt were encountered to the maximum depths explored of 35 feet. The upper portion of these native soils was generally found to be loose to medium dense. Boring EB-3 was performed within the graded staging area. Beneath the ground surface, native loose poorly graded sand with silt was encountered to a depth of about 5 feet followed by medium dense poorly graded sand with silt and very dense silty sand to the maximum depth explored of about 14 feet.

3.3.2 General Aviation Apron Relocated Hangers Area – North Side of Airport

Boring EB-4 and EB-5 were performed in the area proposed for the general aviation apron and relocated hangers adjacent to the Navy Flying Club facilities. Beneath the ground surface, these borings encountered native medium dense to dense poorly graded sand with variable amounts of silt to the maximum depth explored of 15 feet.

3.3.3 Existing Taxiway A and Terminal Apron Area

Borings EB-6 to EB-9 were performed in the existing Taxiway A and terminal apron area. Beneath the pavement section (AC and AB) for Boring EB-6, undocumented fill consisting of dense silty, clayey sand and medium dense poorly graded sand with silt and gravel were encountered to a depth of about 5 feet below the surface. Beneath the fill in Boring EB-6 and the pavement section (AC or PCC and AB) in Borings EB-7 to EB-9, medium dense to very dense silty sand and poorly graded sand was generally encountered to a depth of 8 to 11½ feet. Medium dense to dense clayey sand was encountered in Boring EB-7 and EB-9 starting at a depth of 8 and 9 feet, respectively. The terminal depth of these boring was 10½ to 11½ feet.

3.3.4 New Terminal Building and Terminal Apron Area

Borings EB-10 to EB-18 were performed in areas anticipated to be cut up to about 10 to 12 feet to bring grades down to the new terminal building lower level and terminal apron levels, corresponding to the level of the existing Taxiway A and terminal apron. Beneath the pavement sections (AC and AB), undocumented fill consisting of very dense clayey sand with gravel and loose to very dense poorly graded sand with silt was encountered in Borings EB-10 to EB-12 to depths of about 2½ to 3¼ feet beneath the surface. Beneath the undocumented fill in Borings EB-10 to EB-12, pavement sections in Borings EB-13 to EB-17, and a surficial aggregate base section in EB-18, generally sands with variable amounts of silt and clay were encountered to the maximum depths explored of 40 feet below the surface. These sands were generally loose to medium dense to a depth of about 7½ to 12 feet in Borings EB-10, EB-12 to EB-15, and EB-18. The sands were generally dense to very dense in the other borings and beneath the loose to medium dense sands in Borings EB-10, EB-12 to EB-15, and EB-18. A minor layer of very stiff sandy silty clay about 1 to 2½ feet thick was encountered at a depth of about 15 and 17½ feet in Boring EB-10 and EB-12, respectively. A layer of very dense to hard lean clay and sandy lean clay about 3 to 6 feet thick was encountered at a depth of about 17½ feet in Boring EB-14 and EB-15. A very stiff fat clay layer was encountered at a depth of 37 feet down to the terminal depth of 40 feet in Boring EB-18.

Boring EB-19 was performed in the location of an anticipated ramp down to the new terminal building lower level and apron level. Beneath the ground surface medium dense poorly graded sand with silt was encountered to about 2½ feet followed by generally dense to very dense sands with variable amounts of silt and clay to the terminal depth of 20 feet. A thin ½-foot thick layer of very stiff lean clay was encountered at 5½ feet beneath the surface.

Detailed boring logs, as well as a key to the classification of the soil encountered in our investigation can be found in Appendix A of this report.

3.3.5 Plasticity/Expansion Potential

We performed seven Plasticity Index (PI) determination tests on representative subsurface samples at depths ranging from 1½ to 19½ feet below grade. The test results were used to evaluate plasticity and expansion potential of the proposed new terminal apron and taxiway bearing soils and to evaluate the plasticity and expansion potential of soils beneath the

proposed terminal building. The PI test results ranged from non-plastic to 21, indicating none to moderate expansion potential. Tests from the soils beneath the new terminal apron and taxiway ranged from non-plastic to 14, indicating none to low expansion potential. A Plasticity Index Testing Summary is presented as Figure B1 in Appendix B.

3.4 GROUND WATER

Ground water was encountered in Borings EB-14, EB-17, and EB-18, at depths of 32, 13, and 26½ feet, respectively, below current site grades. Ground water was not encountered in our other borings. All measurements were taken at the time of drilling and may not represent the stabilized levels that can be higher than the initial levels encountered.

Ground water levels are not currently mapped at the site by the State of California. We reviewed the GeoTracker website regarding ground water depths in the site area. Based on our GeoTracker website search, there is no available data within the site area.

Fluctuations in ground water levels occur due to many factors including the following: seasonal water fluctuations, underground drainage patterns causing perched water conditions above steady ground water levels, regionally the average ground water level can fluctuate over long time periods, and other factors.

On a preliminary basis, ground water appears to be below the depth of the new terminal building and apron area (on the order of 3 feet or greater). Depth to ground water should be further evaluated during a design-level investigation to establish a design ground water depth and evaluate any effects, if any, ground water may have on pavements and the terminal building.

3.5 CORROSION SCREENING

We tested two samples for resistivity, pH, soluble sulfates, and chlorides collected from Borings EB-13 and EB-14 at depths of approximately 11½ and 10 feet, respectively. These depths are anticipated to be at the approximate depth of the future terminal apron and lower level of the terminal building. The laboratory test results are summarized in Table 3A and provided in Appendix C. The development of corrosion protection recommendations and/or designs should be performed by a corrosion engineer.

Table 3A: Summary of Corrosion Test Results

Boring/Sample	Depth (feet)	Soil pH[1]	Resistivity[2] (ohm-cm)	Chloride[3,5] (mg/kg)	Sulfate[4,5] (mg/kg)
EB-13/6	11½	6.5	26,138	<2	2
EB-14/5	10	7.0	21,525	<2	25

Notes: [1]ASTM G51
[2]ASTM G57 - 100% saturation
[3]ASTM D4327/Cal 422 Modified
[4]ASTM D4327/Cal 417 Modified
[5]1 mg/kg = 0.0001 % by dry weight

Many factors can affect the corrosion potential of soil including moisture content, resistivity, permeability, and pH, as well as chloride and sulfate concentration. Typically, soil resistivity, which is a measurement of how easily electrical current flows through a medium (soil and/or water), is the most influential factor. In addition to soil resistivity, chloride and sulfate ion concentrations, and pH also contribute in affecting corrosion potential.

Based on the laboratory test results summarized in Table 2A and published correlations between resistivity and corrosion potential, the soils may be considered very mildly corrosive to buried metallic improvements (Chaker and Palmer, 1989).

In accordance with the 2016 CBC Section 1904.1, alternative cementitious materials shall be determined in accordance with ACI 318-14 Table 19.3.1.1, Table R19.3.1, and Table 19.3.2.1. Based on the laboratory sulfate test results, no cement type restriction is required, although, in our opinion, it is generally a good idea to include some sulfate resistance and to maintain a relatively low water-cement ratio. We have summarized applicable sulfate design values and parameters from ACI 318-14, Chapter 19 below in Table 3B.

We recommend the structural engineer and a corrosion engineer be retained to confirm the information provided and for additional recommendations, as required.

Table 3B: ACI Sulfate Soil Corrosion Design Values and Parameters

Category	Water-Soluble Sulfate (SO4) in Soil (% by weight)	Sulfate (S) Class	Cementitious Materials (2)
S, Sulfate	< 0.10	S0	no type restriction

Notes: (1) above values and parameters are from on ACI 318-14, Table 19.3.1.1, Table R19.3.1, and Table 19.3.2.1
(2) cementitious materials are in accordance with ASTM C150, ASTM C595, and ASTM C1157

SECTION 4: GEOLOGIC HAZARDS

4.1 FAULT RUPTURE

As discussed above several significant faults are located within 25 kilometers of the site. The site is not located within a State-designated Alquist Priolo Earthquake Fault Zone. As shown in Figure 4, no known surface expression of fault traces is thought to cross the site; therefore, fault rupture hazard is not a significant geologic hazard at the site.

4.2 ESTIMATED GROUND SHAKING

Moderate to severe (design-level) earthquakes can cause strong ground shaking, which is the case for most sites within the Bay Area. A peak ground acceleration (PGA) was estimated for analysis using a value equal to F_{PGA} x PGA, as allowed in the 2016 edition of the California Building Code. For our analysis we used a PGA of 0.576g.

4.3 LIQUEFACTION POTENTIAL

The site is not located within an area covered by the current State mapping for Liquefaction Hazard Zones. However, the airport is map as being in areas of low susceptibility and variable (may range from high to low) susceptibility (Rosenberg, L.I.; 2001). We screened the site for liquefaction during our site exploration by retrieving samples from the site, performing visual classification on sampled materials, and performing various tests to further classify the soil properties.

During strong seismic shaking, cyclically induced stresses can cause increased pore pressures within the soil matrix that can result in liquefaction triggering, soil softening due to shear stress loss, potentially significant ground deformation due to settlement within sandy liquefiable layers as pore pressures dissipate, and/or flow failures in sloping ground or where open faces are present (lateral spreading) (NCEER 1998). Limited field and laboratory data is available regarding ground deformation due to settlement; however, in clean sand layers settlement on the order of 2 to 4 percent of the liquefied layer thickness can occur. Soils most susceptible to liquefaction are loose, non-cohesive soils that are saturated and are bedded with poor drainage, such as sand and silt layers bedded with a cohesive cap.

Borings EB-12, EB-14, EB-15, and EB-18 extended to a maximum depth of 40 feet below existing site grades and were performed in the anticipated location of the future terminal and parking structure buildings. As previously mentioned, we understand the parking structure will be at-grade while site grades will be lowered about 10 to 12 feet within the terminal building area. Additionally, as discussed, ground water appears to be below the depth of the new terminal building. Below a depth of about 10 feet, the above mentioned borings generally encountered very stiff to hard cohesive clays and medium dense to very dense granular soils. In our opinion, granular soils with SPT “N” values of 30 or greater are too dense to liquefy and have been screened out of our analysis. Based on the above, our preliminary analysis and screening within the anticipated terminal building location indicates the soils could theoretically experience liquefaction triggering that could result in soil softening and post-liquefaction total settlement of up to about ¼ inch based on the Yoshimine et.al (2006) method. The potential for liquefaction settlement in the location of the terminal building should be further evaluated during a design-level geotechnical investigation once the building footprint has been established.

Borings EB-4 and EB-5 were performed in the location of the proposed general aviation apron and relocated hangers and extended to a maximum depth of 15 feet below existing site grades. Ground water was not encountered in these borings. Boring EB-3 was performed to the north of this area and positioned at a ground surface elevation about 23 and 36 feet below Boring EB-5 and EB-4, respectively. Ground water was not encountered to the maximum depth explored in Boring EB-3 of about 14 feet which corresponds to a depth of about 50 feet below Boring EB-4 and 37 feet below Boring EB-5. Therefore, since ground water is anticipated to be at greater depths, in our opinion, the potential for liquefaction settlement in the location of the relocated hangers is low.

4.4 LATERAL SPREADING

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water; typically lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. As failure tends to propagate as block failures, it is difficult to analyze and estimate where the first tension crack will form.

There are no open faces within a distance considered susceptible to lateral spreading; therefore, in our opinion, the potential for lateral spreading to affect the site is low.

4.5 SEISMIC SETTLEMENT/UNSATURATED SAND SHAKING

Loose to medium dense unsaturated sandy soils can settle during strong seismic shaking. We evaluated the potential for seismic compaction of the unsaturated sandy soils in the anticipated location of the terminal building, relocated hangers, and proposed engineered fill slope for the placement of the approximately 100,000 cubic yards of material generated from the planned cuts for the terminal building and apron relocation based on the work by Pradell (1998).

As mentioned, we understand site grades will be lowered about 10 to 12 feet within the terminal building area. Our analyses indicate that the unsaturated sandy soils beneath a depth of about 10 feet could experience up to about ¼ inch of movement after strong seismic shaking. However, if the bottom level of the terminal building is not lowered about 10 to 12 feet as currently anticipated and is constructed near existing grades, our analyses indicate an additional ¼ inch of movement could occur. In the area of the relocated hangers, our analyses indicate that the unsaturated sandy soils could experience up to about ¼ inch of movement after strong seismic shaking. In the location of the proposed engineered fill slope for placement of the cut materials, our analyses indicated that the existing soils could experience 1 to 1½ inches of movement after strong seismic shaking. Once the footprint locations of the terminal building and relocated hangers has been established, the potential for unsaturated sand shaking should be further evaluated during a design-level geotechnical investigation.

SECTION 5: SLOPE STABILITY

5.1 PRELIMINARY SLOPE STABILITY EVALUATION

As discussed, the approximately 100,000 cubic yards of material anticipated to be generated from the planned cuts for the terminal building and apron relocation are to be placed along the north side of the airport. Based on the preliminary grading and fill placement maps provided and our discussions with you, we prepared Geologic Cross Section A-A', Figure 5. Cross Section A-A' depicts the existing topography and the proposed 3:1 (horizontal:vertical) engineered fill slope within the area of proposed fill placement. This cross section was evaluated for static and seismic stability.

Existing grades beneath the proposed engineered fill slope range up to about 3.5:1 (horizontal:vertical). Additionally, as mentioned in the subsurface section, the upper portion of

the native soils beneath the existing berm fills were found to be generally loose to medium dense. As such, we recommend a keyway be cut below the loose native soils at the toe of proposed engineered fill slope and the existing berm be benched into as engineered fill is placed up to final proposed grades. A keyway and benching has been modeled in Cross Section A-A'. Detailed discussions of our evaluation are presented in the following paragraphs.

The analyses presented in this report should be considered preliminary because the project grading plans are conceptual at this stage. The purpose of the analysis is to demonstrate that the overall grading concept is feasible. Additional slope stability analyses should be performed as part of the design-level geologic and geotechnical investigation for the project.

5.1.1 Method of Analysis

The stability of a slope is influenced by many factors including but not limited to the geologic structure and composition, inclination, and height of a slope, ground water, climatic factors such as rainfall, and irrigation. In geotechnical engineering, "stability" is expressed as a ratio of resisting moments and forces divided by driving moments and forces termed the factor of safety (FS). Factors of safety can be calculated for static and seismic conditions. In performing the slope stability analysis, we followed the guidelines set forth by California Geologic Survey (CGS) in Special Publication 117A (2008).

The stability of the geologic cross section was evaluated using the computer program GSTABL7, and circular modes of failure. Input parameters for the analyses include slope geometry, soil layers or zones, total and saturated unit weights and strength parameters, ground water conditions, and assumed areal surface loading.

In evaluating the stability of slopes under seismic conditions, GSTABL7 uses a "pseudo-static" method of analysis. The pseudo-static method models the effects of transient or pulsating earthquake loading on a potential slide mass by using an "equivalent" static horizontal acceleration acting on the mass of the potential landslide in a limit-equilibrium analysis.

The ground motion parameter used in a pseudo-static analysis is referred to as the seismic coefficient "k". CGS (2008) has published recommendations for the selection of the "k" value in a publication titled, "Guidelines for Evaluation and Mitigation of Seismic Hazards in California, SP 117A." The site is located near the active Monterey Bay-Tularcitos, Rinconada and San Gregorio Faults and moderately high ground shaking can be expected during a seismic event near the site. In accordance with the CGS Guidelines, we have performed our pseudo-static analysis using a "k" value of 0.28, which considered an earthquake magnitude of 7.4 for the Monterey Bay-Tularcitos fault. This "k" value also considered a threshold of displacement on the order of 6 inches (15 cm) or less.

Based on our understanding of current standards of practice, the minimum allowable factor of safety with respect to slope stability generally ranges from 1.5 to 2 for static conditions and 1 to 1.2 for seismic conditions. A pseudo-static factor of safety of 1.0 typically implies "movement" of the slope mass and does not necessarily result in complete slope failure. In our opinion, acceptable factors of safety for static and seismic (pseudo-static) conditions may be considered

to be 1.5 and 1.0, respectively. For our analyses, we judged that if seismic stability factors of safety met or exceeded 1.0, that yielding or movement will likely be limited to less than a few to several inches. This is consistent with the guidelines set forth in SP 117A (CGS, 2008) and appears reasonable for the intended use and importance of the proposed improvements.

5.1.2 Selection of Preliminary Soil Properties

The engineered fill will be soil generated from keyway and benching excavation and the planned cuts for the terminal building and apron relocation. The strength parameters for the engineered fill was based on laboratory testing of similar materials from our previous "Monterey Peninsula Airport Runway Safety Area Study" performed in 2011 and our engineering judgement.

The strength parameters for the in-place undocumented fills and native sand deposits were determined based on our boring data including "N" values, densities, and moistures, and our engineering judgement. We estimate the in-place sand deposits to have an internal angle of friction (ϕ) of 30 to 36 degrees, and cohesion (c) generally ranging from 0 to 50 pounds per square foot. A summary of the soil parameters used in our analyses are presented in the table below.

Table 4: Summary of Preliminary Soil Strength Properties

Material Description	Total Unit Weight (pcf)	Saturated Unit Weight (pcf)	Cohesion (psf)	Friction Angle (degrees)
Engineered Fill	110	115	0	36
Sand (SM) – loose	81	86	0	30
Sand (SP) – m. dense	100	105	0	33
Undocumented Fill Sand (SC) – m. dense	110	115	50	33
Sand (SP) - dense	100	105	0	36
Undocumented Fill Sand (SM) – v. dense	124	130	0	36

As the slopes are unsaturated, with the ground water table anticipated to be at greater depths not influencing the stability of the proposed fill slope, the effective strength parameters used for the static analyses were also used for the seismic analyses, following discussions in SP 117A (CGS, 2008).

5.1.3 Anticipated Surficial Loads

At this time, we are not aware of any proposed surficial loads on the slope and fill placement area. As such, no surficial loading have been included in our analyses.

5.1.4 Results of Analysis

The output (calculations) from our stability analyses for both static and seismic (pseudo-static) conditions are presented in Appendix D. Our preliminary analyses for the cross section indicate acceptable factors of safety with respect to slope movement under static and seismic loading conditions with a static factor of safety of 3.3 and a seismic factor of safety of 1.4. The final slope fill slope geometry should be evaluated during a design-level geotechnical investigation.

SECTION 6: CONCLUSIONS

6.1 SUMMARY

From a geotechnical viewpoint, the project is feasible provided the concerns listed below are addressed in the project design. The preliminary recommendations that follow are intended for conceptual planning and preliminary design. A design-level geotechnical investigation should be performed once site development plans are prepared indicating where the proposed terminal building, terminal apron, and other proposed improvements are planned. The design-level investigation findings will be used to confirm the preliminary recommendations and develop detailed recommendations for design and construction. Descriptions of each geotechnical concern with brief outlines of our preliminary recommendations follow the listed concerns.

- Fill slope stability
- Potential for static and seismic settlements
- Cohesionless soils
- Ground water
- Differential movement at on-grade to on-structure transitions
- Highly erodible soils
- Terminal apron subgrade soil conditions
- Retaining wall construction difficulties with cohesionless sands

6.1.1 Fill Slope Stability

As discussed, we performed a preliminary slope stability analyses for the proposed placement of fill from the approximately 100,000 cubic yards of material to be cut for the new terminal building and apron. Our analyses indicate acceptable factors of safety with respect to slope movement under static and seismic loading conditions provided the proposed engineered fill slope is maintained at a 3:1 (horizontal:vertical) and that a keyway at the bottom of slope is constructed and the existing berm slope is benched into as discussed in the “Earthwork” section below.

6.1.2 Potential for Static and Seismic Settlements

In addition to static settlement due to building loads, our preliminary analyses indicate areas of the proposed terminal building may experience seismically-induced total and differential

settlements from dry sand settlement and from liquefaction settlement and the relocated hanger buildings may experience seismically-induced total and differential settlements from dry sand settlement. Provided the lower level of the terminal building is about 10 to 12 feet below existing site grades, we anticipate total combined seismic settlements from dry sand shaking and liquefaction up to about ½ inch and total static settlement from building loads of about ⅔ inch. Combined differential static and seismic settlements are anticipated on the order of ½ to ⅔ inch between independent foundation elements. As previously discussed, if the lower level of the terminal building is not 10 to 12 feet below existing grades, we anticipate an additional ¼ inch of settlement from dry sand settlement could occur.

For the relocated hanger buildings, we anticipate total seismic settlement from dry sand shaking of up to ¼ inch and total static settlement from building loads of about ½ inch. Combined differential static and seismic settlements are anticipated on the order of ½ inch between independent foundation elements. Seismic and static settlement estimates should be further evaluated during a design-level investigation once building layouts and configurations have been determined.

6.1.3 Cohesionless Soils

The site is generally underlain by cohesionless, sandy soils. Due to the cohesionless sandy soils, excavation sidewalls for foundations, utility trenches, etc. may cave in or accumulate a significant amount of slough. Contractors should plan on forming footings, preparing slab-on-grade subgrade just prior to concrete placement, and other similar construction issues as relates to utility excavations, etc.

6.1.4 Ground Water

As discussed, ground water was encountered in Borings EB-14, EB-17, and EB-18 at depths of 32, 13, and 26 ½ feet, respectively, below existing site grades. Borings EB-14 and EB-18 were performed in the anticipated location of the proposed terminal building, which has an anticipated lower level about 10 to 12 feet below existing site grades. At these depths, ground water is not anticipated to affect foundations for the terminal building, however the depth to ground water should be further evaluated during a design-level investigation to determine any affects ground water may have on the building.

Boring EB-17 was performed toward the eastern side of the proposed terminal apron. Grades are only anticipated to be lowered about 2 to 5 feet in this area, however if subgrade compaction and grading require grades to be lowered closer to the ground water, grading could be impacted. Impacts typically consist of potentially wet and unstable subgrade and difficulty achieving compaction. As discussed ground water levels can fluctuate due to many factors. Once final grading has been established, depth to ground water should be further evaluated during a design-level investigation to determine the potential for encountering ground water during grading and subgrade preparation.

6.1.5 Differential Movement At On-grade to On-Structure Transitions

Some improvements may transition from on-grade support to overlying the basement (on-structure) for the new terminal building. Where improvements transition from on-grade to the basement, these transition areas typically experience increased differential movement due to a variety of causes, including difficulty in achieving compaction of retaining wall backfill closest to the wall. We recommend consideration be given to including subslabs beneath flatwork or pavers that can cantilever at least 3 feet beyond the wall. If surface improvements are included that are highly sensitive to differential movement, additional measures may be necessary. We also recommend that retaining wall backfill be compacted to 95 percent where surface improvements are planned.

6.1.6 Highly Erodible Soils

The sands encountered in our exploration and generally present at the site consist of fine to medium sands with fine contents generally less than 30 percent. These types of soils are highly subject to erosion from wind and water. We recommend that final slopes in sand be 3:1 (H:V) or flatter to limit erosion. All exposed surfaces should be vegetated or otherwise protected from erosion. Additional recommendations are provided in the "Earthwork" section below.

6.1.7 Terminal Apron Subgrade Soil Conditions

The soils anticipated to be exposed at the terminal apron subgrade level appear to be variable. These soils also have the potential to become unstable during grading and other construction activities. If the upper soils of the terminal apron subgrade are cement treated, a more consistent subgrade surface would be created and the potential for instability will be greatly reduced. Additionally, cement treatment would increase the design CBR for the subgrade. Additional recommendations are provided in the "Earthwork" section below.

6.1.8 Retaining Wall Construction Difficulties with Cohesionless Sands

The sands generally consist of fine to medium sands with silty and clayey fines generally less than 30 percent. These sands will likely not stand vertical when excavated. The contractor who will construct the retaining walls to transitions grades down to the terminal apron and lower level of the terminal building will need to address this issue. Temporary vertical elements for face stability will likely be required. Recommendations addressing this concern are presented in the "Earthwork" and "Retaining Walls" section of this report.

6.2 DESIGN-LEVEL GEOTECHNICAL INVESTIGATION

The preliminary recommendations contained in this preliminary study were based on limited site development information, limited exploration, and our experience in the area with similar projects. As site conditions may vary significantly between the small-diameter borings performed during this investigation, we also recommend that we be retained to 1) perform a design-level geotechnical investigation, once detailed site development plans are available; 2) to review the geotechnical aspects of the project structural, civil, and landscape plans and

specifications, allowing sufficient time to provide the design team with any comments prior to issuing the plans for construction; and 3) be present to provide geotechnical observation and testing during earthwork and foundation construction.

SECTION 7: PRELIMINARY EARTHWORK RECOMMENDATIONS

In general, earthwork for the proposed improvements should be performed in general accordance with guidelines provided in AC 150/5370-10G titled "Standards for Specifying Construction of Airports", Part II Earthwork (FAA, 2014) and the errata sheet for AC 150/5370-10G (FAA, 2016). The earthwork guidelines provided by the FAA are generic guidelines that should be "tailored" by the design engineer to meet the specific conditions of each project. Our preliminary recommendations for the geotechnical aspects of the project earthwork are presented below and should be incorporated into the project earthwork specifications.

7.1 SITE DEMOLITION, CLEARING AND PREPARATION

7.1.1 Site Stripping

The site should be stripped of all surface vegetation, and surface and subsurface improvements within the proposed development area. Demolition of existing improvements is discussed in detail below. Surface vegetation and topsoil should be stripped to a sufficient depth to remove all material greater than 3 percent organic content by weight. Based on our site observations, surficial stripping should extend about 4 to 6 inches below existing grade in vegetated areas. We anticipate that most of the required stripping will consist of tree and shrub removal, as addressed below. Organic laden stripping should be disposed off-site or stockpiled for re-use in landscape areas or otherwise designated in the project specifications.

7.1.2 Tree and Shrub Removal

Trees and shrubs designated for removal should have the rootballs and any roots greater than 1½-inch diameter removed completely. The depth of the excavations is anticipated to be on the order of 24 to 48 inches. Grade depressions resulting from rootball removal should be cleaned of loose material and backfilled in accordance with the recommendations in the "Compaction" section of this report.

7.1.3 Demolition of Existing Slabs, Foundations and Pavements

All slabs, foundations, and pavements should be completely removed from within planned improvement areas. Any material that cannot be reused as engineered fill should be disposed of as designated in the project specifications or as directed by the Engineer. A discussion of recycling existing improvements is provided later in this report.

7.1.4 Abandonment of Existing Utilities

All utilities not to remain as shown on the project plans and specifications should be completely removed from within planned improvement areas. All associated trench back fills should be

removed and replaced as engineered fill with the trench side slopes flattened to at least 1:1 (horizontal to vertical). The contractor should assume that all utilities will be removed from within improvement areas unless provided written confirmation from both the owner's representative and the engineer.

Utilities extending beyond the improvement areas may be abandoned in place provided the ends are plugged with concrete, they do not conflict with planned improvements, and that the trench fills do not pose significant risk to the planned surface improvements.

The risks associated with abandoning utilities in place include the potential for future differential settlement of existing trench fills, and/or partial collapse and potential ground loss into utility lines that are not completely filled with grout. The risk for each issue are relatively low for single utility lines less than 4 inches in diameter and increase with increasing pipe diameter.

7.2 REMOVAL OF EXISTING FILLS

As discussed, due to elevation differences, we understand 10-foot cuts are planned in the location of the new terminal building. Therefore, undocumented fills encountered are anticipated to be removed. However, if fills are encountered beneath the new terminal building or beneath the relocated hangers at the general aviation apron on the north side of the airport, the fills should be completely removed from within the building areas and to a lateral distance of at least 5 feet beyond the building footprints or to a lateral distance equal to fill depth below the perimeter footing, whichever is greater. Provided the fills meet the "Material for Fill" requirements below, the fills may be reused when backfilling the excavations. If materials are encountered that do not meet the requirements, such as debris, wood, trash, those materials should screened out of the remaining material and be removed from the site. Backfill of excavations should be placed in lifts and compacted in accordance with the "Compaction" section below.

Fills extending into planned pavement and flatwork areas may be left in place provided they are determined to be a low risk for future differential settlement and that the upper 12 to 18 inches of fill below pavement subgrade is re-worked and compacted as discussed in the "Compaction" section below.

7.3 TEMPORARY CUT AND FILL SLOPES

The contractor is responsible for maintaining all temporary slopes and providing temporary shoring where required. Temporary shoring, bracing, and cuts/fills should be performed in accordance with the strictest government safety standards. On a preliminary basis, the upper 10 feet may be classified as OSHA Soil Type C materials. A competent person should determine the actual soil classification during construction and be responsible for implementing and maintaining safe excavation slopes and/or shoring at the site during construction. Preliminary recommended soil parameters for temporary shoring are provided in the "Temporary Shoring" section below.

7.4 BELOW-GRADE EXCAVATIONS

As discussed, we understand 10-foot cuts will be required to transition existing grades down to the existing taxiway and runway levels and to the lower level of the terminal building. Below-grade excavations may be constructed with temporary slopes in accordance with the "Temporary Cut and Fill Slopes" section above if space allows. Alternatively, temporary shoring may support the planned cuts up to 15 feet. We have provided preliminary geotechnical parameters for shoring design in the section below. The choice of shoring method should be left to the contractor's judgment based on experience, economic considerations and adjacent improvements such as utilities, pavements, and foundation loads. Temporary shoring should support adjacent improvements without distress and should be the contractor's responsibility. A pre-condition survey including photographs and installation of monitoring points for existing site improvements should be included in the contractor's scope. We should be provided the opportunity to review the geotechnical parameters of the shoring design prior to implementation; the project structural engineer should be consulted regarding support of adjacent structures.

7.4.1 Temporary Shoring

Based on the site conditions encountered during our investigation, on a preliminary basis, the cuts may be supported by soldier beams and tie-backs, braced excavations, soil nailing, or potentially other methods. If soil nailing is desired, the contractor should likely plan on limited sections where excavations may be left open, potentially constructing the nails through temporary sloped cuts, and other similar measures for sandy soil conditions.

Where shoring will extend more than about 10 feet, restrained shoring will most likely be required to limit detrimental lateral deflections and settlement behind the shoring. In addition to soil earth pressures, the shoring system will need to support adjacent loads such as construction vehicles and incidental loading, existing structure foundation loads, and street loading. We recommend that heavy construction loads (cranes, etc.) and material stockpiles be kept at least 15 feet behind the shoring. Where this loading cannot be set back, the shoring will need to be designed to support the loading. The shoring designer should provide for timely and uniform mobilization of soil pressures that will not result in excessive lateral deflections. Preliminary minimum suggested geotechnical parameters for shoring design are provided in the table below.

Table 5: Preliminary Temporary Shoring Design Parameters

Design Parameter	Design Value
Minimum Lateral Wall Surcharge (upper 5 feet)	120 psf
Cantilever Wall – Triangular Earth Pressure	35 pcf
Restrained Wall – Uniform Earth Pressure	25H[(1)(2)]
Passive Pressure – Starting below the bottom of the adjacent excavation[(3)]	400 pcf up to 3,000 psf maximum uniform pressure

(1) H equals the height of the excavation; passive pressures are assumed to act over twice the soldier pile diameter
(2) The cantilever and restrained pressures are for drained designs. If undrained shoring is designed, an additional 40 pcf should be added for hydrostatic pressures.
(3) Bottom of adjacent excavation is bottom of mass excavation or bottom of footing excavation, whichever is deeper directly adjacent to the shoring element.

If shotcrete lagging is used for the shoring facing, the permanent retaining wall drainage materials, as discussed in the "Wall Drainage" section of this report, will need to be installed during temporary shoring construction. At a minimum, 2-foot-wide vertical panels should be placed between soil nails or tiebacks that are spaced at 6-foot centers. For 8-foot centers, 4-foot-wide vertical panels should be provided. A horizontal strip drain connecting the vertical panels should be provided, or pass-through connections should be included for each vertical panel.

We performed our borings with hollow-stem auger drilling equipment and as such were not able to evaluate the potential for caving soils, which can create difficult conditions during soldier beam, tie-back, or soil nail installation; caving soils can also be problematic during excavation and lagging placement. The contractor is responsible for evaluating excavation difficulties prior to construction. Where relatively clean sands were encountered during our exploration, pilot holes performed by the contractor may be desired to further evaluate these conditions prior to the finalization of the shoring budget.

As previously mentioned, we recommend that a monitoring program be developed and implemented to evaluate the effects of the shoring on adjacent improvements. All sensitive improvements should be located and monitored for horizontal and vertical deflections and distress cracking based on a pre-construction survey.

The above recommendations are for the use of the design team; the contractor in conjunction with input from the shoring designer should perform additional subsurface exploration they deem necessary to design the chosen shoring system. A California-licensed civil or structural engineer must design and be in responsible charge of the temporary shoring design. The contractor is responsible for means and methods of construction, as well as site safety.

Based on our borings and depth to ground water encountered, ground water is anticipated to be below the bottom of anticipated 10-foot cuts and appears as though will not affect shoring design. However, depth to ground water and potential effects on shoring should be further evaluated during a design-level investigation.

The above considerations are for the use of the design team during conceptual planning and preliminary design. Additional subsurface exploration and engineering analysis should be performed during the design-level geotechnical investigation to develop final shoring design parameters, as needed. A California-licensed civil or structural engineer must design and be in responsible charge of the temporary shoring design.

7.5 SUBGRADE PREPARATION

After site clearing and demolition is complete, and prior to backfilling any excavations that extend below the excavation plane for the subgrade resulting from fill removal or demolition, the excavation subgrade and subgrade within areas to receive additional site fills should be scarified to a depth of 6 inches, moisture conditioned, and compacted in accordance with the "Compaction" section below. Further recommendations for preparation of subgrade in pavement areas is discussed in Sections 7.6 and 7.7.

Sandy subgrades that are allowed to dry out after compaction will be subject to disturbance by both foot and vehicle traffic. In pavement areas, we recommend that aggregate base sections be placed immediately after the subgrade is prepared to reduce rework. In building areas, we recommend that subgrade compaction and proof rolling be performed within 24 hours of capillary break layer or slab-on-grade construction to reduce rework.

7.6 SUBGRADE STABILIZATION FOR TERMINAL APRON AND TAXIWAY AREAS USING CEMENT TREATMENT

Native soil and undocumented fill materials, especially soils with high fines contents such as clays, silts, clayey sands and silty sands, can become unstable due to high moisture content, whether from high in-situ moisture contents, winter rains, or overwatering during construction. As the moisture content increases over the laboratory optimum, more likely the materials will be subject to softening and yielding (pumping) from construction loading or become unworkable during placement and compaction. Due to the variable soil conditions potential at the terminal apron subgrade, potential for unstable conditions to arise during over-excavation and subgrade grading, and to increase the design subgrade CBR, we recommend the upper 18 inches of the terminal apron and taxiway subgrade be cement treated. This will also enable a firm and stable working surface for construction activities.

7.7 SUBGRADE STABILIZATION MEASURES FOR THE GENERAL AVIATION AREAS USING CEMENT TREATMENT

As discussed above, native soil and undocumented fill materials, especially soils with high fines contents such as clays, silts, clayey sands and silty sands, can become unstable due to high moisture content, whether from high in-situ moisture contents, winter rains, or overwatering during construction. As the moisture content increases over the laboratory optimum, more likely the materials will be subject to softening and yielding (pumping) from construction loading or become unworkable during placement and compaction. Due to the variable soil conditions potential at the general aviation pavement subgrade areas, potential for unstable conditions to arise during over-excavation and subgrade grading, and to increase the design subgrade CBR,

we recommend the upper 12 inches of the general aviation pavement subgrade be cement treated. This will also enable a firm and stable working surface for construction activities.

7.8 SUBGRADE STABILIZATION MEASURES FOR GENERAL NON-TERMINAL APRON AREAS

As discussed in the section above, native soil and undocumented fill materials, especially soils with high fines contents such as clays, silts, clayey sands and silty sands, can become unstable due to high moisture content, whether from high in-situ moisture contents, winter rains, or overwatering during construction. As the moisture content increases over the laboratory optimum, more likely the materials will be subject to softening and yielding (pumping) from construction loading or become unworkable during placement and compaction.

There are several methods to address potentially unstable soil conditions and facilitate fill placement and trench backfill. Some of these methods are briefly discussed below. Implementation of the appropriate stabilization measures should be evaluated on a case-by-case basis according to the project construction goals and the particular site conditions.

7.8.1 Scarification and Drying

The subgrade may be scarified to a depth of 6 to 12 inches and allowed to dry to near optimum conditions, if sufficient dry weather is anticipated to allow sufficient drying. More than one round of scarification may be needed to break up the soil clods.

7.8.2 Removal and Replacement

As an alternative to scarification, the contractor may choose to over-excavate the unstable soils and replace them with dry on-site or import materials. A Cornerstone representative should be present to provide recommendations regarding the appropriate depth of over-excavation, whether a geosynthethic (stabilization fabric or geogrid) is recommended, and what materials are recommended for backfill.

7.8.3 Chemical Treatment

Where the unstable area exceeds about 5,000 to 10,000 square feet and/or site winterization is desired, chemical treatment with cement may be more cost-effective than removal and replacement. Recommended chemical treatment depths will typically range from 12 to 18 inches depending on the magnitude of the instability.

7.9 MATERIAL FOR FILL

7.9.1 Re-Use of On-site Soils

On-site soils with an organic content less than 3 percent by weight may be reused as general fill. General fill should not have lumps, clods or cobble pieces larger than 6 inches in diameter; 85 percent of the fill should be smaller than 2½ inches in diameter. Minor amounts of oversized

material (smaller than 12 inches in diameter) may be allowed provided the oversized pieces are not allowed to nest together, and the compaction method will allow for loosely placed lifts not exceeding 12 inches. Also note that during summer months and dry months, these soils will need a large amount of water and mixing to raise the moisture content to a compactable range.

7.9.2 Re-Use of On-Site Site Improvements

We anticipate that asphalt concrete (AC) grindings and aggregate base (AB) will be generated during site demolition. If the AC grindings are mixed with the underlying AB to meet project specifications, they may be reused within the new pavement structural sections. AC/AB grindings may not be reused beneath the terminal building areas. Laboratory testing will be required to confirm the grindings meet project specifications.

If the site area allows for on-site pulverization of PCC and provided the PCC is pulverized to meet the "Material for Fill" requirements discussed within this report, it may be used as select fill within the terminal building areas, excluding the capillary break layer, and pavement structural sections baring the pulverized PCC meets project specifications. Laboratory testing will be required to confirm the grindings meet project specifications. PCC grindings also make good winter construction access roads, similar to a cement-treated base (CTB) section.

7.9.3 Potential Import Sources

Imported material should be inorganic with a Plasticity Index (PI) of 15 or less, and not contain recycled asphalt concrete where it will be used within the terminal building or other habitable areas. To prevent significant caving during trenching or foundation construction, imported material should have sufficient fines. Samples of potential import sources should be delivered to our office at least 10 days prior to the desired import start date. Information regarding the import source should be provided, such as any site geotechnical reports. If the material will be derived from an excavation rather than a stockpile, potholes will likely be required to collect samples from throughout the depth of the planned cut that will be imported. At a minimum, laboratory testing will include PI tests. Material data sheets for select fill materials (P-208 Aggregate Base Course, etc.) listing current laboratory testing data (not older than 1 month from the import date) may be provided for our review without providing a sample. If current data is not available, specification testing will need to be completed prior to approval.

Environmental and soil corrosion characterization should also be considered by the project team prior to acceptance. Suitable environmental laboratory data to the planned import quantity should be provided to the project environmental consultant; additional laboratory testing may be required based on the project environmental consultant's review. The potential import source should also not be more corrosive than the on-site soils, based on pH, saturated resistivity, and soluble sulfate and chloride testing.

7.10 COMPACTION REQUIREMENTS

All fills, and subgrade areas where fill, slabs-on-grade, and pavements are planned, should be placed in loose lifts 8 inches thick or less and compacted in accordance with ASTM D1557

(latest version) requirements as shown in the table below. In general, clayey soils should be compacted with sheepsfoot equipment and sandy/gravelly soils with vibratory equipment; open-graded materials such as Class 2 Permeable Material should be placed in lifts no thicker than 18 inches and consolidated in place with vibratory equipment. Each lift of fill and all subgrade should be firm and unyielding under construction equipment loading in addition to meeting the compaction requirements to be approved. The contractor (with input from the Engineer or a Cornerstone representative) should evaluate the in-situ moisture conditions, as the use of vibratory equipment on soils with high moistures can cause unstable conditions. General recommendations for soil stabilization are provided in the "Subgrade Stabilization Measures" section of this report.

Table 6: Compaction Requirements – Mass Grading and Building Areas

Description	Material Description	Minimum Relative[1] Compaction (percent)	Moisture[2] Content (percent)
General Fill (within upper 5 feet)	On-Site Soils	90	>1
General Fill (below upper 5 feet)	On-Site Soils	95	>1
Retaining Wall Backfill	Without Surface Improvements	90	>1
Retaining Wall Backfill	With Surface Improvements	95	0 to 2
Trench Backfill (upper 6 inches of subgrade)	On-Site Soils	95	0 to 2
Trench Backfill (below upper 6 inches of subgrade)	On-Site Soils	90	>1
Drainage Rock	Caltrans Class 2 Permeable Material	Consolidate In-Place	NA
Pavement Subgrade (upper 6 inches of subgrade)	On-Site Soils	95	0 to 2
Pavement Aggregate Base	Caltrans Class II AB[3]	95	Optimum
Asphalt Concrete	Asphalt Concrete	95 (Marshall)	NA

1 – Relative compaction based on maximum density determined by ASTM D1557 (latest version)
2 – Moisture content based on optimum moisture content determined by ASTM D1557 (latest version)
3 – Class 2 aggregate base shall conform to Caltrans Standard Specifications, latest edition, except that the relative compaction should be determined by ASTM D1557 (latest version)

Table 7: Compaction Requirements – Terminal Apron, Taxiway, and General Aviation

Description	Material Description	Minimum Relative[1] Compaction (percent)	Moisture[2] Content (percent)
General Aviation AC Pavement Cement Treated Subgrade[3] (0 to 12 inches)	On-Site Soils	93	0 to 4
Terminal Apron and Taxiway PCC/AC Pavement Cement Treated Subgrade[3] (0 to 18 inches)	On-Site Soils	93	0 to 4
Pavement Aggregate Base	P-209 Crushed AB	100	Optimum
Asphalt Concrete (Base Course)	P-401 AC	As recommended by FAA	NA
Asphalt Concrete (Surface Course)	P-401 AC	As recommended by FAA	NA
Asphalt Concrete	P-403 AC	As recommended by FAA	NA

1 – Relative compaction based on maximum density determined by ASTM D1557 (latest version)
2 – Moisture content based on optimum moisture content determined by ASTM D1557 (latest version)
3 – Cement treatment of the upper 12 to 18 inches of pavement subgrade will be required. Cement treat 12 inches in general aviation area and 18 inches in terminal apron and taxiway areas.

7.9.1 Construction Moisture Conditioning

Based on our previous experience at the Monterey Regional Airport, to achieve compaction of the sandy soils, we anticipate significant amounts of water will be required to moisture condition the soils. The contractor should anticipate needing to add significant moisture and thoroughly mixing the sandy soils to achieve the proper compaction.

7.10 TRENCH BACKFILL

All utility lines should be bedded and shaded to at least 6 inches over the top of the lines with well-graded sand and gravel materials conforming to the pipe manufacturer's requirements. Open-graded materials should not be used. Well-graded materials should be compacted to at least 90 percent relative compaction with vibratory equipment prior to placing subsequent backfill materials.

General backfill over shading materials may consist of on-site native materials provided they meet the requirements in the "Material for Fill" section, and are moisture conditioned and compacted in accordance with the requirements in the "Compaction" section.

Where utility lines will cross perpendicular to strip footings, the footing should be deepened to encase the utility line, providing sleeves or flexible cushions to protect the pipes from anticipated foundation settlement, or the utility lines should be backfilled to the bottom of footing with sand-cement slurry or lean concrete. Where utility lines will parallel footings and will extend below the

"foundation plane of influence," an imaginary 1:1 plane projected down from the bottom edge of the footing, either the footing will need to be deepened so that the pipe is above the foundation plane of influence or the utility trench will need to be backfilled with sand-cement slurry or lean concrete within the influence zone. Sand-cement slurry used within foundation influence zones should have a minimum compressive strength of 75 psi.

As discussed above, the native soils generally consist of sands with little to some silt and clay fines. Trench excavations will likely not stand vertical and will require temporary slopes or shields, if vertical excavations are needed.

7.11 PERMANENT CUT AND FILL SLOPES

All permanent cut slopes in native soil and fill slopes constructed of native sandy soils should have a maximum inclination of 3:1 (horizontal:vertical). Fill slopes should be overbuilt and trimmed back, exposing engineered fill when complete. Refer to the "Erosion Control" section of this report for a discussion regarding protection of slope surfaces.

7.11.1 Keyways and Benches

Fill placed on existing ground inclined at 6:1 or greater should be benched into the existing slope and a keyway constructed at the toe of the fill. Benches should be angled into the slope (minimum 2 percent inclination), be spaced vertically at no greater than 10 feet between benches, be at least 5 feet wide, and extend at least 5 feet laterally into competent materials, whichever is greater. Depending on the soils encountered, the benches may need to be widened beyond the minimum width to extend into competent soils. The keyway should also be angled slightly into the slope (minimum 2 percent inclination), extend at least 5 to 10 feet below grade and at least 2 feet into competent material, whichever is greater, and be at least 25 feet wide. The side slopes of all keyways and benches should be no steeper than 1:1 and may need to be flattened in localized areas if loose unstable sands are encountered.

As previously discussed in the slope stability section of this report, a keyway and benching should be constructed for the proposed fill slope from placement of the cut material for relocation of the terminal building and apron. Typical keyway and benching is depicted in Figure 5 for Cross Section A-A'.

The above recommendations are preliminary and additional analysis and recommendations should be performed and provided during a design-level investigation.

7.12 SITE DRAINAGE

Surface runoff should not be allowed to flow over the top of or pond at the top or toe of engineered slopes or retaining walls. Ponding should also not be allowed on or adjacent to building foundations, slabs-on-grade, pavements, or concrete flatwork. Surface drainage should be directed towards suitable drainage facilities such as lined v-ditches or drain inlets. Hardscape surfaces should slope at least 1 percent towards suitable discharge facilities; landscape areas should slope at least 2 percent towards suitable discharge facilities unless

specified otherwise by the project engineer. Roof runoff should be directed away from building areas in closed conduits, to approved infiltration facilities, or on to hardscaped surfaces that drain to suitable facilities. Lined v-ditches should be included at the top of slopes. All v-ditches and drain inlets should be sized to accommodate the design storm events for the upslope tributary area. Concrete-lined v-ditches should be reinforced as required and have adequate control and construction joints, and should be constructed neat in excavations; backfill around formed ditches should not be allowed.

7.13 PERMANENT EROSION CONTROL MEASURES

At a minimum all slopes should be vegetated by hydroseeding or other landscape ground cover. The establishment of vegetation will help reduce runoff velocities, allow some infiltration and transpiration, trap sediment within runoff, and protect the soil from raindrop impact. In addition, more aggressive erosion control measures will likely be needed to protect slopes for one or more winter seasons while vegetation is establishing. This may consist of straw matting, or erosion control blankets used in combination with planting.

Both construction and post-construction Storm Water Pollution Prevention Plans (SWPPPs) should be prepared for the project-specific requirements.

7.14 LANDSCAPE CONSIDERATIONS

Since the site soils are generally erosive, we recommend that the landscaping plan address permanent erosion control measures. This can typically be achieved by:

- Using drip irrigation in lieu of spray,
- Regulating the amount of water distributed to planter areas by using irrigation timers, and
- Selecting landscaping that requires little or no watering.

We recommend that the landscape architect consider these items when developing landscaping plans.

SECTION 8: PRELIMINARY FOUNDATION RECOMMENDATIONS

8.1 SUMMARY OF RECOMMENDATIONS

On a preliminary basis, in our opinion, the proposed terminal building and relocated hangers may be supported on shallow foundations.

8.2 SEISMIC DESIGN CRITERIA

The 2016 California Building Code (CBC) provides criteria for the seismic design of buildings in Chapter 16. The “Seismic Coefficients” used to design buildings are established based on a

series of tables and figures addressing different site factors, including the soil profile in the upper 100 feet below grade and mapped spectral acceleration parameters based on distance to the controlling seismic source/fault system. Based on our borings and review of local geology, the site is underlain by quaternary deposits with typical SPT "N" values between 15 and 50 blows per foot. Therefore, we have classified the site as Soil Classification C. The mapped spectral acceleration parameters S_S and S_1 were calculated using the USGS computer program *U.S. Seismic Design Maps*, located at http://earthquake.usgs.gov/designmaps/us/application.php, based on the site coordinates presented below and the site classification. The table below lists the various factors used to determine the seismic coefficients and other parameters.

Table 8: CBC Site Categorization and Site Coefficients

Classification/Coefficient	Design Value
Site Class	D
Site Latitude	36.58551°
Site Longitude	-121.8477°
0.2-second Period Mapped Spectral Acceleration[1], S_S	1.488g
1-second Period Mapped Spectral Acceleration[1], S_1	0.543g
Short-Period Site Coefficient – Fa	1.0
Long-Period Site Coefficient – Fv	1.5
0.2-second Period, Maximum Considered Earthquake Spectral Response Acceleration Adjusted for Site Effects - S_{MS}	1.488g
1-second Period, Maximum Considered Earthquake Spectral Response Acceleration Adjusted for Site Effects – S_{M1}	0.814g
0.2-second Period, Design Earthquake Spectral Response Acceleration – S_{DS}	0.992g
1-second Period, Design Earthquake Spectral Response Acceleration – S_{D1}	0.543g
Mapped MCE Geometric Mean Peak Ground Acceleration – PGA_M	0.576g
Site Coefficient Based on PGA and Site Class - F_{PGA}	1.0

[1]For Site Class B, 5 percent damped.

8.3 SHALLOW FOUNDATIONS

8.3.1 Spread Footings

On a preliminary basis, the terminal building and relocated hangers may be supported on spread footings, which should bear on natural, undisturbed soil or engineered fill, be at least 24 inches wide, and extend at least 18 to 24 inches below the lowest adjacent grade. Lowest adjacent grade is defined as the deeper of the following: 1) bottom of the adjacent interior slab-on-grade, or 2) finished exterior grade, excluding landscaping topsoil.

On a preliminary basis, terminal building and parking structure footings constructed to the above dimensions are capable of supporting maximum allowable bearing pressures of 2,500 psf for

dead loads, 3,750 psf for combined dead plus live loads, and 5,000 psf for all loads including wind and seismic. On a preliminary basis, the relocated hanger building footings constructed to the above dimensions are capable of supporting maximum allowable bearing pressures of 2,000 psf for dead loads, 3,000 psf for combined dead plus live loads, and 4,000 psf for all loads including wind and seismic. The above pressures are based on factors of safety of 3.0, 2.0, and 1.5 applied to the ultimate bearing pressure for dead, dead plus live, and all loads, respectively. These pressures are net values; the weight of the footing may be neglected for the portion of the footing extending below grade (typically, the full footing depth). Top and bottom mats of reinforcing steel should be included in continuous footings to help span irregularities and differential settlement.

8.3.2 Footing Settlement

Structural loads were not provided to us at the time this report was prepared; therefore, we assumed the typical loading in the following table.

Table 9: Assumed Structural Loading

Foundation Area	Range of Assumed Loads
Terminal Building Interior Isolated Column Footing	200 to 300 kips
Terminal Building Exterior Isolated Column Footing	100 to 150 kips
Parking Structure Interior Isolated Column Footing	300 to 400 kips
Parking Structure Exterior Isolated Column Footing	150 to 200 kips
Relocated Hanger Buildings Isolated Column Footing	100 to 150 kips

On a preliminary basis and based on the above loading and the allowable bearing pressures presented above, we estimate that the total static footing settlement will be on the order of ⅔-inch for the terminal building, with about ⅓-inch of post-construction differential settlement between adjacent foundation elements. As mentioned, we understand site grades will be cut about 10 to 12 feet to the lower level of the terminal building. Based on this understanding, we estimate differential seismic movement from liquefaction and dry sand shaking below the bottom of proposed building will be on the order of ¼- to ⅓-inch between independent foundation elements, resulting in a total estimated differential footing movement of up to about ½- to ⅔-inch between foundation elements.

On a preliminary basis and based on the above loading and the allowable bearing pressures presented above, we estimate that the total static footing settlement will be on the order of 1-inch for the parking structure, with about ½-inch of post-construction differential settlement between adjacent foundation elements. As mentioned, we understand the parking structure will be at-grade. Based on this understanding, we estimate differential seismic movement from liquefaction and dry sand shaking below the bottom of parking structure will be on the order of ½-inch between independent foundation elements, resulting in a total estimated differential footing movement of up to about 1-inch between foundation elements.

On a preliminary basis and based on the above loading and the allowable bearing pressures presented above, we estimate that the total static footing settlement will be on the order of ½-inch for the relocated hangers, with about ¼-inch of post-construction differential settlement between adjacent foundation elements. In addition, we estimate differential seismic movement from dry sand shaking will be on the order of ¼-inch between independent foundation elements, resulting in a total estimated differential footing movement of up to about ½-inch between foundation elements.

As our footing loads were assumed and the depth of footings below existing grades for the terminal building are not know at this time, we recommend footing settlements be further evaluated for all buildings during a design level investigation.

8.3.3 Lateral Loading

Lateral loads may be resisted by friction between the bottom of footing and the supporting subgrade, and also by passive pressures generated against footing sidewalls. On a preliminary basis, an ultimate frictional resistance of 0.4 applied to the footing dead load, and an ultimate passive pressure based on an equivalent fluid pressure of 400 pcf may be used in design. The structural engineer should apply an appropriate factor of safety to the ultimate values above. Where footings are adjacent to landscape areas without hardscape, the upper 12 inches of soil should be neglected when determining passive pressure capacity.

8.3.4 Spread Footing Construction Considerations

Cohesionless sands will likely be encountered within footing excavations. Excavation walls may not stand vertical and may need to be sloped to a minimum 1:1 inclination where footings are located within sands or Stay-Form or similar be placed within the footing excavations as they are excavated during construction of the foundation elements. Granular material encountered in the footing bottoms will likely be disturbed to a depth of 6 to 8 inches following excavation and will need to be consolidated with vibratory equipment prior to steel placement. Care should be taken to not disturb the compacted granular material during steel placement. Footing excavations should also be kept moist by regular sprinkling with water to prevent desiccation and potential raveling of the granular materials. As an alternative, a rat slab can be placed over the granular material to protect the granular material prior to steel placement.

SECTION 9: PRELIMINARY PAVEMENT RECOMMENDATIONS

9.1 CONCRETE TERMINAL APRON AND GENERAL AVIATION APRON

The pavement design analysis for the new terminal apron and general aviation apron will be performed with the computer program FAARFIELD by Kimley Horn and Associates, Inc. using geotechnical design parameters recommended by Cornerstone Earth Group. Based on the results of our CBR tests and engineering judgement, on a preliminary basis we recommend a design CBR of 10 be used. Based on this information and discussions with Kimley Horn and Associates, Inc., preliminary pavement designs are as follows:

- Terminal Apron (PCC) – 13 inches PCC over 5 inches P-401/P403 over 6 inches P-209 over 18 inches cement treated subgrade (modulus = 30,000)

- Terminal Apron (Bitumnous Concrete (AC)) – 4 inches P-401 over 5 inches P-401/P403 over 6 inches P-209 (6 inch Minimum) over 18 inches cement treated subgrade (modulus = 30,000)

- General Aviation Apron – 4 inches P-403 over 5 inches P-209 over 12 inches cement treated subgrade (modulus = 30,000).

SECTION 10: PRELIMINARY RETAINING WALL RECOMMENDATIONS

As previously discussed, we understand approximately 10-foot cuts with retaining walls are planned to retain existing soils and transition existing grades down to the existing taxiway and runway levels for the proposed terminal apron and terminal building. The following sections provide preliminary retaining wall recommendations for the anticipated retaining walls.

10.1 STATIC LATERAL EARTH PRESSURES

The structural design of any site retaining wall should include resistance to lateral earth pressures that develop from the soil behind the wall, any undrained water pressure, and surcharge loads acting behind the wall. Provided a drainage system is constructed behind the wall to prevent the build-up of hydrostatic pressures as discussed in the section below, we recommend that the walls with level backfill be designed for the following pressures:

Table 10: Recommended Lateral Earth Pressures

Wall Condition	Lateral Earth Pressure*	Additional Surcharge Loads
Unrestrained – Cantilever Wall	35 pcf	⅓ of vertical loads at top of wall
Restrained – Braced Wall	35 pcf + 8H** psf	½ of vertical loads at top of wall

* Lateral earth pressures are based on an equivalent fluid pressure for level backfill conditions
** H is the distance in feet between the bottom of footing and top of retained soil

If adequate drainage cannot be provided behind the wall, an additional equivalent fluid pressure of 40 pcf should be added to the values above for both restrained and unrestrained walls for the portion of the wall that will not have drainage. Damp proofing or waterproofing of the walls may be considered where moisture penetration and/or efflorescence are not desired.

10.2 SEISMIC LATERAL EARTH PRESSURES

10.2.1 Restrained Basement Walls

Retaining walls for the lower level of the new terminal building will likely be required. As mentioned, 10-foot cuts are anticipated and as such the lower level new terminal building walls may be 10 to 12 feet in height. The 2016 California Building Code (CBC) states that lateral

pressures from earthquakes should be considered in the design of basements and retaining walls. We developed preliminary seismic earth pressures for the proposed terminal building basement (lower level) wall using interim recommendations generally based on refinement of the Mononobe-Okabe method (Lew et al., SEAOC 2010). Because the walls may be 12 feet in height, and peak ground accelerations are greater than 0.40g, we checked the result of the seismic increment when added to the recommended active earth pressure against the recommended fixed wall earth pressures. Basement walls are not free to deflect, and should therefore be designed for static conditions as a restrained wall, which is also a CBC requirement. Based on our preliminary analysis and current recommendations for seismic earth pressures, it appears that active earth pressures plus a seismic increment exceed the restrained (i.e. at-rest), static wall earth pressures. Therefore, we recommend checking the walls for the seismic condition in accordance with the interim recommendations of the above referenced paper and the 2013 CBC.

The CBC prescribes basic load combinations for structures, components and foundations with the intention that their design strength equals or exceeds the effects of the factored loads. With respect to the load from lateral earth pressure and ground water pressure, the CBC prescribes the basic combinations shown in CBC equations 16-2 and 16-7 below.

$1.2(D + F) + 1.6(L + H) + 0.5(L_r \text{ or } S \text{ or } R)$ [Eq. 16-2]

In Eq. 16-2: H - should represent the total static lateral earth pressure, which for the basement wall will be restrained (use 45 pcf + 8H psf)

$0.9(D + F) + 1.0E + 1.6H$ [Eq. 16-7]

In Eq. 16-7: H - Should represent the static “active” earth pressure component under seismic loading conditions (use 45 pcf).

E - Should represent the seismic increment component in Eq. 16-7. On a preliminary basis, a seismic increment component equal to a triangular load with a resultant force of $4.5H^2$, which should be applied one third of the height up from the base of the wall (and which can also be expressed as an equivalent fluid pressure equal to 9 pcf) can be utilized for restrained basement walls. During a design level investigation, the seismic increment component should be further evaluated.

The interim recommendations in the SEAOC paper more appropriately split out "active" earth pressure (and not the restrained ["at-rest"] pressure) from our report and provide the total seismic increment so that different load factors can be applied in accordance with different risk levels.

10.2.2 Unrestrained Site Walls

Unrestrained site retaining walls up to approximately 10 feet in height may be constructed. The 2016 CBC states that lateral pressures from earthquakes should be considered in the design of basements and retaining walls. Because the walls are greater than about 6 feet, and peak ground accelerations greater than 0.40g are expected, we recommend checking the walls for

the seismic condition in accordance with the interim recommendations from the SEAOC (2010) paper and the 2016 CBC.

The CBC prescribes basic load combinations for structures, components and foundations with the intention that their design strength equals or exceeds the effects of the factored loads. With respect to the load from lateral earth pressure and ground water pressure, the CBC prescribes the basic combinations shown in CBC equations 16-2 and 16-7 below.

$1.2(D + F) + 1.6(L + H) + 0.5(L_r \text{ or } S \text{ or } R)$ [Eq. 16-2]

In Eq. 16-2: H - should represent the total static lateral earth pressure, which for the site walls will be unrestrained (use 45 pcf)

$0.9(D + F) + 1.0E + 1.6H$ [Eq. 16-7]

In Eq. 16-7: H - Should represent the static "active" earth pressure component under seismic loading conditions (use 45 pcf).

E - Should represent the seismic increment component in Eq. 16-7. On a preliminary basis, a seismic increment component equal to a triangular load with a resultant force of $12.5H^2$, which should be applied one third of the height up from the base of the wall (and which can also be expressed as an equivalent fluid pressure equal to 25 pcf) can be utilized for unrestrained site walls. During a design level investigation, the seismic increment component should be further evaluated.

The interim recommendations in the SEAOC paper more appropriately split out "active" earth pressure from the seismic earth pressure increment so that different load factors can be applied in accordance with different risk levels.

10.3 WALL DRAINAGE

10.3.1 At-Grade Site Walls

Adequate drainage should be provided by a subdrain system behind all walls. This system should consist of a 4-inch minimum diameter perforated pipe placed near the base of the wall (perforations placed downward). The pipe should be bedded and backfilled with Class 2 Permeable Material per Caltrans Standard Specifications, latest edition. The permeable backfill should extend at least 12 inches out from the wall and to within 2 feet of outside finished grade. Alternatively, ½-inch to ¾-inch crushed rock may be used in place of the Class 2 Permeable Material provided the crushed rock and pipe are enclosed in filter fabric, such as Mirafi 140N or approved equivalent. The upper 2 feet of wall backfill should consist of compacted on-site soil. The subdrain outlet should be connected to a free-draining outlet or sump.

Miradrain, Geotech Drainage Panels, or equivalent drainage matting can be used for wall drainage as an alternative to the Class 2 Permeable Material or drain rock backfill. Horizontal strip drains connecting to the vertical drainage matting may be used in lieu of the perforated pipe and crushed rock section. The vertical drainage panel should be connected to the perforated pipe or horizontal drainage strip at the base of the wall, or to some other closed or

through-wall system such as the TotalDrain system from AmerDrain. Sections of horizontal drainage strips should be connected with either the manufacturer's connector pieces or by pulling back the filter fabric, overlapping the panel dimples, and replacing the filter fabric over the connection. At corners, a corner guard, corner connection insert, or a section of crushed rock covered with filter fabric must be used to maintain the drainage path.

Drainage panels should terminate 18 to 24 inches from final exterior grade. The Miradrain panel filter fabric should be extended over the top of and behind the panel to protect it from intrusion of the adjacent soil.

10.3.2 Below-Grade Walls

Miradrain, AmerDrain or other equivalent drainage matting should be used for wall drainage where below-grade walls are temporarily shored and the shoring will be flush with the back of the permanent walls. The drainage panel should be connected at the base of the wall by a horizontal drainage strip and closed or through-wall system such as the TotalDrain system from AmerDrain.

Sections of horizontal drainage strips should be connected with either the manufacturer's connector pieces or by pulling back the filter fabric, overlapping the panel dimples, and replacing the filter fabric over the connection. At corners, a corner guard, corner connection insert, or a section of crushed rock covered with filter fabric must be used to maintain the drainage path.

Drainage panels should terminate 18 to 24 inches from final exterior grade unless capped by hardscape. The drainage panel filter fabric should be extended over the top of and behind the panel to protect it from intrusion of the adjacent soil. If the shoring system will be offset behind the back of permanent wall, the drainage systems discussed in the "At-Grade Site Walls" section may also be used.

10.4 BACKFILL

Where surface improvements will be located over retaining wall backfill, backfill placed behind the walls should be compacted to at least 95 percent relative compaction using light compaction equipment. Where no surface improvements are planned, backfill should be compacted to at least 90 percent. If heavy compaction equipment is used, the walls should be temporarily braced.

Consideration should be given to the transitions from on-grade to on-structure. Subslabs or other methods for reducing differential movement of flatwork or pavements across this transition should be included in the project design.

10.5 FOUNDATIONS

On a preliminary basis, site retaining walls and basement retaining walls for the lower level of the terminal building may be supported on a continuous spread footings designed in accordance

with the preliminary recommendations presented in the “Preliminary Foundations” section of this report.

SECTION 11: LIMITATIONS

This report, an instrument of professional service, has been prepared for the sole use of Kimley-Horn and Associates, Inc. specifically to support the design of the Monterey Peninsula Airport Terminal Building, Apron Area, and North Side Improvements Areas project in Monterey, California. The opinions, conclusions, and recommendations presented in this report have been formulated in accordance with accepted geotechnical engineering practices that exist in Northern California at the time this report was prepared. No warranty, expressed or implied, is made or should be inferred.

Recommendations in this report are based upon the soil and ground water conditions encountered during our subsurface exploration. If variations or unsuitable conditions are encountered during construction, Cornerstone must be contacted to provide supplemental recommendations, as needed.

Kimley-Horn and Associates, Inc. may have provided Cornerstone with plans, reports and other documents prepared by others. Kimley-Horn and Associates, Inc. understands that Cornerstone reviewed and relied on the information presented in these documents and cannot be responsible for their accuracy.

Cornerstone prepared this report with the understanding that it is the responsibility of the owner or his representatives to see that the recommendations contained in this report are presented to other members of the design team and incorporated into the project plans and specifications, and that appropriate actions are taken to implement the geotechnical recommendations during construction.

Conclusions and recommendations presented in this report are valid as of the present time for the development as currently planned. Changes in the condition of the property or adjacent properties may occur with the passage of time, whether by natural processes or the acts of other persons. In addition, changes in applicable or appropriate standards may occur through legislation or the broadening of knowledge. Therefore, the conclusions and recommendations presented in this report may be invalidated, wholly or in part, by changes beyond Cornerstone’s control. This report should be reviewed by Cornerstone after a period of three (3) years has elapsed from the date of this report. In addition, if the current project design is changed, then Cornerstone must review the proposed changes and provide supplemental recommendations, as needed.

An electronic transmission of this report may also have been issued. While Cornerstone has taken precautions to produce a complete and secure electronic transmission, please check the electronic transmission against the hard copy version for conformity.

Recommendations provided in this report are based on the assumption that Cornerstone will be retained to provide observation and testing services during construction to confirm that

conditions are similar to that assumed for design, and to form an opinion as to whether the work has been performed in accordance with the project plans and specifications. If we are not retained for these services, Cornerstone cannot assume any responsibility for any potential claims that may arise during or after construction as a result of misuse or misinterpretation of Cornerstone's report by others. Furthermore, Cornerstone will cease to be the Geotechnical-Engineer-of-Record if we are not retained for these services.

SECTION 12: REFERENCES

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Vicinity Map

Monterey Peninsula Airport Terminal Building, Apron Area, and North Side Improvements Areas Monterey, CA

Project Number	234-2-7
Figure Number	Figure 1
Date	January 2017
Drawn By	RRN

Base by Google Earth, dated 4/13/2015

Site Plan

Monterey Peninsula Airport Terminal Building, Apron Area, and North Side Improvements Areas Monterey, CA

Project Number	Figure Number	Drawn By
234-2-7	Figure 2	RRN
	Date: January 2017	

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Geologic Units

OLDER SURFICIAL SEDIMENTS

Qoa Dissected older alluvium

Qos Older stabilized dune and drift sand

AROMAS SAND

Qar Wind deposited, yellowish-brown to reddish brown fine sand, in placed weakly indurated

PASO ROBLES FORMATION

QTp Light gray to tan gravel, sand and clay

MONTEREY FORMATION

Tm White-weathering siliceous shale; includes Aguajito Shale Member of Bowen, 1965;

Tmd White diatomite and shale (Canyon del Ray Member of Bowen, 1965);

Base by Dibblee (2007)

0 3000 6000

APPROXIMATE SCALE (FEET)

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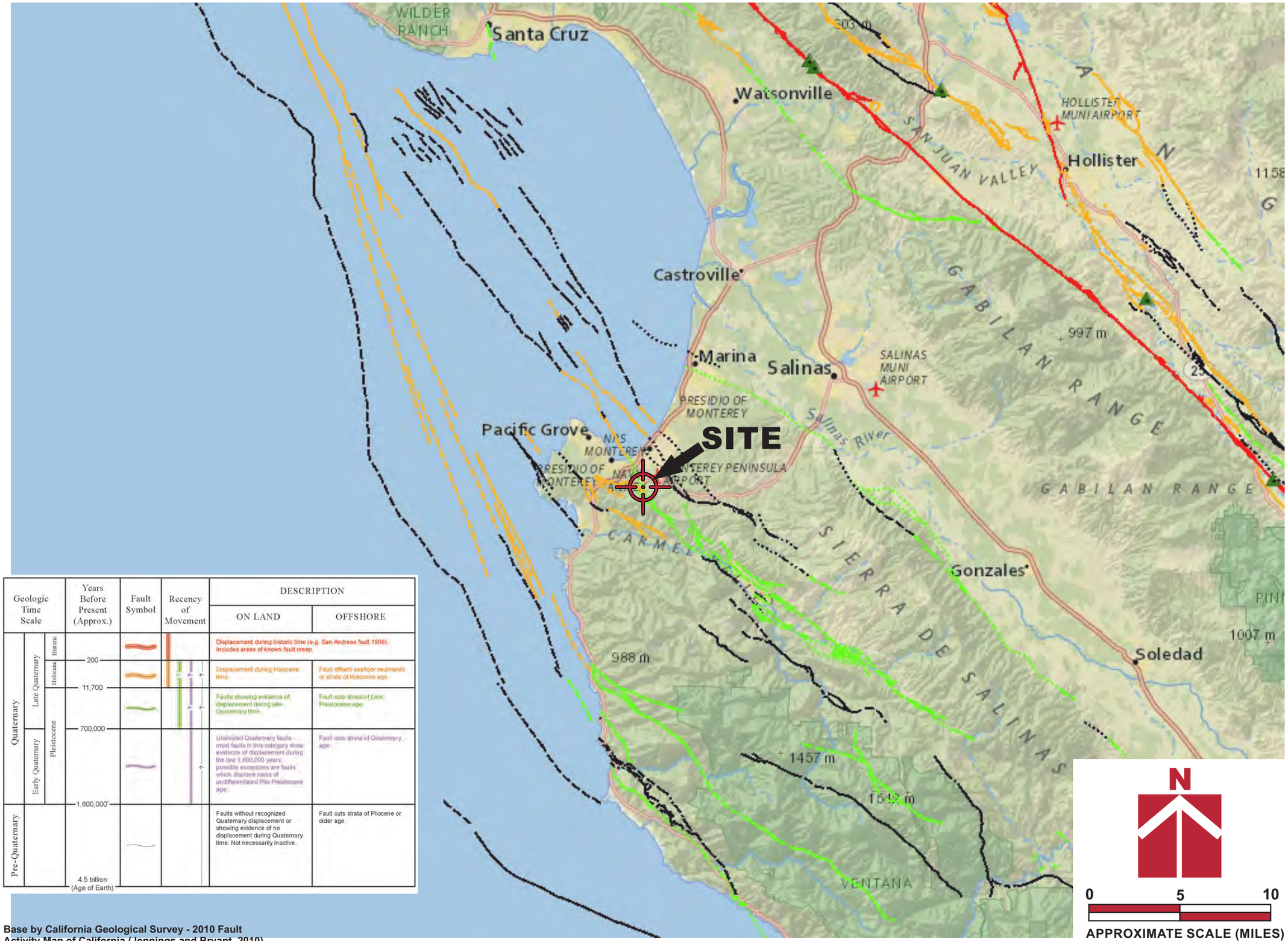
Regional Geologic Map

Monterey Peninsula Airport Terminal Building, Apron Area, and North Side Improvements Areas Monterey, CA

Project Number	234-2-7
Figure Number	Figure 3
Date	January 2017
Drawn By	RRN



Geologic Time Scale			Years Before Present (Approx.)	Fault Symbol	Recency of Movement	DESCRIPTION: ON LAND	DESCRIPTION: OFFSHORE
Quaternary	Late Quaternary	Historic				Displacement during historic time (e.g. San Andreas fault 1906). Includes areas of known fault creep.	
		Holocene	200			Displacement during Holocene time	Fault offsets seafloor sediments or strata of Holocene age
		Pleistocene	11,700			Faults showing evidence of displacement during late Quaternary time	Fault cuts strata of Late Pleistocene age
	Early Quaternary		700,000			Undivided Quaternary faults - most faults in this category show evidence of displacement during the last 1,600,000 years; possible exceptions are faults which displace rocks of undifferentiated Plio-Pleistocene age	Fault cuts strata of Quaternary age
Pre-Quaternary			1,600,000			Faults without recognized Quaternary displacement or showing evidence of no displacement during Quaternary time. Not necessarily inactive.	Fault cuts strata of Pliocene or older age.
			4.5 billion (Age of Earth)				

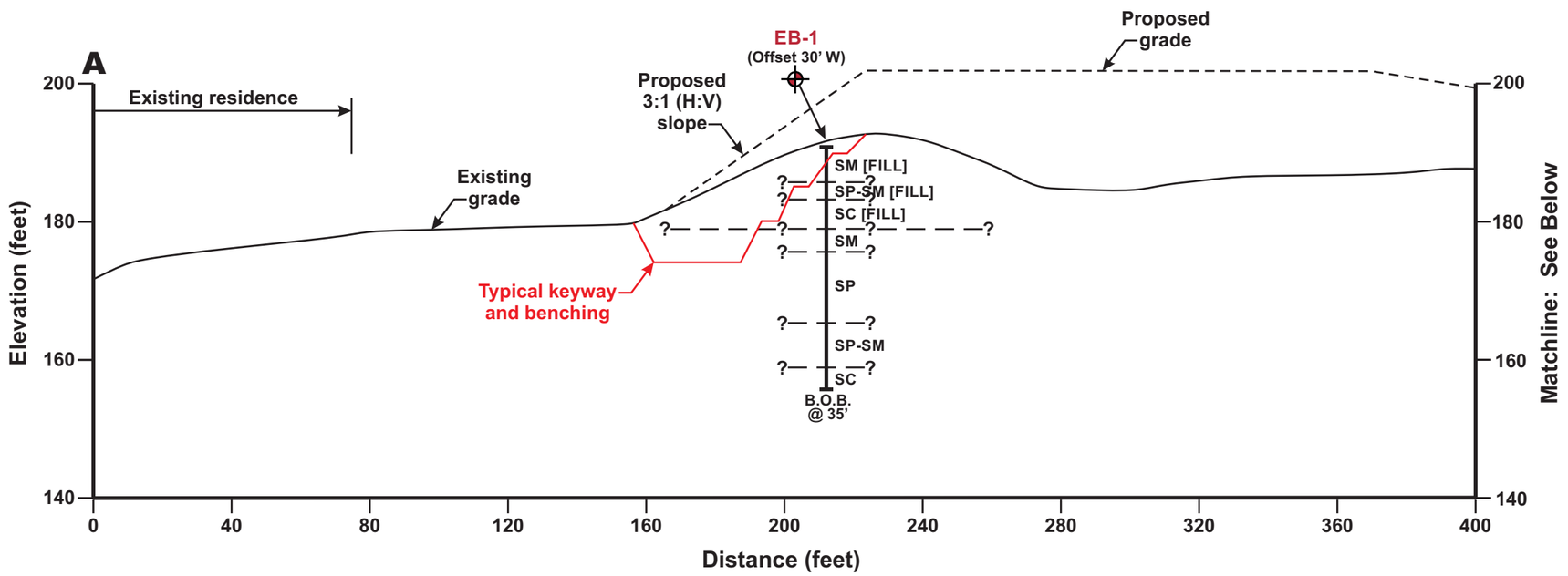
Base by California Geological Survey - 2010 Fault Activity Map of California (Jennings and Bryant, 2010)

Regional Fault Map

Monterey Peninsula Airport Terminal Building, Apron Area, and North Side Improvements Areas Monterey, CA

Project Number	Figure Number	Drawn By
234-2-7	Figure 4	RRN
Date		
January 2017		

CORNERSTONE EARTH GROUP



Section A-A'

(View Looking East)
1"=40' Horizontal
1"=20' Vertical

Symbols

SC	Clayey Sand
SM	Silty Sand
SP-SM	Poorly Graded Sand with Silt
⊕	Approximate location of exploratory boring (EB)

Notes:
1) Surficial fills associated with existing pavements, landscaping or utilities are not shown.
2) The subsurface profile is conceptual and is based on limited subsurface data obtained from widely spaced borings. Actual subsurface conditions may vary significantly between borings.
3) See Figure 2 for location of cross section.

Project Number 234-2-7
Figure Number Figure 5
Drawn By RRN
Date January 2017

Geologic Cross Section A-A'
Monterey Peninsula Airport
Terminal Building, Apron Area,
and North Side Improvements Areas
Monterey, CA

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APPENDIX A: FIELD INVESTIGATION

The field investigation consisted of a surface reconnaissance and a subsurface exploration program using concrete core drilling equipment and truck-mounted, hollow-stem auger drilling equipment. Nineteen 8-inch-diameter exploratory borings were drilled on December 11 to December 14, 2016 to depths of 10½ to 40 feet. Twelve pavement cores were drilled on December 11 and 12, 2016 at Boring EB-6 to EB-17 locations. Approximate exploratory boring locations are shown on the Site Plan, Figure 2. The soils encountered were continuously logged in the field by our representative and described in accordance with the Unified Soil Classification System (ASTM D2488). Boring logs, as well as a key to the classification of the soil, are included as part of this appendix.

Boring locations were approximated using existing site boundaries, existing buildings, and other site features as references. Boring elevations were interpolated using the autocad file provided showing existing contours (datum unknown). The locations of the borings should be considered accurate only to the degree implied by the method used.

Representative soil samples were obtained from the borings at selected depths. All samples were returned to our laboratory for evaluation and appropriate testing. The standard penetration resistance blow counts were obtained by dropping a 140-pound hammer through a 30-inch free fall. The 2-inch O.D. split-spoon sampler was driven 18 inches and the number of blows was recorded for each 6 inches of penetration (ASTM D1586). 2.5-inch I.D. samples were obtained using a Modified California Sampler driven into the soil with the 140-pound hammer previously described. Unless otherwise indicated, the blows per foot recorded on the boring log represent the accumulated number of blows required to drive the last 12 inches. The various samplers are denoted at the appropriate depth on the boring logs.

Field tests included an evaluation of the unconfined compressive strength of the soil samples using a pocket penetrometer device. The results of these tests are presented on the individual boring logs at the appropriate sample depths.

Attached boring logs and related information depict subsurface conditions at the locations indicated and on the date designated on the logs. Subsurface conditions at other locations may differ from conditions occurring at these boring locations. The passage of time may result in altered subsurface conditions due to environmental changes. In addition, any stratification lines on the logs represent the approximate boundary between soil types and the transition may be gradual.

UNIFIED SOIL CLASSIFICATION (ASTM D-2487-98)

MATERIAL TYPES	CRITERIA FOR ASSIGNING SOIL GROUP NAMES			GROUP SYMBOL	SOIL GROUP NAMES & LEGEND
COARSE-GRAINED SOILS >50% RETAINED ON NO. 200 SIEVE	GRAVELS >50% OF COARSE FRACTION RETAINED ON NO 4. SIEVE	CLEAN GRAVELS <5% FINES	Cu>4 AND 1<Cc<3	GW	WELL-GRADED GRAVEL
			Cu>4 AND 1>Cc>3	GP	POORLY-GRADED GRAVEL
		GRAVELS WITH FINES >12% FINES	FINES CLASSIFY AS ML OR CL	GM	SILTY GRAVEL
			FINES CLASSIFY AS CL OR CH	GC	CLAYEY GRAVEL
	SANDS >50% OF COARSE FRACTION PASSES ON NO 4. SIEVE	CLEAN SANDS <5% FINES	Cu>6 AND 1<Cc<3	SW	WELL-GRADED SAND
			Cu>6 AND 1>Cc>3	SP	POORLY-GRADED SAND
		SANDS AND FINES >12% FINES	FINES CLASSIFY AS ML OR CL	SM	SILTY SAND
			FINES CLASSIFY AS CL OR CH	SC	CLAYEY SAND
FINE-GRAINED SOILS >50% PASSES NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT<50	INORGANIC	PI>7 AND PLOTS>"A" LINE	CL	LEAN CLAY
			PI>4 AND PLOTS<"A" LINE	ML	SILT
		ORGANIC	LL (oven dried)/LL (not dried)<0.75	OL	ORGANIC CLAY OR SILT
	SILTS AND CLAYS LIQUID LIMIT>50	INORGANIC	PI PLOTS >"A" LINE	CH	FAT CLAY
			PI PLOTS <"A" LINE	MH	ELASTIC SILT
		ORGANIC	LL (oven dried)/LL (not dried)<0.75	OH	ORGANIC CLAY OR SILT
HIGHLY ORGANIC SOILS		PRIMARILY ORGANIC MATTER, DARK IN COLOR, AND ORGANIC ODOR		PT	PEAT

OTHER MATERIAL SYMBOLS

- Poorly-Graded Sand with Clay
- Clayey Sand
- Sandy Silt
- Artificial/Undocumented Fill
- Poorly-Graded Gravelly Sand
- Topsoil
- Well-Graded Gravel with Clay
- Well-Graded Gravel with Silt
- Sand
- Silt
- Well Graded Gravelly Sand
- Gravelly Silt
- Asphalt
- Boulders and Cobble

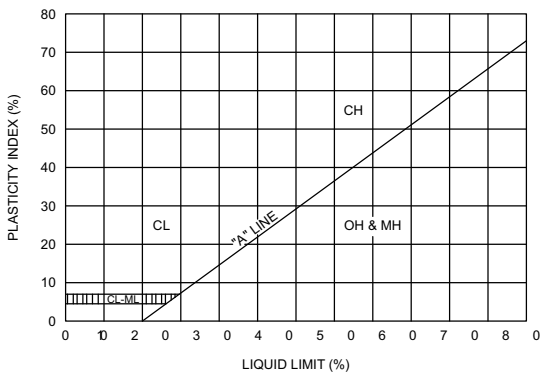
SAMPLER TYPES

- SPT
- Modified California (2.5" I.D.)
- Rock Core
- Shelby Tube
- No Recovery
- Grab Sample

ADDITIONAL TESTS

CA	-	CHEMICAL ANALYSIS (CORROSIVITY)	PI	-	PLASTICITY INDEX
CD	-	CONSOLIDATED DRAINED TRIAXIAL	SW	-	SWELL TEST
CN	-	CONSOLIDATION	TC	-	CYCLIC TRIAXIAL
CU	-	CONSOLIDATED UNDRAINED TRIAXIAL	TV	-	TORVANE SHEAR
DS	-	DIRECT SHEAR	UC	-	UNCONFINED COMPRESSION
PP	-	POCKET PENETROMETER (TSF)	(1.5)	-	(WITH SHEAR STRENGTH IN KSF)
(3.0)	-	(WITH SHEAR STRENGTH IN KSF)			
RV	-	R-VALUE	UU	-	UNCONSOLIDATED UNDRAINED TRIAXIAL
SA	-	SIEVE ANALYSIS: % PASSING #200 SIEVE			
	-	WATER LEVEL			

PLASTICITY CHART



PENETRATION RESISTANCE
(RECORDED AS BLOWS / FOOT)

SAND & GRAVEL		SILT & CLAY		
RELATIVE DENSITY	BLOWS/FOOT*	CONSISTENCY	BLOWS/FOOT*	STRENGTH** (KSF)
VERY LOOSE	0 - 4	VERY SOFT	0 - 2	0 - 0.25
LOOSE	4 - 10	SOFT	2 - 4	0.25 - 0.5
MEDIUM DENSE	10 - 30	MEDIUM STIFF	4 - 8	0.5 - 1.0
DENSE	30 - 50	STIFF	8 - 15	1.0 - 2.0
VERY DENSE	OVER 50	VERY STIFF	15 - 30	2.0 - 4.0
		HARD	OVER 30	OVER 4.0

* NUMBER OF BLOWS OF 140 LB HAMMER FALLING 30 INCHES TO DRIVE A 2 INCH O.D. (1-3/8 INCH I.D.) SPLIT-BARREL SAMPLER THE LAST 12 INCHES OF AN 18-INCH DRIVE (ASTM-1586 STANDARD PENETRATION TEST).

** UNDRAINED SHEAR STRENGTH IN KIPS/SQ. FT. AS DETERMINED BY LABORATORY TESTING OR APPROXIMATED BY THE STANDARD PENETRATION TEST, POCKET PENETROMETER, TORVANE, OR VISUAL OBSERVATION.

CORNERSTONE EARTH GROUP

LEGEND TO SOIL DESCRIPTIONS

Figure Number A-1

BORING NUMBER EB-1

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements
PROJECT NUMBER 234-2-7
PROJECT LOCATION Monterey, CA

DATE STARTED 12/14/16 **DATE COMPLETED** 12/14/16
GROUND ELEVATION 191 FT +/- **BORING DEPTH** 35 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc.
LATITUDE 36.591911° **LONGITUDE** -121.840960°
DRILLING METHOD Mobile B-56, 8 inch Hollow-Stem Auger
GROUND WATER LEVELS:
LOGGED BY DL
AT TIME OF DRILLING Not Encountered
NOTES
AT END OF DRILLING Not Encountered

This log is a part of a report by Cornerstone Earth Group, and should not be used as a stand-alone document. This description applies only to the location of the exploration at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with time. The description presented is a simplification of actual conditions encountered. Transitions between soil types may be gradual.

ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
191.0	0	**Silty Sand (SM) [Fill]** very dense, moist, brown, fine sand, trace fine gravel D1557 Max. Dry Density: 114.8pcf @ 11.5%	50/6"	MC-1B	117	6		
			50/5.5"	MC-2B	115	8		
186.0	5	**Poorly Graded Sand with Silt (SP-SM) [Fill]** very dense, moist, light brown, fine sand	50/6"	MC-3	103	9		
183.5		**Clayey Sand (SC) [Fill]** medium dense, moist, brown and gray mottled, fine to medium sand	21	SPT				
	10							
179.0		**Silty Sand (SM)** loose, moist, dark brown, fine sand, trace organics	13	MC-5A	73	11		
			17	MC-6B				
176.0	15	**Poorly Graded Sand (SP)** medium dense, moist, light brown, fine sand	14	SPT				
			15	SPT				
			35	MC-9B	98	3		
	20		27	MC				
			25	MC-11B	96	3		
			32	MC-12B	98	5		
	25		21	SPT				
165.5		*Continued Next Page*						

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

CORNERSTONE EARTH GROUP2 - CORNERSTONE 0812.GDT - 3/29/17 15:01 - P:\DRAFTING\GINT FILES\234-2-7 MRY TERMINAL.GPJ

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements
PROJECT NUMBER 234-2-7
PROJECT LOCATION Monterey, CA

This log is a part of a report by Cornerstone Earth Group, and should not be used as a stand-alone document. This description applies only to the location of the exploration at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with time. The description presented is a simplification of actual conditions encountered. Transitions between soil types may be gradual.

ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
165.5									
165.5			**Poorly Graded Sand with Silt (SP-SM)** dense, moist, brown, fine sand	33	SPT				
				31	SPT-15		8		
	30								
159.0			**Clayey Sand (SC)** dense, moist, light reddish brown with gray mottles, fine to medium sand						
				31	SPT-16		13		
156.0	35		Bottom of Boring at 35.0 feet.						
	40								
	45								
	50								

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

CORNERSTONE EARTH GROUP2 - CORNERSTONE 0812.GDT - 3/29/17 15:01 - P:\DRAFTING\GINT FILES\234-2-7 MRY TERMINAL.GPJ

BORING NUMBER EB-2

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements
PROJECT NUMBER 234-2-7
PROJECT LOCATION Monterey, CA

DATE STARTED 12/14/16 **DATE COMPLETED** 12/14/16
GROUND ELEVATION 208 FT +/- **BORING DEPTH** 30 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc.
LATITUDE 36.59130° **LONGITUDE** -121.83865°
DRILLING METHOD Mobile B-56, 8 inch Hollow-Stem Auger
GROUND WATER LEVELS:
LOGGED BY DL
AT TIME OF DRILLING Not Encountered
NOTES
AT END OF DRILLING Not Encountered

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
208.0	0	**Poorly Graded Sand with Silt (SP-SM) [Fill]** dense, moist, brown and light brown mottled, fine sand	60	MC-1B	112	5		
		D1557 Max. Dry Density: 114.8pcf @ 11.5%	62	MC-2B	112	4		
	5	becomes medium dense	24	MC				
			30	MC-4B	99	3		
			26	MC-5B	95	5		
	10		13	SPT				
197.0		**Poorly Graded Sand (SP)** medium dense to dense, moist, light brown, fine sand	20	SPT				
			31	SPT-8		3		
	15		33	SPT				
			20	SPT-10		6		
	20							
187.5		**Poorly Graded Sand with Silt (SP-SM)** dense, moist, light brown, fine sand	32	SPT				
			46	SPT-12		3		
	25							
182.0		*Continued Next Page*						

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

CORNERSTONE EARTH GROUP2 - CORNERSTONE 0812.GDT - 3/29/17 15:01 - P:\DRAFTING\GINT FILES\234-2-7 MRY TERMINAL.GPJ

BORING NUMBER EB-2

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements

PROJECT NUMBER 234-2-7

PROJECT LOCATION Monterey, CA

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ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
182.0			**Poorly Graded Sand with Silt (SP-SM)** dense, moist, light brown, fine sand						
180.5			**Silty Sand (SM)** dense, moist, brown, fine sand	35	SPT-13		8		
178.0	30		Bottom of Boring at 30.0 feet.						
	35								
	40								
	45								
	50								
	55								

UNDRAINED SHEAR STRENGTH, ksf
- ○ HAND PENETROMETER
- △ TORVANE
- ● UNCONFINED COMPRESSION
- ▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL

1.0 2.0 3.0 4.0

CORNERSTONE EARTH GROUP2 - CORNERSTONE 0812.GDT - 3/29/17 15:01 - P:\DRAFTING\GINT FILES\234-2-7 MRY TERMINAL.GPJ

BORING NUMBER EB-3

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements
PROJECT NUMBER 234-2-7
PROJECT LOCATION Monterey, CA

DATE STARTED 12/14/16 **DATE COMPLETED** 12/14/16
GROUND ELEVATION 180 FT +/- **BORING DEPTH** 13.75 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc.
LATITUDE 36.591035° **LONGITUDE** -121.841119°
DRILLING METHOD Mobile B-56, 8 inch Hollow-Stem Auger
GROUND WATER LEVELS:
LOGGED BY DL
AT TIME OF DRILLING Not Encountered
NOTES
AT END OF DRILLING Not Encountered

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
180.0	0	**Poorly Graded Sand with Silt (SP-SM)** loose, moist, reddish brown to brown, fine sand	11	MC-1B	99	5		
			13	MC-2B	99	5		
			16	MC				
175.0	5	**Poorly Graded Sand with Silt (SP-SM)** medium dense, moist, light brown, fine sand	26	MC-4B	103	8		
			20	MC-5B	101	8		
168.0	10	**Silty Sand (SM)** very dense, moist, brown, fine sand	50 4.5"	SPT				
166.3	15	Bottom of Boring at 13.8 feet.						
	20							
	25							

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

CORNERSTONE EARTH GROUP2 - CORNERSTONE 0812.GDT - 3/29/17 15:01 - P:\DRAFTING\GINT FILES\234-2-7 MRY TERMINAL.GPJ

BORING NUMBER EB-4

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements
PROJECT NUMBER 234-2-7
PROJECT LOCATION Monterey, CA

DATE STARTED 12/12/16 **DATE COMPLETED** 12/12/16
GROUND ELEVATION 216 FT +/- **BORING DEPTH** 15 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc. **LATITUDE** 36.58854° **LONGITUDE** -121.84049°
DRILLING METHOD Mobile B-56, 8 inch Hollow-Stem Auger **GROUND WATER LEVELS:**
LOGGED BY DL **AT TIME OF DRILLING** Not Encountered
NOTES **AT END OF DRILLING** Not Encountered

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
216.0	0	**Poorly Graded Sand with Silt (SP-SM)** dense to medium dense, moist, light reddish brown to brown, fine sand 90% Sand, 5% Silt, 5% Clay D1557 Max. Dry Density: 107.5pcf @ 13.0% NP = Non-plastic	51	MC-1B	103	7	NP	10
			25	MC-2B	101	7		
			20	MC-3B	98	7		
211.0	5	**Poorly Graded Sand (SP)** medium dense, moist, light brown, fine sand	24	MC-4B	81	5		
			27	MC-5B	104	8		
	10							
			39	MC-6B	91	5		
201.0	15	Bottom of Boring at 15.0 feet.						
	20							
	25							

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

CORNERSTONE EARTH GROUP2 - CORNERSTONE 0812.GDT - 3/29/17 15:01 - P:\DRAFTING\GINT FILES\234-2-7 MRY TERMINAL.GPJ

BORING NUMBER EB-5

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements
PROJECT NUMBER 234-2-7
PROJECT LOCATION Monterey, CA

DATE STARTED 12/12/16 **DATE COMPLETED** 12/12/16
GROUND ELEVATION 203 FT +/- **BORING DEPTH** 15 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc.
LATITUDE 36.58888° **LONGITUDE** -121.84323°
DRILLING METHOD Mobile B-56, 8 inch Hollow-Stem Auger
GROUND WATER LEVELS:
LOGGED BY DL
AT TIME OF DRILLING Not Encountered
NOTES
AT END OF DRILLING Not Encountered

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
203.0	0	**Poorly Graded Sand with Silt (SP-SM)** dense to very dense, moist, brown, fine sand	57	MC-1C	97	3		
		D1557 Max. Dry Density: 107.5pcf @ 13.0%	50/6"	MC-2B	102	5		
			59	SPT				
	5		64	MC-4B	103	5		
		becomes medium dense	22	SPT				
	10							
			48	MC-6B	101	7		
188.0	15	Bottom of Boring at 15.0 feet.						
	20							
	25							

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

CORNERSTONE EARTH GROUP2 - CORNERSTONE 0812.GDT - 3/29/17 15:01 - P:\DRAFTING\GINT FILES\234-2-7 MRY TERMINAL.GPJ

BORING NUMBER EB-6

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements
PROJECT NUMBER 234-2-7
PROJECT LOCATION Monterey, CA

DATE STARTED 12/12/16 **DATE COMPLETED** 12/12/16
GROUND ELEVATION 177 FT +/- **BORING DEPTH** 11.5 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc.
LATITUDE 36.588179° **LONGITUDE** -121.850246°
DRILLING METHOD Mobile B-56, 8 inch Hollow-Stem Auger
GROUND WATER LEVELS:
LOGGED BY DL
AT TIME OF DRILLING Not Encountered
NOTES
AT END OF DRILLING Not Encountered

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
177.0	0	9¾ inches asphalt concrete over 5 inches aggregate base						
176.2								
175.6		**Silty, Clayey Sand (SC-SM) [Fill]** dense, moist, dark brown to gray, fine to coarse sand Liquid Limit = 28, Plastic Limit = 21						
174.5			70	MC-1B	112	15	7	
			33	MC-2B	112	6		
171.8	5	**Poorly Graded Sand with Silt and Gravel (SP-SM) [Fill]** medium dense, moist, brown, fine sand, fine to coarse subangular gravel	19	3B MC	107	8		
		Silty Sand (SM) medium dense, moist, reddish brown to brown, fine sand		3C	97	10		
	10		28	MC-4B	94	5		
			16	SPT				
165.5		Bottom of Boring at 11.5 feet.						
	15							
	20							
	25							

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

CORNERSTONE EARTH GROUP2 - CORNERSTONE 0812.GDT - 3/29/17 15:01 - P:\DRAFTING\GINT FILES\234-2-7 MRY TERMINAL.GPJ

BORING NUMBER EB-7

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements
PROJECT NUMBER 234-2-7
PROJECT LOCATION Monterey, CA

DATE STARTED 12/12/16 **DATE COMPLETED** 12/12/16
GROUND ELEVATION 194 FT +/- **BORING DEPTH** 11.5 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc.
LATITUDE 36.586933° **LONGITUDE** -121.847572°
DRILLING METHOD Mobile B-56, 8 inch Hollow-Stem Auger
GROUND WATER LEVELS:
LOGGED BY DL
AT TIME OF DRILLING Not Encountered
NOTES
AT END OF DRILLING Not Encountered

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
194.0	0	14½ inches Portland cement concrete over 4 inches aggregate base						
192.6								
192.3		**Silty Sand (SM)** medium dense, moist, brown and light brown mottled, fine sand	19	SPT-1		15		15
		D1557 Max. Dry Density: 125.2pcf @ 10.0% see CBR Results	26	SPT-2	99	17		15
	5	becomes dense NP = Non-plastic 71% Sand, 11% Silt, 18% Clay	36	SPT-3		11	NP	29
			64	MC-4A	117	11		
186.0		**Clayey Sand (SC)** medium dense, moist, gray and reddish brown mottled, fine sand	51	MC-5A	119	11		
	10		18	SPT				
182.5		Bottom of Boring at 11.5 feet.						
	15							
	20							
	25							

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

CORNERSTONE EARTH GROUP2 - CORNERSTONE 0812.GDT - 3/29/17 15:01 - P:\DRAFTING\GINT FILES\234-2-7 MRY TERMINAL.GPJ

BORING NUMBER EB-8

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements
PROJECT NUMBER 234-2-7
PROJECT LOCATION Monterey, CA

DATE STARTED 12/12/16 **DATE COMPLETED** 12/12/16
GROUND ELEVATION 196 FT +/- **BORING DEPTH** 11.5 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc. **LATITUDE** 36.58701° **LONGITUDE** -121.84690°
DRILLING METHOD Mobile B-56, 8 inch Hollow-Stem Auger **GROUND WATER LEVELS:**
LOGGED BY DL **AT TIME OF DRILLING** Not Encountered
NOTES **AT END OF DRILLING** Not Encountered

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
196.0	0	12-1/8 inches asphalt concrete over 5 inches aggregate base						
195.0								
194.6		**Poorly Graded Sand (SP)** very dense to dense, moist, brown, fine sand	50 6"	MC-1B	103	5		
			60	MC-2B	111	11		
192.0		**Silty Sand (SM)** dense, moist, brown with gray mottles, fine sand, some clay	78	MC-3B	114	8		
	5							
			69	MC-4C	114	8		
	10	becomes medium dense	29	SPT				
184.5		Bottom of Boring at 11.5 feet.						
	15							
	20							
	25							

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

CORNERSTONE EARTH GROUP2 - CORNERSTONE 0812.GDT - 3/29/17 15:01 - P:\DRAFTING\GINT FILES\234-2-7 MRY TERMINAL.GPJ

BORING NUMBER EB-9

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements
PROJECT NUMBER 234-2-7
PROJECT LOCATION Monterey, CA

DATE STARTED 12/12/16 **DATE COMPLETED** 12/12/16
GROUND ELEVATION 213 FT +/- **BORING DEPTH** 10.5 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc.
LATITUDE 36.585683° **LONGITUDE** -121.843469°
DRILLING METHOD Mobile B-56, 8 inch Hollow-Stem Auger
GROUND WATER LEVELS:
LOGGED BY DL
AT TIME OF DRILLING Not Encountered
NOTES
AT END OF DRILLING Not Encountered

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
213.0	0	11¼ inches asphalt concrete over 8 inches aggregate base						
212.1								
211.3		**Poorly Graded Sand with Silt (SP-SM)**						
210.5		dense, moist, light brown, fine sand	58	MC-1B	101	4		
		Silty Sand (SM)	50/5"	MC-2B	118	11	NP	31
	5	very dense, moist, gray with brown, fine sand NP = Non-plastic 69% Sand, 14% Silt, 17% Clay D1557 Max. Dry Density: 124.7pcf @ 9.7% see CBR Results	50/5"	MC-3B	102	8		
204.0		**Clayey Sand (SC)**	50/5.5"	MC-4	108	9		
	10	dense, moist, gray with brown mottles, fine sand	62	SPT				
202.5		Bottom of Boring at 10.5 feet.						
	15							
	20							
	25							

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

CORNERSTONE EARTH GROUP2 - CORNERSTONE 0812.GDT - 3/29/17 15:01 - P:\DRAFTING\GINT FILES\234-2-7 MRY TERMINAL.GPJ

BORING NUMBER EB-10

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements
PROJECT NUMBER 234-2-7
PROJECT LOCATION Monterey, CA

DATE STARTED 12/11/16 **DATE COMPLETED** 12/11/16
GROUND ELEVATION 214 FT +/- **BORING DEPTH** 20 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc. **LATITUDE** 36.58596° **LONGITUDE** -121.84554°
DRILLING METHOD Mobile B-56, 8 inch Hollow-Stem Auger **GROUND WATER LEVELS:**
LOGGED BY DL ▽ **AT TIME OF DRILLING** Not Encountered
NOTES ▼ **AT END OF DRILLING** Not Encountered

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
214.0	0	1½ inch asphalt concrete over 5 inches aggregate base						
213.5		**Clayey Sand with Gravel (SC) [Fill]** very dense, moist, brown, fine to coarse sand, fine to coarse gravel	50 5"	MC-1B	129	12		
210.8		**Poorly Graded Sand with Silt (SP-SM)** dense to medium dense, moist, light brown, fine sand	60	SPT				
	5		11	SPT-3		4		
			16	SPT				
	10		11	SPT-5		5		
202.5		**Silty Sand (SM)** dense, moist, brown with gray mottles, fine sand	31	SPT-6		10		
201.0		**Silty, Clayey Sand (SC-SM)** very dense, moist, brown with gray mottles, fine sand	82	SPT-7		13		
198.8	15	**Sandy Silty Clay (CL-ML)** very stiff, moist, gray, fine sand, low plasticity	77	SPT-8B	104	16		
198.0		**Clayey Sand (SC)** dense, moist, gray, fine sand						
			44	SPT-9B	114	16		
194.0	20	Bottom of Boring at 20.0 feet.						
	25							

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

CORNERSTONE EARTH GROUP2 - CORNERSTONE 0812.GDT - 3/29/17 15:01 - P:\DRAFTING\GINT FILES\234-2-7 MRY TERMINAL.GPJ

BORING NUMBER EB-11

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements
PROJECT NUMBER 234-2-7
PROJECT LOCATION Monterey, CA

DATE STARTED 12/12/16 **DATE COMPLETED** 12/12/16
GROUND ELEVATION 216 FT +/- **BORING DEPTH** 25 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc.
LATITUDE 36.58549° **LONGITUDE** -121.84407°
DRILLING METHOD Mobile B-56, 8 inch Hollow-Stem Auger
GROUND WATER LEVELS:
LOGGED BY DL
AT TIME OF DRILLING Not Encountered
NOTES
AT END OF DRILLING Not Encountered

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
216.0	0	1½ inch asphalt concrete over 4 inches aggregate base						
215.6		**Poorly Graded Sand with Silt (SP-SM) [Fill]** very dense, moist, light gray, fine sand	50/4"	MC-1B	107	7		
213.5		**Clayey Sand (SC)** very dense, moist, gray with brown mottles, fine sand, some silty sand lenses	50/6"	SPT				
	5		50/5"	MC-3B	110	8		
			80	SPT				
	10		50/5"	MC-5	89	10		
			63	SPT-6		12		25
202.0		**Silty Sand (SM)** dense, moist, brown, fine sand	50/3"	MC-7B	109	12		
	15		40	SPT-8		11		
			44	SPT-9		12		
	20							
		becomes very dense	60	SPT-10		11		
191.0	25	Bottom of Boring at 25.0 feet.						

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

CORNERSTONE EARTH GROUP2 - CORNERSTONE 0812.GDT - 3/29/17 15:01 - P:\DRAFTING\GINT FILES\234-2-7 MRY TERMINAL.GPJ

BORING NUMBER EB-12

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements
PROJECT NUMBER 234-2-7
PROJECT LOCATION Monterey, CA

DATE STARTED 12/13/16 **DATE COMPLETED** 12/13/16
GROUND ELEVATION 208 FT +/- **BORING DEPTH** 20 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc.
LATITUDE 36.586089° **LONGITUDE** -121.847517°
DRILLING METHOD Mobile B-56, 8 inch Hollow-Stem Auger
GROUND WATER LEVELS:
LOGGED BY DL
AT TIME OF DRILLING Not Encountered
NOTES
AT END OF DRILLING Not Encountered

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
208.0	0	4¾ inches asphalt concrete over 3½ inches aggregate base						
207.6								
207.3		**Poorly Graded Sand with Silt (SP) [Fill]** loose, moist, brown, fine sand	17	MC-1C	78	8		
205.5		**Poorly Graded Sand with Silt (SP-SM)** loose to medium dense, moist, brown, fine sand	12	MC-2B	96	4		
	5		20	MC-3B	96	4		
200.0		**Silty Sand (SM)** medium dense to very dense, moist, reddish brown with gray mottles, fine sand	28	MC-4B	110	12		
	10		50/6"	MC-5B	116	11		
		67% Sand, 21% Silt, 12% Clay	82	SPT-6		9		33
			50/6"	MC-7B	117	12		
	15		60	SPT				
190.5		**Sandy Silty Clay (CL-ML)** very stiff, moist, gray with brown mottles, fine sand, low plasticity Liquid Limit = 27, Plastic Limit = 20	62	MC-9B	106	20	7	
188.0	20	Bottom of Boring at 20.0 feet.						
	25							

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

CORNERSTONE EARTH GROUP2 - CORNERSTONE 0812.GDT - 3/29/17 15:01 - P:\DRAFTING\GINT FILES\234-2-7 MRY TERMINAL.GPJ

BORING NUMBER EB-13

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements
PROJECT NUMBER 234-2-7
PROJECT LOCATION Monterey, CA

DATE STARTED 12/12/16 **DATE COMPLETED** 12/12/16
GROUND ELEVATION 212 FT +/- **BORING DEPTH** 20 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc.
LATITUDE 36.585812° **LONGITUDE** -121.846289°
DRILLING METHOD Mobile B-56, 8 inch Hollow-Stem Auger
GROUND WATER LEVELS:
LOGGED BY DL
AT TIME OF DRILLING Not Encountered
NOTES
AT END OF DRILLING Not Encountered

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
212.0	0	2¾ inches asphalt concrete over 4 inches aggregate base						
211.8								
211.4		**Silty Sand (SM)** medium dense, moist, brown, fine sand	41	MC-1C	104	11		
			20	SPT				
	5		26	MC-3B	107	9		
204.5		**Poorly Graded Sand with Silt (SP-SM)** very dense, moist, brown, fine sand	50	SPT-4		3		
202.0	10	**Clayey Sand (SC)** very dense, moist, gray with brown mottles, fine sand	50/5.5"	MC-5	100	21		
200.3		**Silty Sand (SM)** very dense, moist, gray with light brown mottles, fine sand D1557 Max. Dry Density: 124.0pcf @ 10.2%	64	SPT-6		12		
198.0		**Clayey Sand (SC)** dense, moist, gray with brown mottles, fine sand	50/6"	MC-7B	117	7		
	15		43	SPT-8		13		
			62	MC-9C	106	17		
192.0	20	Bottom of Boring at 20.0 feet.						
	25							

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

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BORING NUMBER EB-14

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements
PROJECT NUMBER 234-2-7
PROJECT LOCATION Monterey, CA

DATE STARTED 12/13/16 **DATE COMPLETED** 12/13/16
GROUND ELEVATION 209 FT +/- **BORING DEPTH** 40 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc. **LATITUDE** 36.58589° **LONGITUDE** -121.84813°
DRILLING METHOD Mobile B-56, 8 inch Hollow-Stem Auger **GROUND WATER LEVELS:**
LOGGED BY DL ▽ **AT TIME OF DRILLING** 33.5 ft.
NOTES ▼ **AT END OF DRILLING** 32 ft.

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf
209.0	0	4½ inches asphalt concrete							
208.6		**Poorly Graded Sand with Silt (SP-SM)** medium dense, moist, brown to light brown, fine sand	41	MC-1B	100	5			
206.0		**Silty Sand (SM)** loose, moist, reddish brown, fine sand	15	MC					
204.0	5	**Poorly Graded Sand with Silt (SP-SM)** medium dense, moist, brown to light brown, fine sand	26	MC-3B	95	3			
			26	MC-4B	92	5			
	10		18	SPT-5	7				
197.0		**Silty Sand (SM)** very dense, moist, brown, fine sand, slightly cemented	50/5"	MC-6B	113	8			
	15		50/5"	SPT-7		7			
191.5		**Sandy Lean Clay (CL)** hard, moist, gray, fine sand, low plasticity Liquid Limit = 34, Plastic Limit = 13	42	SPT-8		17	21	59	>4.5 ○
	20								
188.5		**Clayey Sand (SC)** dense, moist, reddish brown with gray mottles, fine sand, some fine subangular gravel	31	SPT-9		16			
	25		57	MC-10B	109	20			
183.0									

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UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

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BORING NUMBER EB-14

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements

PROJECT NUMBER 234-2-7

PROJECT LOCATION Monterey, CA

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ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
183.0									
182.5			**Silty Sand (SM)** dense, moist to wet, gray brown, fine sand						
				34	SPT-11		25		
	30								
			becomes medium dense	48	MC-12B	103	25		
	35		becomes dense	40	SPT				
				70	MC-14B	104	22		
169.0	40		Bottom of Boring at 40.0 feet.						
	45								
	50								
	55								

UNDRAINED SHEAR STRENGTH, ksf
- ○ HAND PENETROMETER
- △ TORVANE
- ● UNCONFINED COMPRESSION
- ▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL

1.0 2.0 3.0 4.0

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BORING NUMBER EB-15

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements
PROJECT NUMBER 234-2-7
PROJECT LOCATION Monterey, CA

DATE STARTED 12/13/16 **DATE COMPLETED** 12/13/16
GROUND ELEVATION 213 FT +/- **BORING DEPTH** 40 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc. **LATITUDE** 36.58556° **LONGITUDE** -121.84731°
DRILLING METHOD Mobile B-56, 8 inch Hollow-Stem Auger **GROUND WATER LEVELS:**
LOGGED BY DL ▽ **AT TIME OF DRILLING** Not Encountered
NOTES ▼ **AT END OF DRILLING** Not Encountered

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
213.0	0	2½ inches asphalt concrete						
212.8		**Poorly Graded Sand with Silt (SP-SM)** medium dense, moist, brown to light brown, fine sand	21	MC-1B	95	5		
			19	MC				
	5		17	MC-3B	92	6		
205.0		**Clayey Sand (SC)** very dense, moist, gray with brown mottles, fine sand	50/6"	MC-4B	115	10		
	10							
201.0		**Silty Sand (SM)** very dense, moist, brown to light gray, fine sand	35	SPT				
	15		84	MC-6B	114	11		
195.5		**Sandy Lean Clay (CL)** very stiff, moist, brown with gray mottles, fine sand, low plasticity	28	SPT-7		15		
	20							
192.5		**Lean Clay (CL)** very stiff, moist, gray with brown mottles, some fine sand, moderate plasticity	35	MC-8B	90	31		
189.5		**Silty Sand (SM)** dense, moist, gray with brown mottles, fine sand, some clayey sand lenses	60	MC-9B	99	21		
	25							
187.0								

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UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

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BORING NUMBER EB-15

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements

PROJECT NUMBER 234-2-7

PROJECT LOCATION Monterey, CA

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
187.0		**Silty Sand (SM)** dense, moist, gray with brown mottles, fine sand, some clayey sand lenses						
	30		66	MC-10B	107	18		
181.5		**Silty Sand (SM)** dense, wet, gray brown, fine sand						
	35		52	MC-11B	97	25		
			59	MC-12B	96	27		
173.0	40	Bottom of Boring at 40.0 feet.						
	45							
	50							
	55							

UNDRAINED SHEAR STRENGTH, ksf
- ○ HAND PENETROMETER
- △ TORVANE
- ● UNCONFINED COMPRESSION
- ▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL

1.0 2.0 3.0 4.0

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BORING NUMBER EB-16

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements
PROJECT NUMBER 234-2-7
PROJECT LOCATION Monterey, CA

DATE STARTED 12/13/16 **DATE COMPLETED** 12/13/16
GROUND ELEVATION 217 FT +/- **BORING DEPTH** 20 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc. **LATITUDE** 36.58522° **LONGITUDE** -121.84633°
DRILLING METHOD Mobile B-56, 8 inch Hollow-Stem Auger **GROUND WATER LEVELS:**
LOGGED BY DL **AT TIME OF DRILLING** Not Encountered
NOTES **AT END OF DRILLING** Not Encountered

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
217.0	0	2 inches asphalt concrete over 4 inches aggregate base						
216.8								
216.5		**Silty Sand (SM)** very dense, moist, brown, fine sand	50/4"	MC-1B	115	12		
			50/6"	SPT-2		9		
	5	color becomes gray with brown mottles	50/6"	SPT				
			50/3.5"	SPT-4		9		
		slightly cemented						
	10		50/6"	MC-5	102	12		
		dense	55	SPT-6		11		
		D1557 Max. Dry Density: 124.0pcf @ 10.2%	50/5"	MC-7B	111	11		
202.5	15	**Clayey Sand (SC)** very dense, moist, brown and gray mottled, fine sand Liquid Limit = 27, Plastic Limit = 13	74	SPT-8		17	14	38
		becomes medium dense	28	SPT-9		16		
197.0	20	Bottom of Boring at 20.0 feet.						
	25							

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

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BORING NUMBER EB-17

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements
PROJECT NUMBER 234-2-7
PROJECT LOCATION Monterey, CA

DATE STARTED 12/14/16 **DATE COMPLETED** 12/14/16
GROUND ELEVATION 219 FT +/- **BORING DEPTH** 20 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc. **LATITUDE** 36.58477° **LONGITUDE** -121.84406°
DRILLING METHOD Mobile B-56, 8 inch Hollow-Stem Auger **GROUND WATER LEVELS:**
LOGGED BY DL ▽ **AT TIME OF DRILLING** 15 ft.
NOTES ▼ **AT END OF DRILLING** 13 ft.

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
219.0	0	2¾ inches asphalt concrete over 5 inches aggregate base						
218.8								
218.3		**Silty Sand (SM)** dense, moist, reddish brown to brown, fine sand	60	MC-1B	107	11		
			50/6"	MC-2B	108	11		
	5		50	MC				
211.0		**Silty, Clayey Sand (SC-SM)** medium dense, moist, brown with gray mottles, fine sand	31	MC-4B	103	20		
	10		44	MC-5B	103	18		26
		becomes dense	32	SPT-6		20		
206.0		**Clayey Sand (SC)** dense, moist, reddish brown with gray mottles, fine to coarse sand, some cemented nodules	50/6"	MC-7B	98	24		
	15		44	SPT-8		24		
202.0		**Silty Sand (SM)** very dense, moist to wet, gray brown, fine sand	65	SPT-9		19		
199.0	20	Bottom of Boring at 20.0 feet.						
	25							

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

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BORING NUMBER EB-18

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements
PROJECT NUMBER 234-2-7
PROJECT LOCATION Monterey, CA

DATE STARTED 12/14/16 **DATE COMPLETED** 12/14/16
GROUND ELEVATION 212 FT +/- **BORING DEPTH** 40 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc. **LATITUDE** 36.58469° **LONGITUDE** -121.84794°
DRILLING METHOD Mobile B-56, 8 inch Hollow-Stem Auger **GROUND WATER LEVELS:**
LOGGED BY DL **AT TIME OF DRILLING** 28 ft.
NOTES **AT END OF DRILLING** 26.5 ft.

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
212.0	0	6 inches aggregate base						
211.5		**Poorly Graded Sand with Silt (SP-SM)** medium dense, moist, brown, fine sand	31	MC-1B	94	5		
			23	MC				
	5		50	MC-3B	111	12		
204.5		**Clayey Sand (SC)** dense, moist, gray with brown mottles, fine sand	79	MC-4B	116	12		
	10							
201.0		**Silty Sand (SM)** very dense, moist, brown with gray mottles, fine sand, some clay	50 6"	MC-5B	108	15		
	15		89	SPT-6		16		
		becomes dense	36	SPT-7		18		26
192.0	20	**Silty Sand (SM)** dense to medium dense, moist to wet, gray brown, fine sand	61	MC-8B	110	18		
	25		50	MC-9B	108	18		
186.0								

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

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BORING NUMBER EB-18

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements

PROJECT NUMBER 234-2-7

PROJECT LOCATION Monterey, CA

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ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
186.0	0		**Silty Sand (SM)** dense to medium dense, moist to wet, gray brown, fine sand						
			some thin clay seams	38	MC-10B	97	22		
	30			58	SPT				
				50	SPT-12		26		
	35								
175.0			**Fat Clay (CH)** very stiff, moist, gray, some fine sand, high plasticity	51	MC-13C	81	40		
172.0	40		Bottom of Boring at 40.0 feet.						
	45								
	50								
	55								

UNDRAINED SHEAR STRENGTH, ksf
- ○ HAND PENETROMETER
- △ TORVANE
- ● UNCONFINED COMPRESSION
- ▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL

1.0 2.0 3.0 4.0

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BORING NUMBER EB-19

CORNERSTONE EARTH GROUP

PROJECT NAME MRY Terminal, Apron and North Side Improvements
PROJECT NUMBER 234-2-7
PROJECT LOCATION Monterey, CA

DATE STARTED 12/14/16 **DATE COMPLETED** 12/14/16
GROUND ELEVATION 216 FT +/- **BORING DEPTH** 20 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc. **LATITUDE** 36.58418° **LONGITUDE** -121.84704°
DRILLING METHOD Mobile B-56, 8 inch Hollow-Stem Auger **GROUND WATER LEVELS:**
LOGGED BY DL **AT TIME OF DRILLING** Not Encountered
NOTES **AT END OF DRILLING** Not Encountered

This log is a part of a report by Cornerstone Earth Group, and should not be used as a stand-alone document. This description applies only to the location of the exploration at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with time. The description presented is a simplification of actual conditions encountered. Transitions between soil types may be gradual.

ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
216.0	0	**Poorly Graded Sand with Silt (SP-SM)** medium dense, moist, gray, fine to medium sand	21	MC-1B	105	16		
213.5		**Silty Sand (SM)** dense, moist, light gray to gray, fine sand	79	MC-2B	120	10		
	5		54	MC-3A	116	10		
210.5		**Sandy Lean Clay (CL)** very stiff, moist, gray, fine sand, low plasticity	50 5.5"	MC-4	104	13		
210.0		**Poorly Graded Sand with Silt (SP-SM)** very dense, moist, gray, fine to medium sand						
208.0		**Clayey Sand (SC)** dense, moist, brown with light gray mottles, fine sand	40	SPT-5		21		
	10							
205.0		**Poorly Graded Sand with Silt (SP-SM)** very dense, moist, light gray, fine sand	50	SPT-6		16		
	15							
		becomes dense	35	SPT-7		20		
196.0	20	Bottom of Boring at 20.0 feet.						
	25							

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

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APPENDIX B: LABORATORY TEST PROGRAM

The laboratory testing program was performed to evaluate the physical and mechanical properties of the soils retrieved from the site to aid in verifying soil classification.

Moisture Content: The natural water content was determined (ASTM D2216) on 135 samples of the materials recovered from the borings. These water contents are recorded on the boring logs at the appropriate sample depths.

Dry Densities: In place dry density determinations (ASTM D2937) were performed on 97 samples to measure the unit weight of the subsurface soils. Results of these tests are shown on the boring logs at the appropriate sample depths.

Washed Sieve Analyses: The percent soil fraction passing the No. 200 sieve (ASTM D1140) was determined on 11 samples of the subsurface soils to aid in the classification of these soils. Results of these tests are shown on the boring logs at the appropriate sample depths.

Grain Size Analyses: The particle size distribution (ASTM D422) was determined on four samples of the near-surface soils to aid in the classification of these soils and determining the percent silt and clay. Results of these tests are shown in the table below.

Table B-1: Summary of Grain Size Analyses

Sieve Size	EB-4 1.5'	EB-7 2 – 7'	EB-9 1.5 – 6.5'	EB-12 11.5'
	% Passing	% Passing	% Passing	% Passing
¾-inch	100	100	100	100
No. 4	100	100	100	100
No. 10	100	99.7	99.6	100
No. 16	100	99.5	99.4	99.9
No. 30	99.8	98.5	98.3	99.4
No. 50	86.7	88.3	90.0	95.4
No. 100	18.6	42.0	44.0	54.1
No. 200	10.1	29.4	30.8	32.7
Silt	5%	11%	14%	21%
Clay	5%	18%	17%	12%

Plasticity Index: Seven Plasticity Index determinations (ASTM D4318) were performed on samples of the subsurface soils to measure the range of water contents over which this material exhibits plasticity. The Plasticity Index was used to classify the soil in accordance with the Unified Soil Classification System and to evaluate the soil expansion potential. Results of these tests are shown on the boring logs at the appropriate sample depths.

Compaction: Five compaction tests (ASTM D 1557-00 Method B) were performed on sand samples to assist in evaluating the maximum dry unit weight and optimum moisture content of the soils. Results of the compaction tests are included as part of this appendix.

California Bearing Ratio: California Bearing Ratio Tests (CBR) (ASTM D1883) were performed on two samples of the subsurface soils ranging from 1½ to 7 feet below grade to evaluate the mechanical strength of this soil. Results of the CBR tests are shown below and graphically in this appendix.

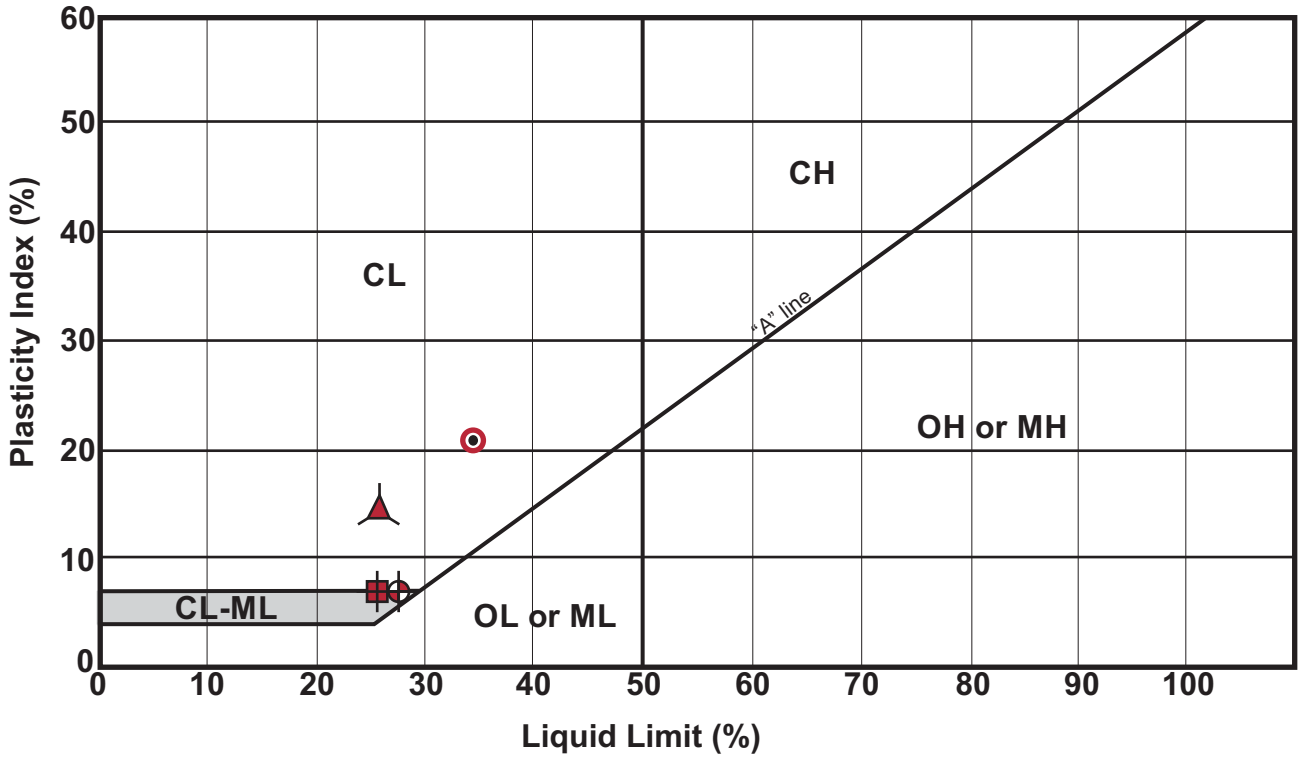
Table B-2: Results of California Bearing Ratio Test Boring EB-7

Sample	Depth of Soil Sample	Classification	CBR at Required In-Situ Field Density (%)			
EB-7	2 – 7 feet	Sand	Rel. Comp. (%)	91	95	98.3
			@ 0.1 in.	18.2	29.1	41.5
			@ 0.2 in.	20.9	32.8	54.7

Table B-3: Results of California Bearing Ratio Test Boring EB-9

Sample	Depth of Soil Sample	Classification	CBR at Required In-Situ Field Density (%)			
EB-7	1½ – 6½ feet	Sand	Rel. Comp. (%)	90.7	95	99.6
			@ 0.1 in.	16.6	32.4	46.4
			@ 0.2 in.	17.9	38.1	60.6

Plasticity Index (ASTM D4318) Testing Summary



Symbol	Boring No.	Depth (ft)	Natural Water Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index	Passing No. 200 (%)	Group Name (USCS - ASTM D2487)
	EB-4	1.5	7	determined non-plastic			10	Poorly Graded Sand with Silt (SP-SM)
⊕	EB-6	1.5	15	28	21	7	—	Silty, Clayey Sand (SC-SM) [Fill]
	EB-7	5.0	11	determined non-plastic			29	Silty Sand (SM) (ML fines)
	EB-9	3.5	11	determined non-plastic			31	Silty Sand (SM) (ML fines)
⊞	EB-12	19.5	20	27	20	7	—	Sandy Silty Clay (CL-ML)
◉	EB-14	18.5	17	34	13	21	59	Sandy Lean Clay (CL)
▲	EB-16	15.0	17	27	13	14	38	Clayey Sand (SC) (CL fines)

Samples prepared in accordance with ASTM D421

CORNERSTONE EARTH GROUP

Plasticity Index Testing Summary

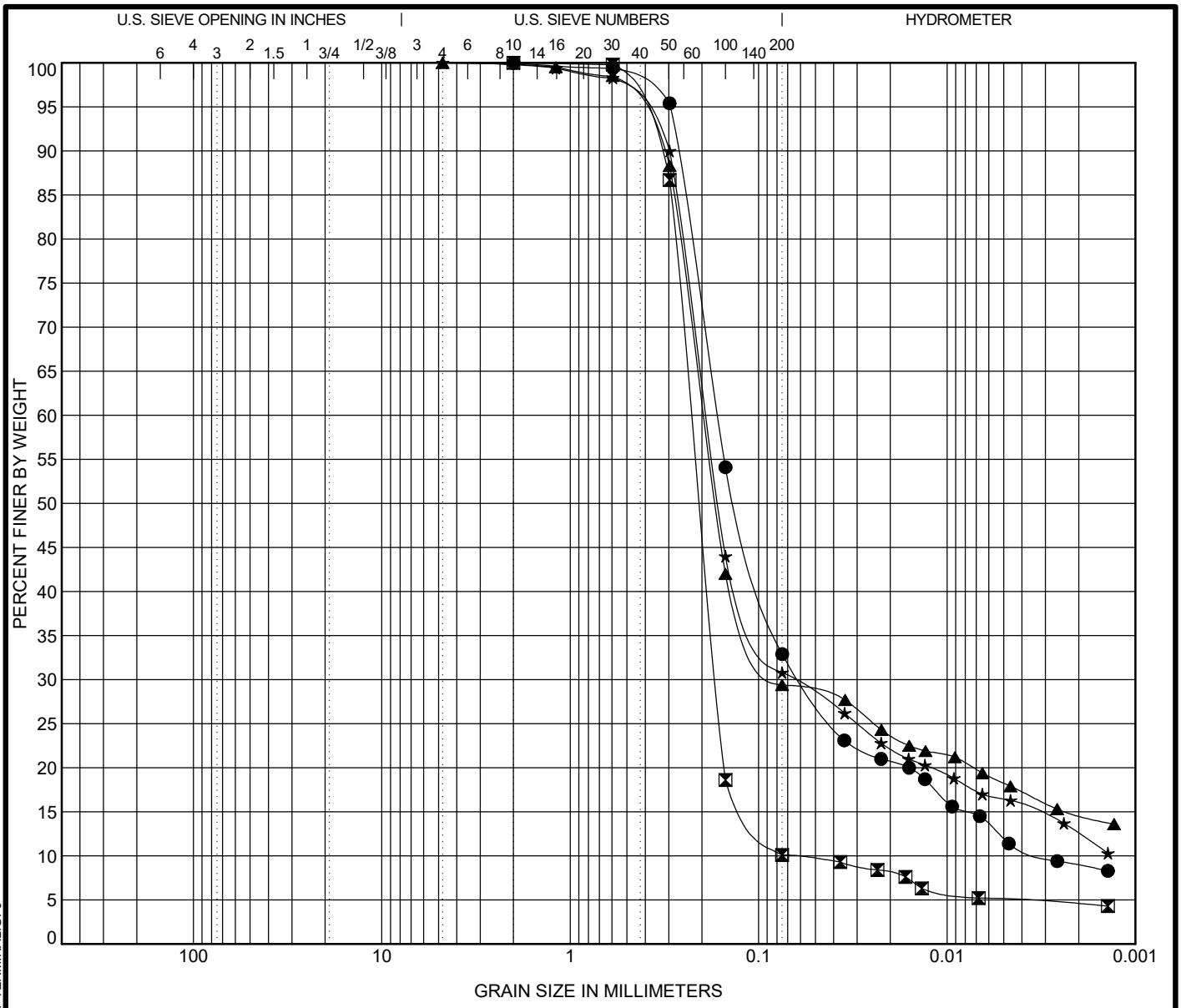
Monterey Peninsula Airport Terminal Building, Apron Area, and North Side Improvements Areas Monterey, CA

Project Number: 234-2-7

Figure Number: Figure B1

Date: January 2017

Drawn By: FLL



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	EB-12	11.5	Silty Sand (SM)				6.99	53.3
⊠	EB-4	0.5	Poorly Graded Sand with Silt (SP-SM)				1.81	3.3
▲	EB-7	5.0	Silty Sand (SM)					
★	EB-9	3.0	Silty Sand (SM)					

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	EB-12	11.5	2	0.165	0.06	0.003	0.0	67.1	32.9	
⊠	EB-4	0.5	2	0.227	0.168	0.069	0.0	89.9	10.1	
▲	EB-7	5.0	4.75	0.196	0.078		0.0	70.6	29.4	
★	EB-9	3.0	4.75	0.19	0.066		0.0	69.2	30.8	

CORNERSTONE EARTH GROUP

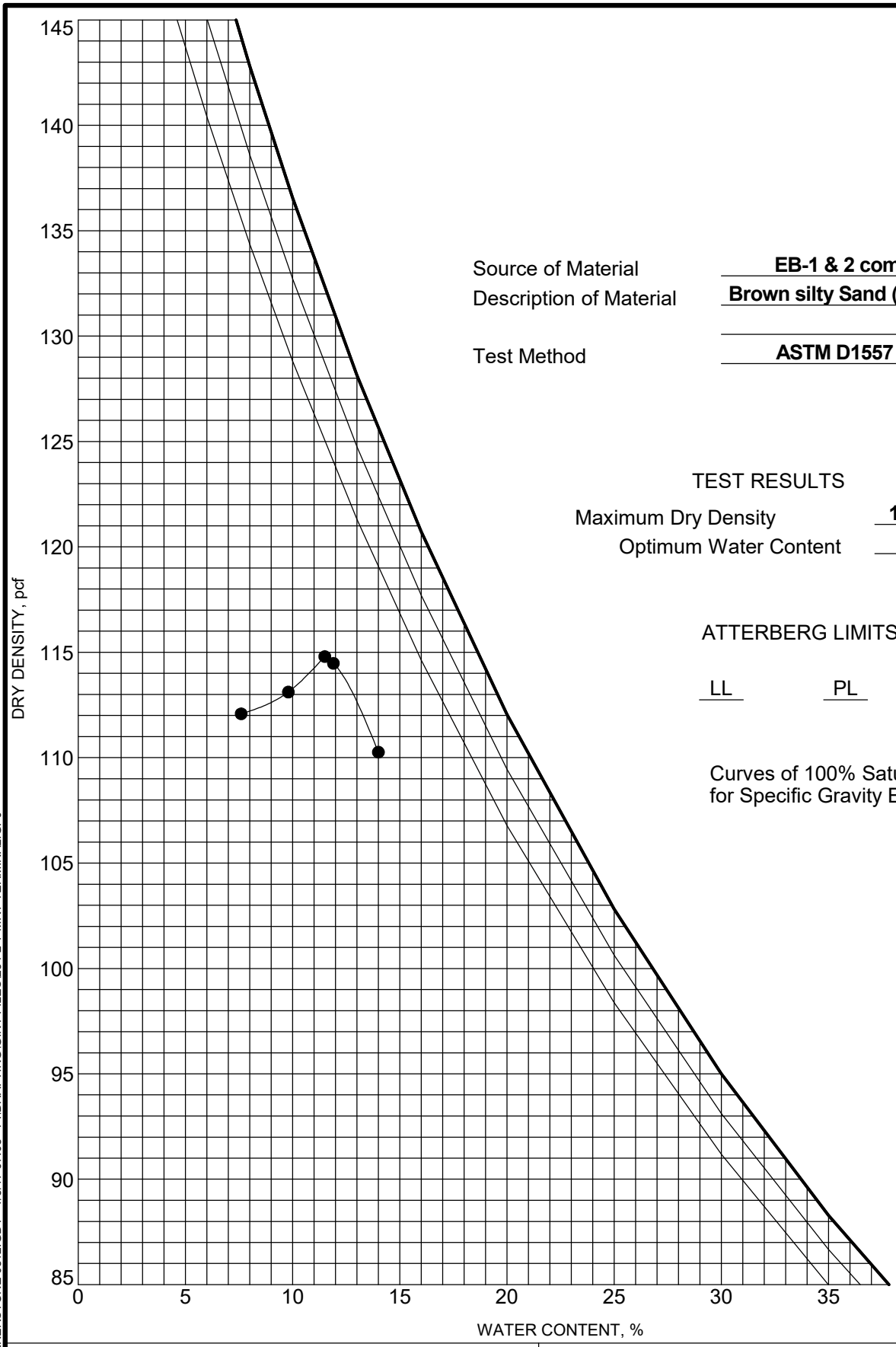
GRAIN SIZE DISTRIBUTION

Project: MRY Terminal, Apron Area and N. Side Improv.

Location: Monterey, CA

Number: 234-2-7

US GRAIN SIZE - CORNERSTONE 0812.GDT - 1/5/17 07:22 - P:\DRAFTING\GINT FILES\234-2-7 MRY TERMINAL.GPJ



Source of Material: **EB-1 & 2 composite 2.5**

Description of Material: **Brown silty Sand (SM)**

Test Method: **ASTM D1557 Method B**

TEST RESULTS

Maximum Dry Density: **114.8 PCF**

Optimum Water Content: **11.5 %**

ATTERBERG LIMITS

LL	PL	PI

Curves of 100% Saturation for Specific Gravity Equal to:

2.80

2.70

2.60

CORNERSTONE EARTH GROUP

MOISTURE-DENSITY RELATIONSHIP

Project: MRY Terminal, Apron Area and N. Side Improv.

Location: Monterey, CA

Number: 234-2-7

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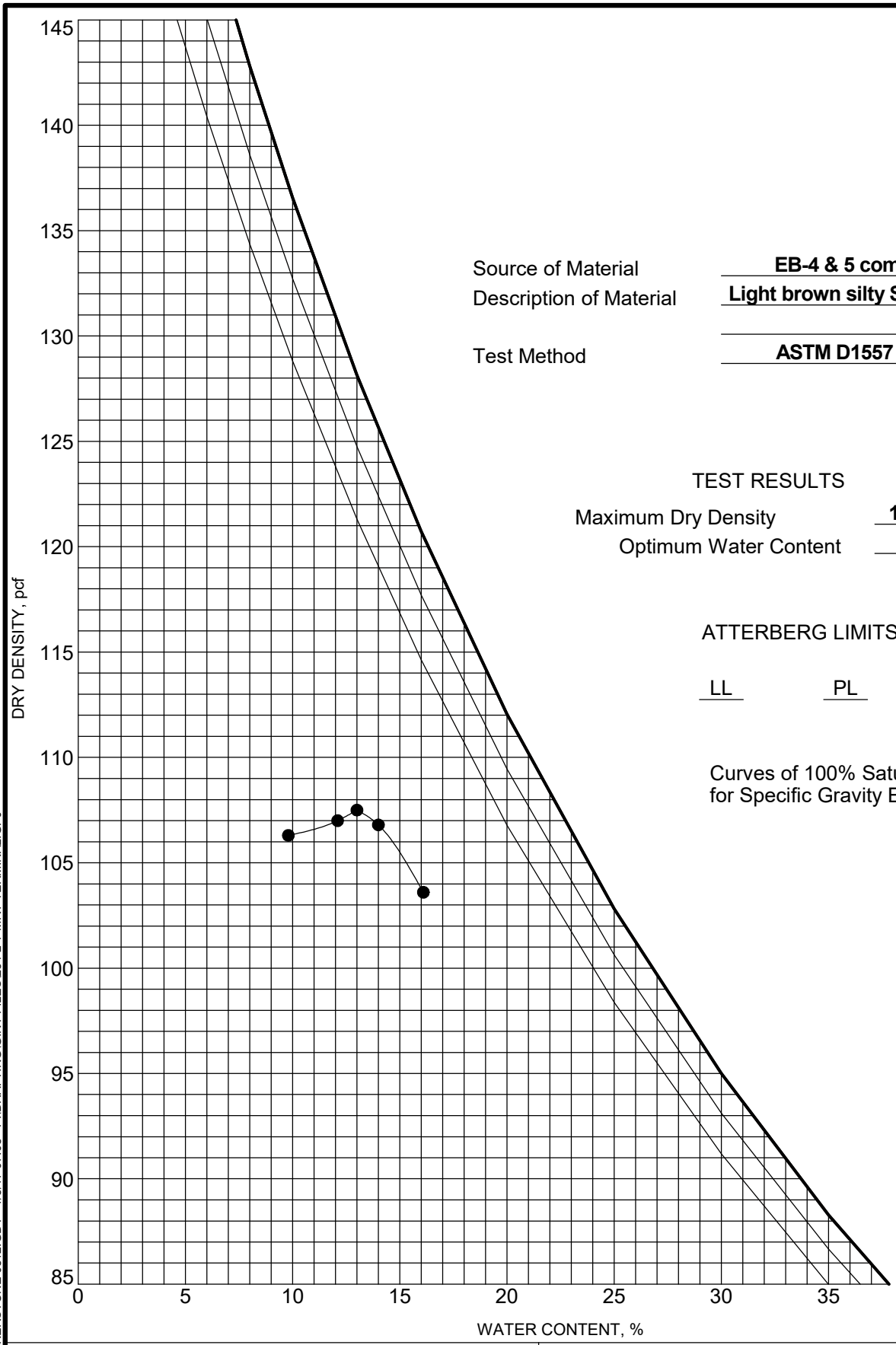


Source of Material: **EB-4 & 5 composite 2.5**

Description of Material: **Light brown silty Sand (SM)**

Test Method: **ASTM D1557 Method B**

TEST RESULTS

Maximum Dry Density: **107.5 PCF**

Optimum Water Content: **13.0 %**

ATTERBERG LIMITS

LL	PL	PI

Curves of 100% Saturation for Specific Gravity Equal to:

2.80

2.70

2.60

CORNERSTONE EARTH GROUP

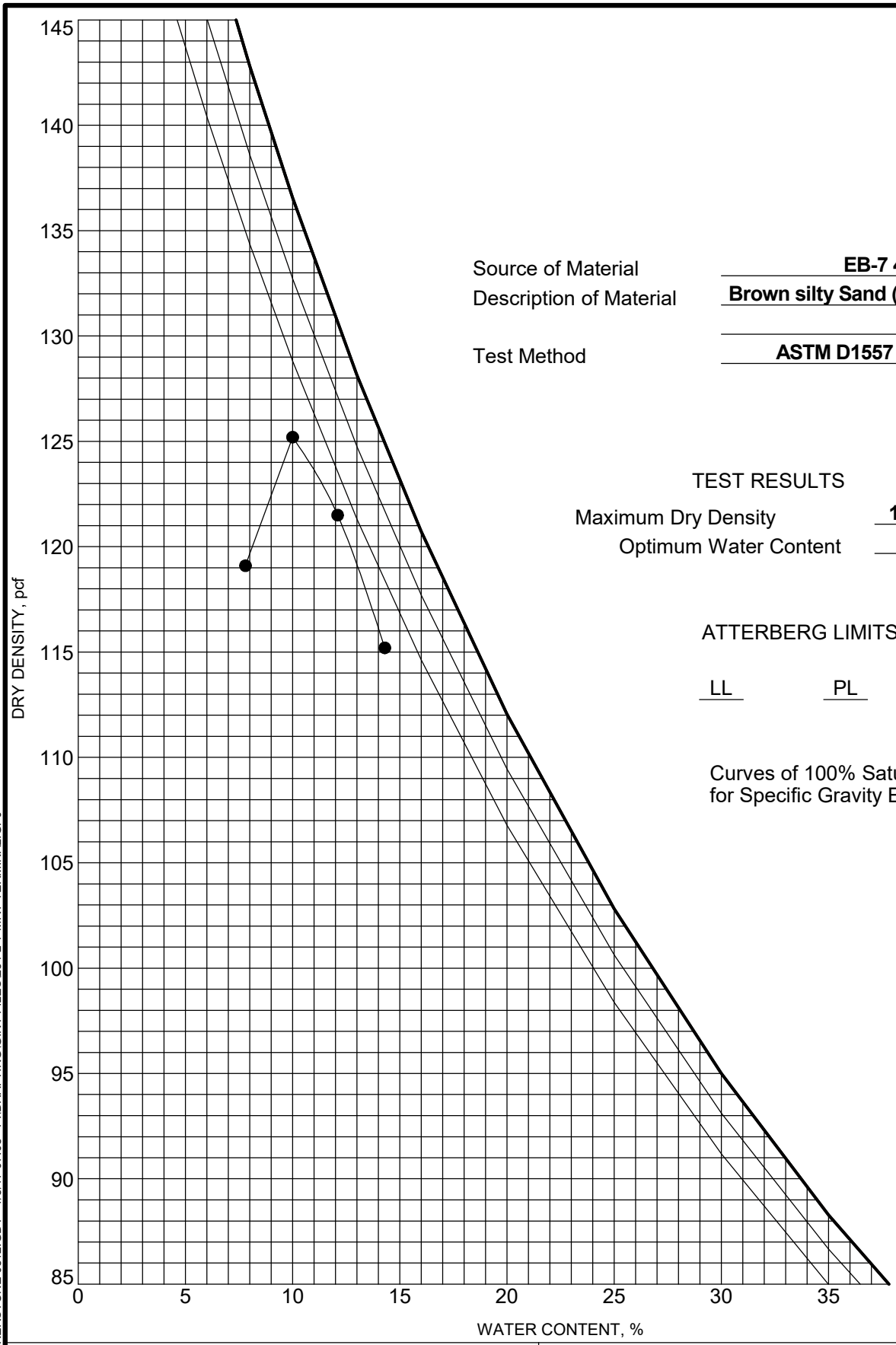
MOISTURE-DENSITY RELATIONSHIP

Project: MRY Terminal, Apron Area and N. Side Improv.

Location: Monterey, CA

Number: 234-2-7

US_COMPACTION - CORNERSTONE 0812.GDT - 1/5/17 07:08 - P:\DRAFTING\GINT FILES\234-2-7 MRY TERMINAL.GPJ



Source of Material: **EB-7 4.5**

Description of Material: **Brown silty Sand (SM)**

Test Method: **ASTM D1557 Method B**

TEST RESULTS

Maximum Dry Density: **125.2 PCF**

Optimum Water Content: **10.0 %**

ATTERBERG LIMITS

LL	PL	PI

Curves of 100% Saturation for Specific Gravity Equal to:

2.80

2.70

2.60

CORNERSTONE EARTH GROUP

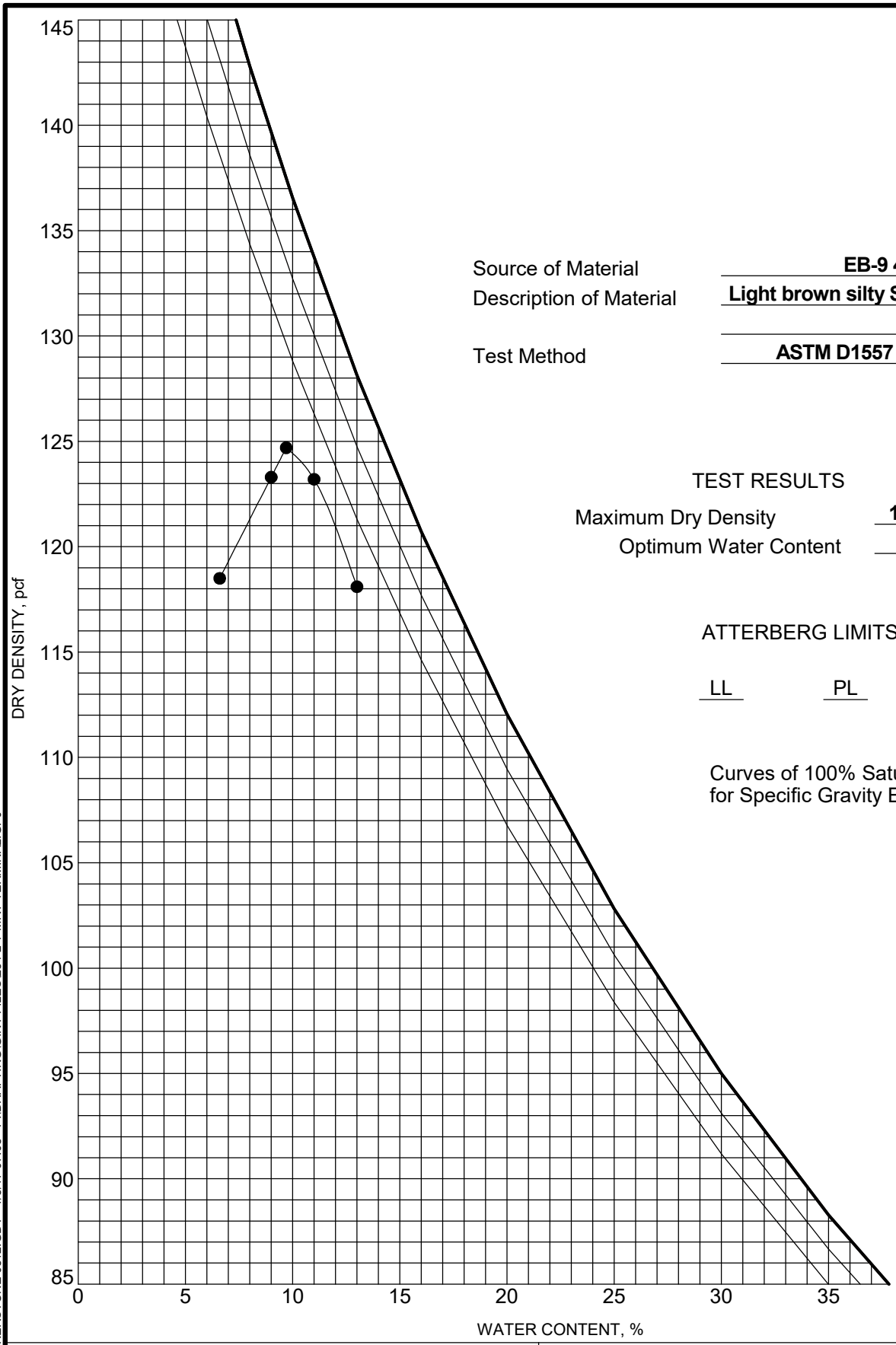
MOISTURE-DENSITY RELATIONSHIP

Project: MRY Terminal, Apron Area and N. Side Improv.

Location: Monterey, CA

Number: 234-2-7

US_COMPACTION - CORNERSTONE 0812.GDT - 1/5/17 07:08 - P:\DRAFTING\GINT FILES\234-2-7 MRY TERMINAL.GPJ



Source of Material: **EB-9 4.0**

Description of Material: **Light brown silty Sand (SM)**

Test Method: **ASTM D1557 Method B**

TEST RESULTS

Maximum Dry Density: **124.7 PCF**

Optimum Water Content: **9.7 %**

ATTERBERG LIMITS

LL PL PI

Curves of 100% Saturation for Specific Gravity Equal to:

2.80

2.70

2.60

CORNERSTONE EARTH GROUP

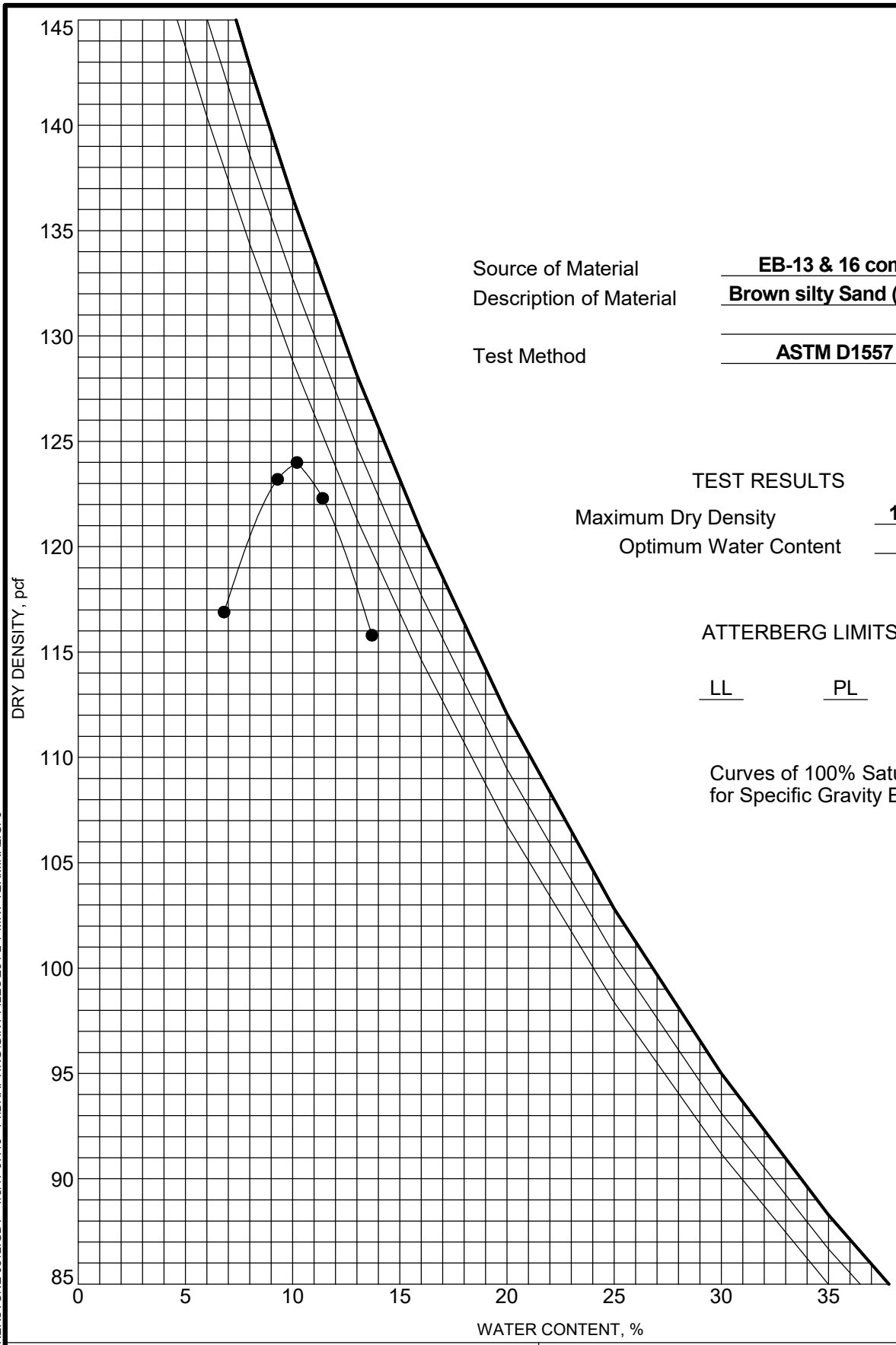
MOISTURE-DENSITY RELATIONSHIP

Project: MRY Terminal, Apron Area and N. Side Improv.

Location: Monterey, CA

Number: 234-2-7

US COMPACTION - CORNERSTONE 0812.GDT - 1/5/17 07:08 - P:\DRAFTING\GINT FILES\234-2-7 MRY TERMINAL.GPJ



Source of Material: **EB-13 & 16 composite 13.0**

Description of Material: **Brown silty Sand (SM)**

Test Method: **ASTM D1557 Method B**

TEST RESULTS

Maximum Dry Density: **124.0 PCF**

Optimum Water Content: **10.2 %**

ATTERBERG LIMITS

LL	PL	PI

Curves of 100% Saturation for Specific Gravity Equal to:

2.80

2.70

2.60

CORNERSTONE EARTH GROUP

MOISTURE-DENSITY RELATIONSHIP

Project: MRY Terminal, Apron Area and N. Side Improv.

Location: Monterey, CA

Number: 234-2-7

US_COMPACTION - CORNERSTONE 0812.GDT - 1/5/17 07:10 - P:\DRAFTING\GINT FILES\234-2-7 MRY TERMINAL.GPJ

California Bearing Ratio ASTM D 1883

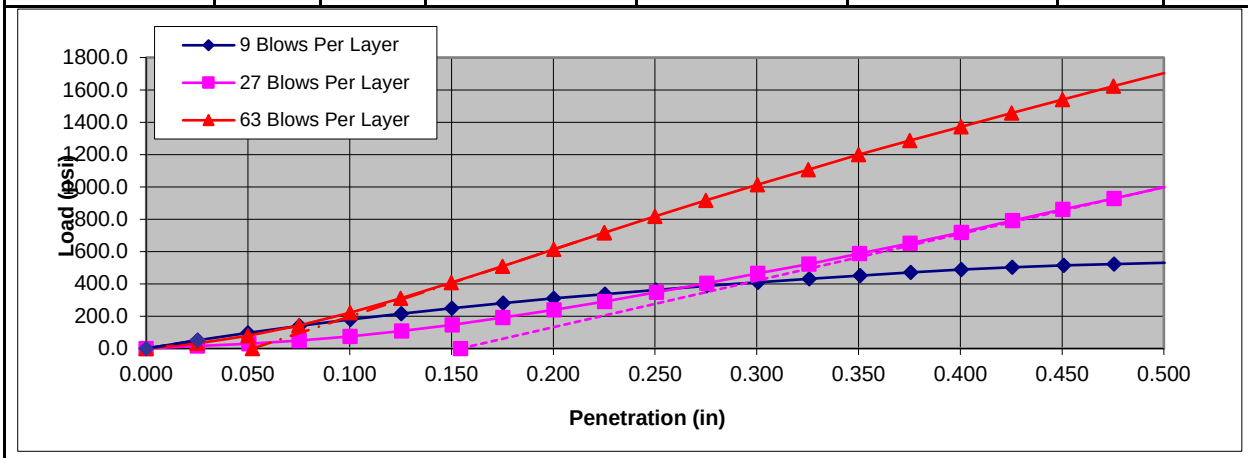
CTL Job No.:	640-1065	**Boring:**	EB-7	**Date:**	12/20/2016
Client:	Cornerstone Earth Group	**Sample:**	Bulk	**Tested :**	PJ
Project Name:	MRY New Terminal and Apron Imp	**Depth (ft.):**	2'-7'	**Checked:**	DC
Project No:	234-2-7				
Visual Description:	Brown Silty SAND (SM)				

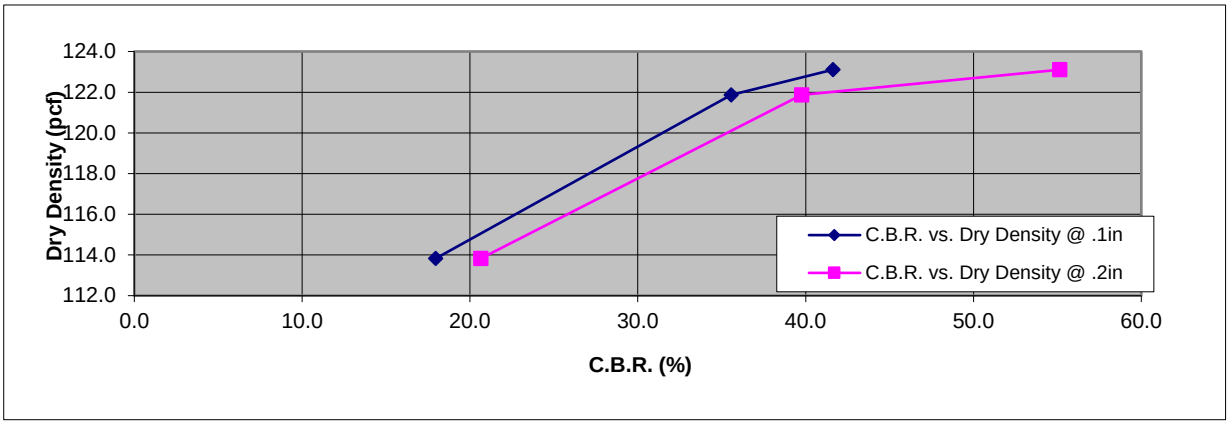
Maximum Dry Density (pcf):	125.2	Optimum Moisture Content (%):	10.0	Rel. Comp. For CBR Evaluation (% of max):	98.3
Maximum Density & Optimum Moisture Obtained By:	ASTM D1557	Sample Condition:	Soaked	Surcharge Weight (kg):	4.54

Percent Retained on 3/4in. Sieve:	0.0	Remarks:	The CBR at 0.2 inches was greater than the CBR at 0.1 inches. The confirmatory test was not run. Due to the material characteristics, the 9 blows per layer point exceeded the minimum target relative compaction of 90%, the CBR was reported at 91.0% relative compaction. Did not exceed the maximum target relative compaction of 100% at 63 blows per layer, CBR reported at 98.3% relative compaction.

Sample Information

Number of Blows per Layer	Dry Density (pcf)		Moisture Content (%)		Expansion (%)	C.B.R. (%)	
	Before Soaking	After Soaking	Before Soaking	After Soaking		@ 0.1in.	@ 0.2in.
9	113.8	113.8	10.9	13.8	0.1	18.0	20.6
27	121.9	121.9	11.1	12.4	0.0	35.6	39.8
63	123.1	122.9	10.7	11.3	0.2	41.6	55.1





C.B.R. at Required In Field Density (%)			
%RC	91	95	98.3
@ 0.1in	18.2	29.1	41.5
@ 0.2in	20.9	32.8	54.7

California Bearing Ratio ASTM D 1883

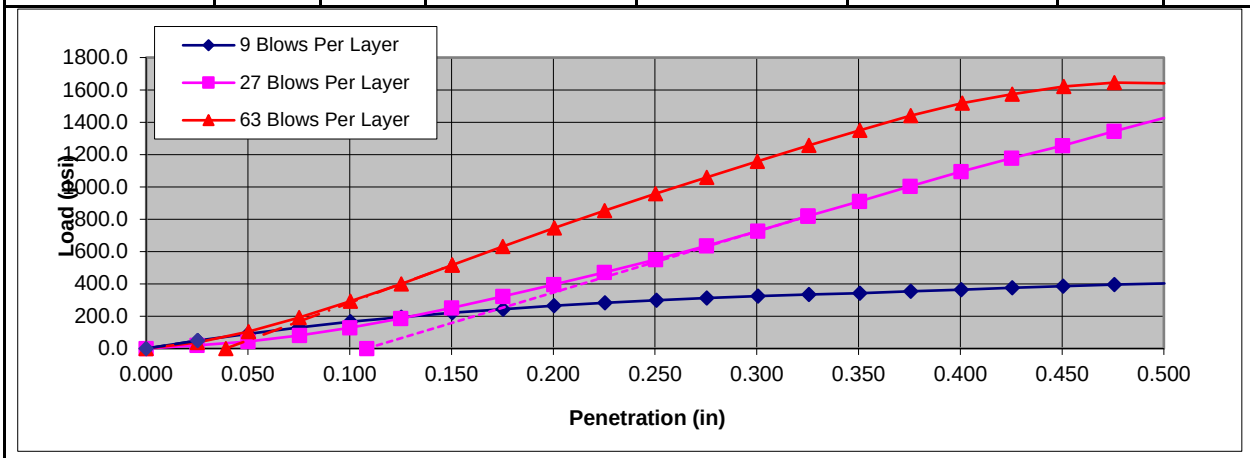
CTL Job No.:	640-1065	**Boring:**	EB-9	**Date:**	12/20/2016
Client:	Cornerstone Earth Group	**Sample:**	Bulk	**Tested :**	PJ
Project Name:	MRY New Terminal and Apron Imp	**Depth (ft.):**	1.5'-6.5'	**Checked:**	DC
Project No:	234-2-7				

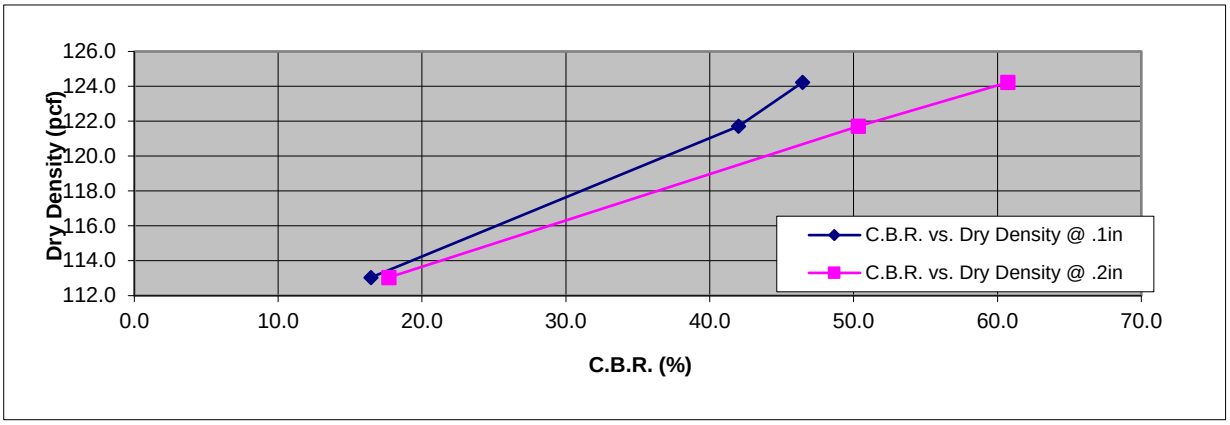
Visual Description: Light Brown Silty SAND (SM)

Maximum Dry Density (pcf):	124.7	Optimum Moisture Content (%):	9.7	Rel. Comp. For CBR Evaluation (% of max):	99.6
Maximum Density & Optimum Moisture Obtained By:	ASTM D1557	Sample Condition:	Soaked	Surcharge Weight (kg):	4.54
Percent Retained on 3/4in. Sieve:	0.0	Remarks:	The CBR at 0.2 inches was greater than the CBR at 0.1 inches. The confirmatory test was not run. Due to the material characteristics, the 9 blows per layer point exceeded the minimum target relative compaction of 90%, the CBR was reported at 90.7% relative compaction. Did not exceed the maximum target relative compaction of 100% at 63 blows per layer, CBR reported at 99.7% relative compaction.		

Sample Information

Number of Blows per Layer	Dry Density (pcf)		Moisture Content (%)		Expansion (%)	C.B.R. (%)	
	Before Soaking	After Soaking	Before Soaking	After Soaking		@ 0.1in.	@ 0.2in.
9	113.0	113.0	10.5	14.5	0.0	16.4	17.7
27	121.7	121.7	10.5	11.9	0.0	42.0	50.3
63	124.2	124.2	10.5	11.3	0.0	46.4	60.7





C.B.R. at Required In Field Density (%)			
%RC	90.7	95	99.6
@ 0.1in	16.6	32.4	46.4
@ 0.2in	17.9	38.1	60.6

APPENDIX C: SITE CORROSION TEST DATA

Corrosivity Tests Summary

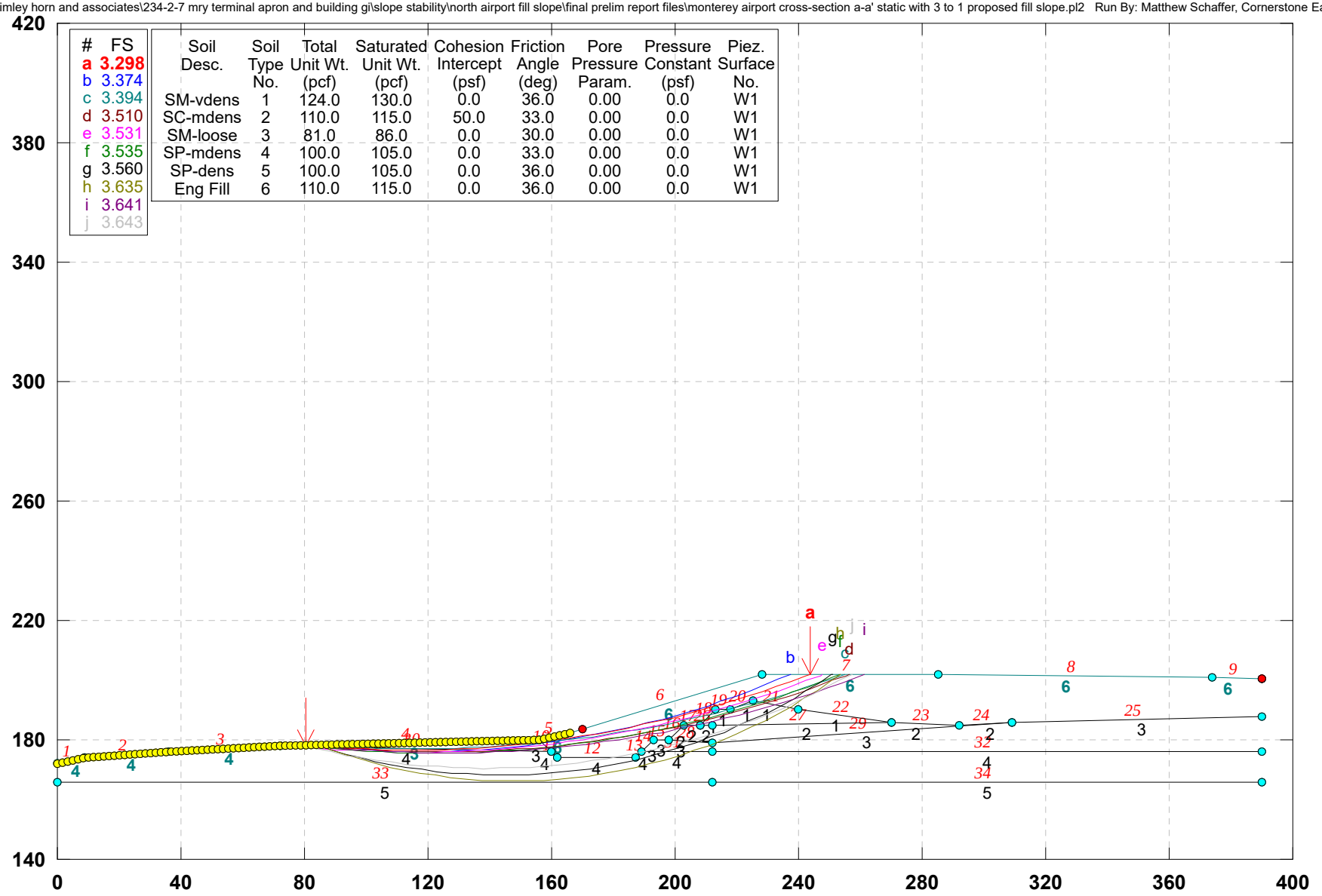
CTL # 640-1068 **Date:** 12/23/2016 **Tested By:** PJ **Checked:** PJ
Client: Cornerstone Earth Group **Project:** MRY Terminal Apron and Bldg **Proj. No:** 234-2-7
Remarks:

Sample Location or ID			Resistivity @ 15.5 °C (Ohm-cm)			Chloride	Sulfate		pH	ORP (Redox)		Sulfide	Moisture	Soil Visual Description
			As Rec.	Min	Sat.	mg/kg	mg/kg	%		E_H (mv)	At Test	Qualitative by Lead	At Test %	
						Dry Wt.	Dry Wt.	Dry Wt.						
Boring	Sample, No.	Depth, ft.	ASTM G57	Cal 643	ASTM G57	ASTM D4327	ASTM D4327	ASTM D4327	ASTM G51	ASTM G200	Temp °C	Acetate Paper	ASTM D2216	
EB-13	6	11.5	-	-	26,138	<2	2	0.0002	6.5	-	-	-	12.0	Olive Brown SAND w/ Silt
EB-14	5	10.0	-	-	21,525	<2	25	0.0025	7.0	-	-	-	6.9	Oale Brown SAND w/ Silt

APPENDIX D: STABILITY ANALYSIS OUTPUT

Monterey Airport Cross-Section A-A' Static

p:\projects\200\234 kimley horn and associates\234-2-7 mry terminal apron and building gi\slope stability\north airport fill slope\final prelim report files\monterey airport cross-section a-a' static with 3 to 1 proposed fill slope.pl2 Run By: Matthew Schaffer, Cornerstone Earth 1/24/2017



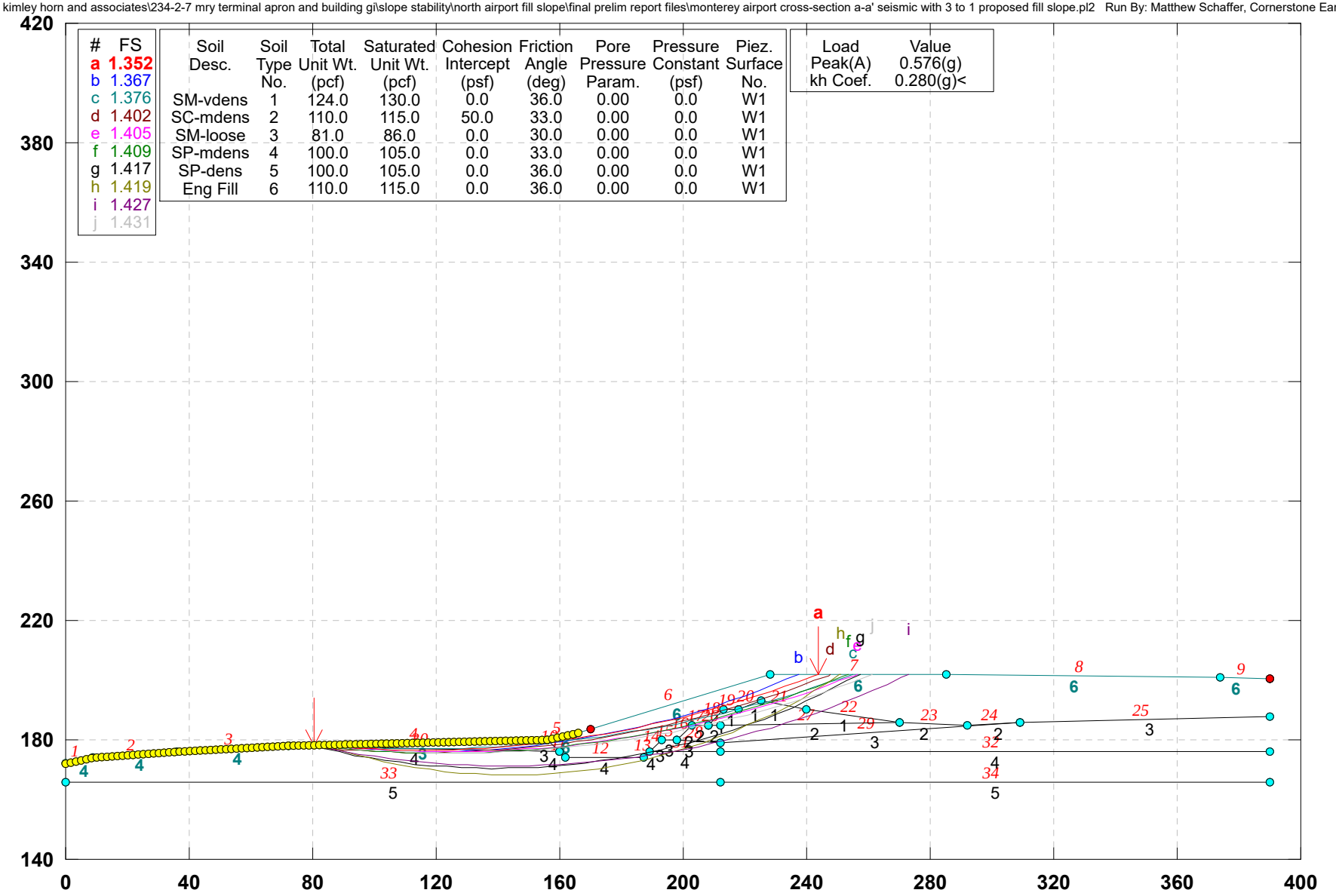
#	FS
a	3.298
b	3.374
c	3.394
d	3.510
e	3.531
f	3.535
g	3.560
h	3.635
i	3.641
j	3.643

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
SM-vdens	1	124.0	130.0	0.0	36.0	0.00	0.0	W1
SC-mdens	2	110.0	115.0	50.0	33.0	0.00	0.0	W1
SM-loose	3	81.0	86.0	0.0	30.0	0.00	0.0	W1
SP-mdens	4	100.0	105.0	0.0	33.0	0.00	0.0	W1
SP-dens	5	100.0	105.0	0.0	36.0	0.00	0.0	W1
Eng Fill	6	110.0	115.0	0.0	36.0	0.00	0.0	W1

GSTABL7 v.2 FSmin=3.298
Safety Factors Are Calculated By The Modified Bishop Method

Monterey Airport Cross-Section A-A' Seismic

p:\projects\200\234 kimley horn and associates\234-2-7 mry terminal apron and building gi\slope stability\north airport fill slope\final prelim report files\monterey airport cross-section a-a' seismic with 3 to 1 proposed fill slope.pl2 Run By: Matthew Schaffer, Cornerstone Earth 1/24/2017 (



#	FS
a	1.352
b	1.367
c	1.376
d	1.402
e	1.405
f	1.409
g	1.417
h	1.419
i	1.427
j	1.431

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
SM-vdens	1	124.0	130.0	0.0	36.0	0.00	0.0	W1
SC-mdens	2	110.0	115.0	50.0	33.0	0.00	0.0	W1
SM-loose	3	81.0	86.0	0.0	30.0	0.00	0.0	W1
SP-mdens	4	100.0	105.0	0.0	33.0	0.00	0.0	W1
SP-dens	5	100.0	105.0	0.0	36.0	0.00	0.0	W1
Eng Fill	6	110.0	115.0	0.0	36.0	0.00	0.0	W1

Load	Value
Peak(A)	0.576(g)
kh Coef.	0.280(g)<

GSTABL7 v.2 FSmin=1.352

Safety Factors Are Calculated By The Modified Bishop Method

Kimley»Horn

TECHNICAL DRAINAGE MEMORANDUM

To:	Coffman Associates, Inc.
From:	Sam McWhorter, P.E. Alexander Lin, E.I.T. Kimley-Horn and Associates, Inc. 401 B Street, Suite 600 San Diego, California 92101
Date:	May 2, 2018
Subject:	Monterey Regional Airport – Proposed Safety Enhancement Project Technical Memorandum, Drainage Study

Summary

This technical drainage memo has been prepared to analyze the existing drainage conditions and provide recommendations for the project area storm drain system at the Monterey Regional Airport. The project area consists of 2 locations: South side for future terminal apron construction and Taxiway A relocation, and North Side for future hangar buildings.

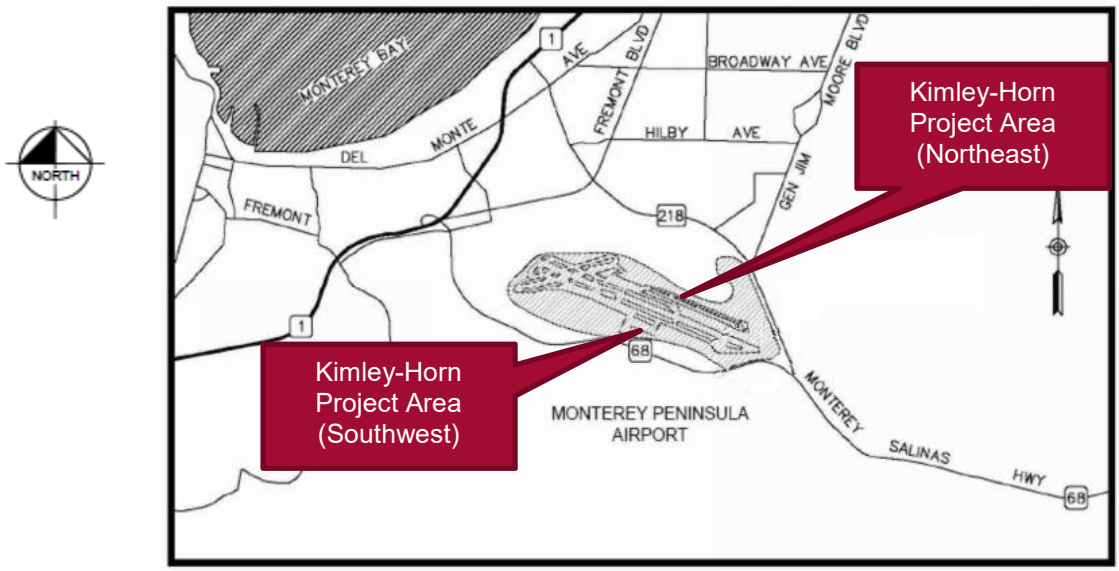
The project area hydrology/storm drain hydraulics were analyzed for the 5-year storm event in accordance with the *Federal Aviation Administration's Advisory Circular 150/5320-5C Surface Drainage Design Manual.* See **Figure 1** and **Figure 2** for the proposed modifications to the existing storm drain systems.

Overview

Project Setting

The airport is a general aviation and commercial aviation facility located north of Monterey Salinas Highway (Highway 68) and just east of Monterey Bay (Figure 1). The airport is owned and operated by the municipalities that make up the Monterey Regional Airport District and consists of two (2) runways, two (2) parallel taxiways plus other associated connector taxiways. The existing drainage system at the Airport consists of pipe culverts under taxiways and runways.

Monterey Regional Airport



Vicinity Map

Topographic information for the project was obtained from site specific survey. The airport generally slopes from south to north draining across the airport runway and taxiways with culverts. The project is located within the Canyon Del Rey-Frontal Monterey Bay Watershed. The airport is located in the "Central Coast" area of Southern California. The average high temperature for Monterey is 64 Degrees Fahrenheit with an average annual rainfall of 21.16 inches (www.usclimatedata.com). Most of the rainfall in the watershed occurs from November through March.

Hydrology Analysis

Storm drains on the airport have been sized for the 5yr-24 hr storm event. See **Table 1** and **Table 2** for Hydrology Calculations.

Hydrology Calculations has been prepared in accordance with the *Federal Aviation Administration's Advisory Circular 150/5320-5C Surface Drainage Design Manual.*

The rainfall intensity is required to calculate the sheet flow travel time. The rainfall intensity (i), for the 5yr-24hr storm was found by using an Intensity-Duration Frequency (IDF) curve developed by the *Caltrans IDF Rainfall Curve Program, v. 2.11 (*2004 Data). The IDF curve equation shown below is relative to the 5 yr-24hr storm event, with the constants relative to the Del Monte Rain Gauge Stations, in close proximity to the project site.

$$I_5 = 0.525t_c^{-0.527}$$

Where: i_{25} = Rainfall Intensity [in/hr] (5yr-24hr Storm)
t_c = Rainfall Duration [hrs]

The results of the Hydrologic Analysis are located in **Appendix A**. The Caltrans IDF curve data used in the hydrology calculations are located in **Appendix B**. Excerpts from the FAA UFC are located in **Appendix C**.

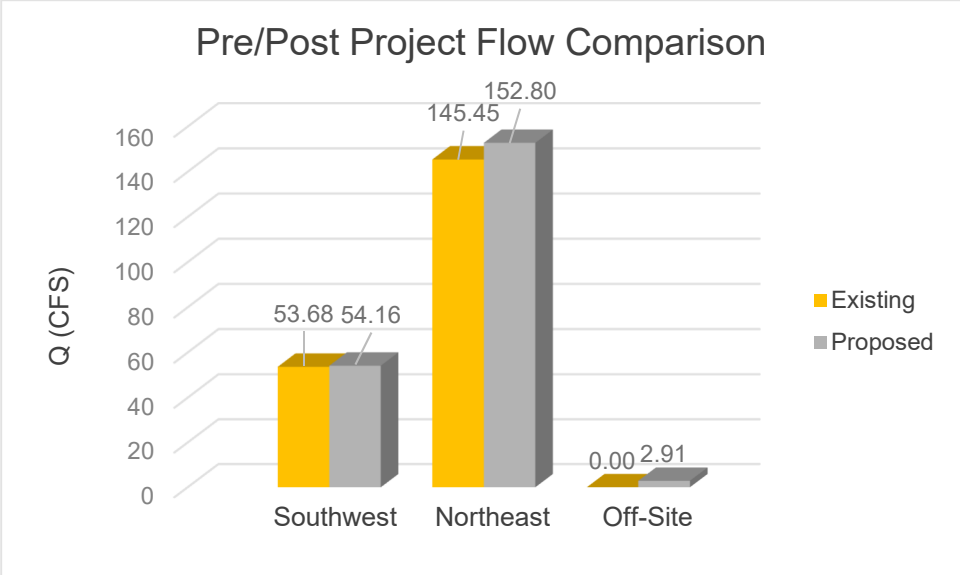
Table 1 – Proposed Hydrology (Southwest)

Drainage Basin	Total Area (acres)	Pervious Area (acres)	Impervious Area (acres)	Weighted Runoff Coefficient*	Tc 5-yr-24hr (minutes)	$Intensity_{5yr}$ (in/hr)	Q_5-yr (cfs)
A	0.78	0	0.78	0.90	5.00	1.945	1.37
B	0.63	0	0.63	0.90	5.00	1.945	1.10
C	0.91	0.05	0.86	0.88	5.00	1.945	1.55
D	0.6	0.00	0.6	0.90	5.00	1.945	1.05
E	0.6	0.00	0.6	0.90	5.00	1.945	1.05
F	1.83	0.00	1.83	0.90	5.84	1.793	2.95
G	1.44	0.00	1.44	0.90	5.00	1.945	2.52
H	2.02	0.00	2.02	0.90	5.54	1.843	3.35
I	1.68	0.25	1.43	0.83	15.66	1.066	1.48
J	1.3	0.00	1.3	0.90	5.06	1.932	2.26
K	5.15	3.61	1.55	0.55	13.82	1.138	3.22
L	6.14	5.83	0.31	0.43	20.89	0.916	2.39
M	3.04	0.00	3.04	0.90	5.00	1.945	5.32
N	2.13	0.00	2.13	0.90	9.79	1.365	2.62
O	2.54	0.00	2.54	0.90	5.38	1.871	4.28
P	14.51	0.00	14.51	0.90	9.97	1.352	17.65

Table 2 – Proposed Hydrology (Northeast)

Drainage Basin	Total Area (acres)	Pervious Area (acres)	Impervious Area (acres)	Weighted Runoff Coefficient*	Tc 5-yr-24hr (minutes)	$Intensity_{5yr}$ (in/hr)	Q_5-yr (cfs)
Q	43.58	0	43.58	0.90	20.92	0.915	35.88
R	18.92	0.1892	18.7308	0.90	16.01	1.053	17.83
S	33.98	23.786	10.19	0.55	25.87	0.818	15.29
T	29.23	14.615	14.615	0.65	27.21	0.796	15.13
U	6.14	4.912	1.228	0.50	36.91	0.678	2.08
V	19.24	13.468	5.772	0.55	19.97	0.937	9.92
W	3.74	2.618	1.122	0.55	21.32	0.906	1.86
X	1.25	0.3125	0.9375	0.78	5.00	1.945	1.88
Y	0.98	0.686	0.29	0.55	17.50	1.005	0.54
Z	3.59	0	3.59	0.90	7.62	1.557	5.03
AA	3.64	3.276	0.36	0.45	12.13	1.219	2.00
AB	1.73	0.4325	1.30	0.78	5.00	1.945	2.61
AC	1.92	0.48	1.44	0.78	5.00	1.945	2.89
AD	2.09	0.5225	1.5675	0.78	5.00	1.945	3.15
AE	2.44	0.61	1.83	0.78	5.00	1.945	3.68
AF	6.19	0.25	5.94	0.88	5.00	1.945	10.59
AG	67.85	64.062	7.118	0.45	38.57	0.663	21.23
AG-2	3.33	2.997	0.333	0.45	5.00	1.945	2.91
AH	6.14	5.53	0.61	0.45	27.24	0.796	2.20

Chart 1 – Pre and Post Project Flow Comparison

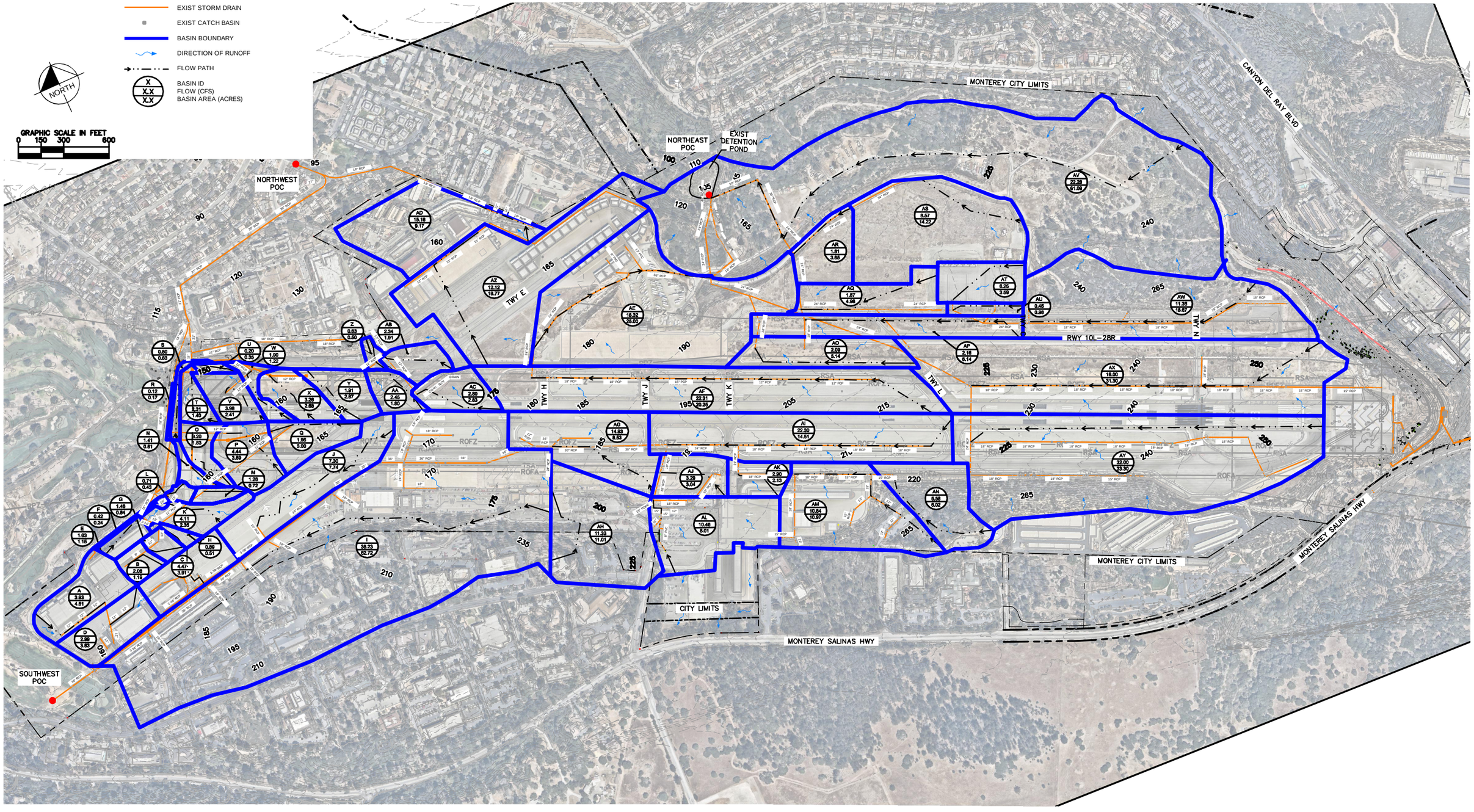


Hydraulic Analysis

Storm drains on the airport were analyzed using the computer program StormCAD. Existing storm drain information including pipe sizes and flowline information was used to prepare a StormCAD hydraulic model. The model was used to verify capacity of the existing storm drain system for the project areas and determine locations where pipe sizes were deficient and did not meet the design storm capacity. These segments of undersized pipe were then upsized in the model to determine the extents of pipe upgrades required to serve the proposed project. Upsized storm drains are depicted on Figures 1 and 2 along with proposed pipe sizes. The StormCAD modeling results are located in **Appendix D**.

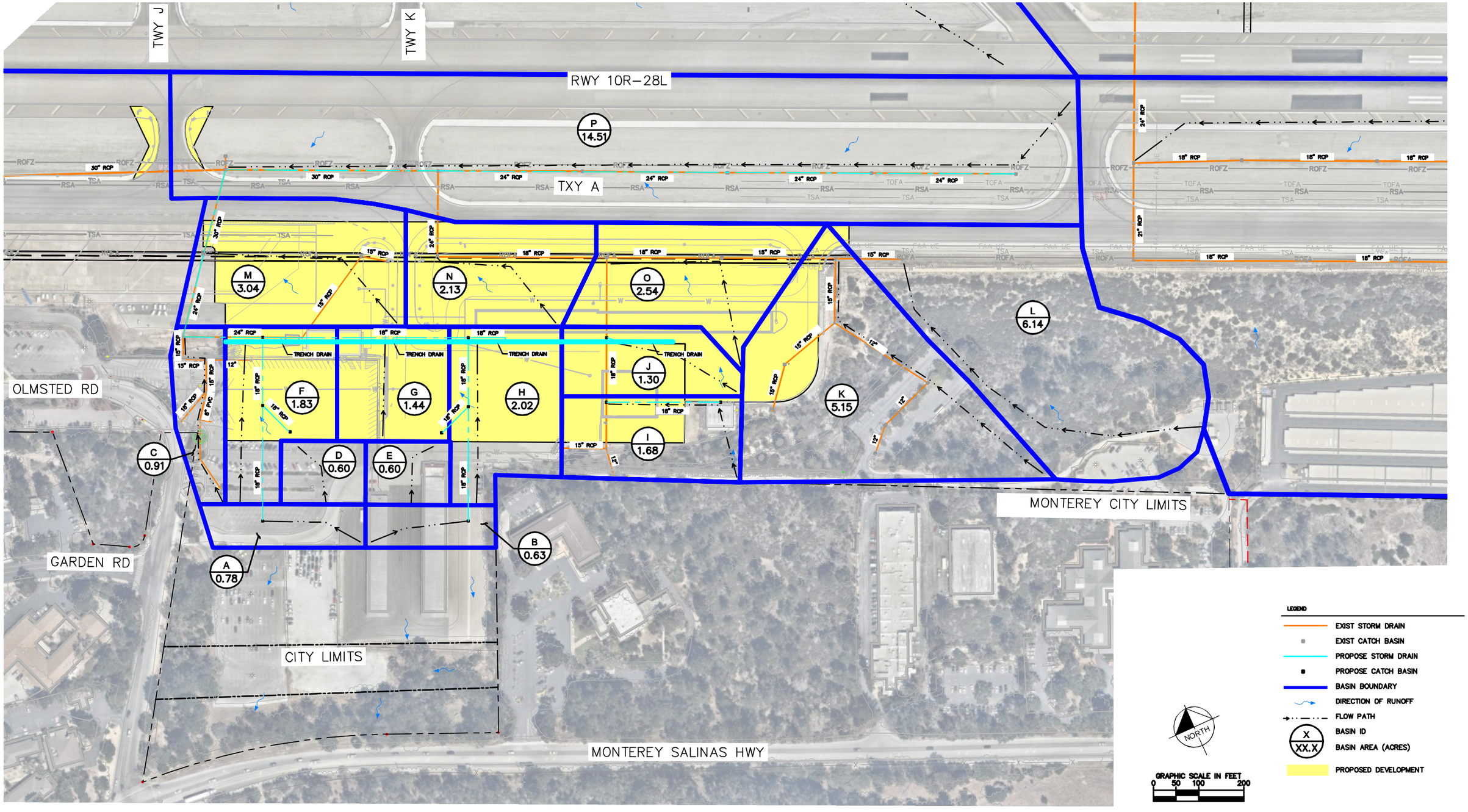
Conclusion

Based on the hydraulic analysis, the airside improvements will create a slight increase in the flow to the southwest point of confluence (POC). However, this increase is slight enough to be considered negligible. New storm drains would have to be installed, as shown in **Figure 1,** and some existing infrastructure would have to be up-sized to handle the re-configuration. Flow to the northeast POC has also increased. The existing detention basin was designed to accommodate future development; thus, no additional improvement will be needed to mitigate the increased flow. New storm drains will be installed to convey runoffs from the new hangar buildings as shown in **Figure 2**. Due to the the existing topography, the northside access rod to the Northside GA will create run-off that drains off-site towards Del Rey Gardens Drive. The connection to Del Rey Gardens is being performed by others, further evaluation will be required for a drainage solution at this POC. The proposed post project runoff generated from this portion of the Northside Access Road can be found in **Chart 1** labeled as Off-Site.



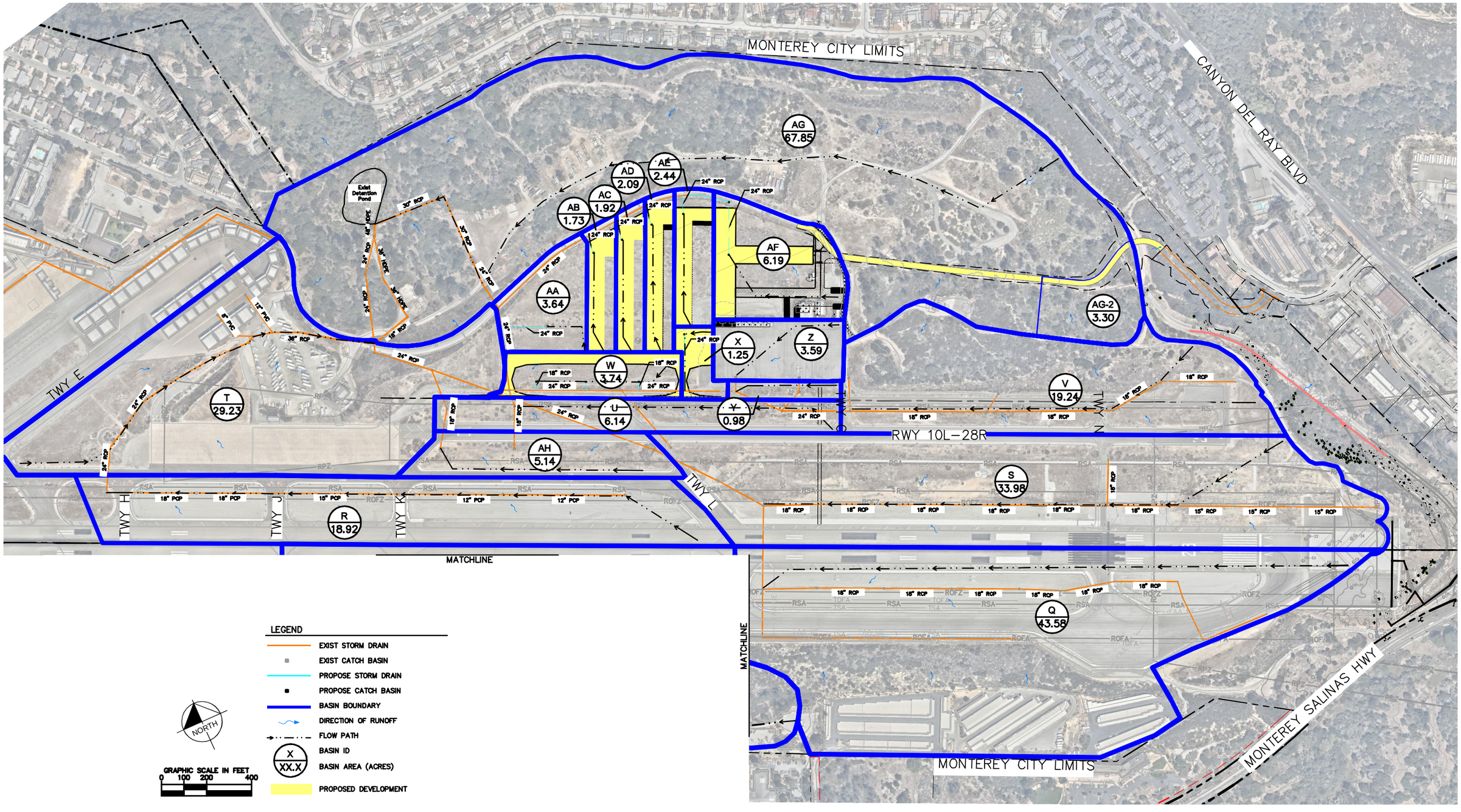
Kimley»Horn

Exhibit 1
EXISTING HYDROLOGY EXHIBIT
Monterey Airport
March 2018



Kimley»Horn

Figure 1
PROPOSED HYDROLOGY EXHIBIT
Monterey Airport (South)
April 2018



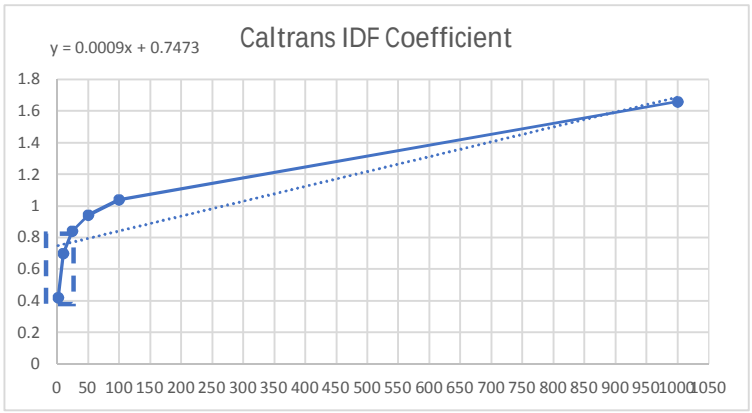
Kimley»Horn

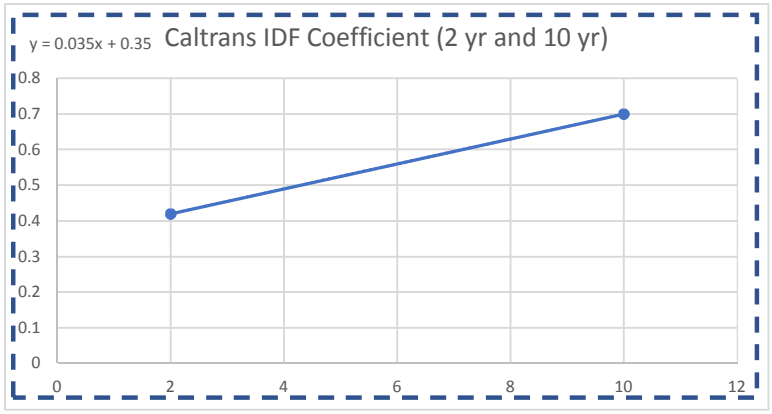
Figure 2
PROPOSED HYDROLOGY EXHIBIT
Monterey Airport (North)
April 2018

APPENDICES

APPENDIX A

HYDROLOGIC ANALYSIS





Return Year	Coefficient
2	0.42
10	0.7
25	0.84
50	0.94
100	1.04
1000	1.66

Return Year	Coefficient
2	0.42
10	0.7

5	0.525

Proposed Hydrology -South Airport Summary Table

Drainage Basin	Total Area (acres)	Pervious Area (acres)	Impervious Area (acres)	Weighted Runoff Coefficent*	Tc 5-yr-24hr (minutes)	Intensity$_{5yr}$ (in/hr)	Q_5-yr (cfs)
A	0.78	0	0.78	0.90	5.00	1.945	1.37
B	0.63	0	0.63	0.90	5.00	1.945	1.10
C	0.91	0.05	0.86	0.88	5.00	1.945	1.55
D	0.6	0.00	0.6	0.90	5.00	1.945	1.05
E	0.6	0.00	0.6	0.90	5.00	1.945	1.05
F	1.83	0.00	1.83	0.90	5.84	1.793	2.95
G	1.44	0.00	1.44	0.90	5.00	1.945	2.52
H	2.02	0.00	2.02	0.90	5.54	1.843	3.35
I	1.68	0.25	1.43	0.83	15.66	1.066	1.48
J	1.3	0.00	1.3	0.90	5.06	1.932	2.26
K	5.15	3.61	1.55	0.55	13.82	1.138	3.22
L	6.14	5.83	0.31	0.43	20.89	0.916	2.39
M	3.04	0.00	3.04	0.90	5.00	1.945	5.32
N	2.13	0.00	2.13	0.90	9.79	1.365	2.62
O	2.54	0.00	2.54	0.90	5.38	1.871	4.28
P	14.51	0.00	14.51	0.90	9.97	1.352	17.65
							54.16 Total

Proposed Hydrology -North Airport Summary Table

Drainage Basin	Total Area (acres)	Pervious Area (acres)	Impervious Area (acres)	Weighted Runoff Coefficent*	Tc 5-yr-24hr (minutes)	$Intensity_{5yr}$ (in/hr)	Q_5-yr (cfs)
Q	43.58	0	43.58	0.90	20.92	0.915	35.88
R	18.92	0.1892	18.7308	0.90	16.01	1.053	17.83
S	33.98	23.786	10.19	0.55	25.87	0.818	15.29
T	29.23	14.615	14.615	0.65	27.21	0.796	15.13
U	6.14	4.912	1.228	0.50	36.91	0.678	2.08
V	19.24	13.468	5.772	0.55	19.97	0.937	9.92
W	3.74	2.618	1.122	0.55	21.32	0.906	1.86
X	1.25	0.3125	0.9375	0.78	5.00	1.945	1.88
Y	0.98	0.686	0.29	0.55	17.50	1.005	0.54
Z	3.59	0	3.59	0.90	7.62	1.557	5.03
AA	3.64	3.276	0.36	0.45	12.13	1.219	2.00
AB	1.73	0.4325	1.30	0.78	5.00	1.945	2.61
AC	1.92	0.48	1.44	0.78	5.00	1.945	2.89
AD	2.09	0.5225	1.5675	0.78	5.00	1.945	3.15
AE	2.44	0.61	1.83	0.78	5.00	1.945	3.68
AF	6.19	0.25	5.94	0.88	5.00	1.945	10.59
AG	67.85	61.065	6.785	0.45	38.57	0.663	20.23
AG-2	3.33	2.997	0.333	0.45	5.00	1.945	2.91*
AH	6.14	5.53	0.61	0.45	27.24	0.796	2.20
						Total:	152.80

*Basin Drains Offsite

Basin A (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration			
	1	2	3	4
Tti (min) [a	5	1.94	3.20	2.46
n	0.013	0.013	0.013	0.013
L (ft)	50	50	50	50
S (ft/ft)	0.012	0.012	0.012	0.012
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	3.20	2.46	2.83
Tti (min) [e	2.1	1.7	1.9	1.8

Tti =	1.8 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.619
S (%)	1.2
V (ft/s) [ec	2.224104
L (ft)	173.6998
Tt (min) [e	1.30

Tti =	3.09 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0
R (ft)	0
s (ft/ft)	0
V (ft/s)	0.00
L (ft)	0
Tt (min)	0.00

Tti =	5.00 min

Basin B (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration			
	1	2	3	4
Tti (min) [a	5	1.94	3.20	2.46
n	0.013	0.013	0.013	0.013
L (ft)	50	50	50	50
S (ft/ft)	0.012	0.012	0.012	0.012
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	3.20	2.46	2.83
Tti (min) [e	2.1	1.7	1.9	1.8

Tti =	1.8 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.619
S (%)	1.2
V (ft/s) [ec	2.224104
L (ft)	168.4276
Tt (min) [e	1.26

Tti =	3.05 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0
R (ft)	0
s (ft/ft)	0.05
V (ft/s)	0.00
L (ft)	80
Tt (min)	0.00

Tti =	5.00 min

Basin C (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration 1	2	3	4
Tti (min) [a	5	1.94	3.20	2.46
n	0.013	0.013	0.013	0.013
L (ft)	30	50	50	50
S (ft/ft)	0.022	0.022	0.022	0.022
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	3.20	2.46	2.83
Tti (min) [e	1.3	1.4	1.6	1.5

Tti = 1.5 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.619
S (%)	1.8
V (ft/s) [ec	2.72396
L (ft)	0
Tt (min) [e	0.00

Tti = 1.49 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.625
R (ft)	0.3125
S (ft/ft)	0.005
V (ft/s)	3.73
L (ft)	389.76
Tt (min)	1.74

Tti = 5.00 min

Basin D (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration 1	2	3	4
Tti (min) [a	5	1.94	3.20	2.46
n	0.013	0.013	0.013	0.013
L (ft)	50	50	50	50
S (ft/ft)	0.01	0.01	0.01	0.01
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	3.20	2.46	2.83
Tti (min) [e	2.2	1.8	2.0	1.9

Tti = 1.9 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.619
S (%)	1.0
V (ft/s) [ec	2.03032
L (ft)	101.4323
Tt (min) [e	0.83

Tti = 2.73 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.5
R (ft)	0.25
s (ft/ft)	0.005
V (ft/s)	3.22
L (ft)	0
Tt (min)	0.00

Tti = 5.00 min

Basin E (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration 1	2	3	4
Tti (min) [a	5	1.94	3.20	2.46
n	0.013	0.013	0.013	0.013
L (ft)	50	50	50	50
S (ft/ft)	0.01	0.01	0.01	0.01
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	3.20	2.46	2.83
Tti (min) [e	2.2	1.8	2.0	1.9

Tti = 1.9 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.619
S (%)	1.0
V (ft/s) [ec	2.03032
L (ft)	101.4324
Tt (min) [e	0.83

Tti = 2.73 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.5
R (ft)	0.25
s (ft/ft)	0.05
V (ft/s)	10.17
L (ft)	0
Tt (min)	0.00

Tti = 5.00 min

Basin F (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration 1	2	3	4
Tti (min) [a	5	1.94	3.20	2.46
n	0.013	0.013	0.013	0.013
L (ft)	50	50	50	50
S (ft/ft)	0.005	0.005	0.005	0.005
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	3.20	2.46	2.83
Tti (min) [e	2.7	2.2	2.5	2.3

Tti = 2.3 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.619
S (%)	0.5
V (ft/s) [ec	1.435653
L (ft)	301.9
Tt (min) [e	3.50

Tti = 5.84 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.5
R (ft)	0.25
s (ft/ft)	0.05
V (ft/s)	10.17
L (ft)	0
Tt (min)	0.00

Tti = 5.84 min

Basin G (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration 1	2	3	4
Tti (min) [a	5	2.71	2.38	2.31
n	0.013	0.013	0.013	0.013
L (ft)	50	50	50	50
S (ft/ft)	0.005	0.005	0.005	0.005
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	2.69	2.88	2.92
Tti (min) [e	2.7	2.4	2.3	2.3

Tti = 2.3 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.619
S (%)	0.5
V (ft/s) [ec	1.435653
L (ft)	156.7797
Tt (min) [e	1.82

Tti = 4.12 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.5
R (ft)	0.25
s (ft/ft)	0.05
V (ft/s)	10.17
L (ft)	0
Tt (min)	0.00

Tti = 5.00 min

Basin H (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration 1	2	3	4
Tti (min) [a	5	2.45	2.11	2.04
n	0.011	0.011	0.011	0.011
L (ft)	50	50	50	50
S (ft/ft)	0.005	0.005	0.005	0.005
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	2.83	3.07	3.12
Tti (min) [e	2.4	2.1	2.0	2.0

Tti = 2.0 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.619
S (%)	0.5
V (ft/s) [ec	1.435653
L (ft)	302.2105
Tt (min) [e	3.51

Tti = 5.54 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.5
R (ft)	0.25
s (ft/ft)	0.05
V (ft/s)	10.17
L (ft)	0
Tt (min)	0.00

Tti = 5.54 min

Basin I (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration 1	2	3	4
Tti (min) [a	5	9.54	10.93	11.24
n	0.15	0.15	0.15	0.15
L (ft)	50	50	50	50
S (ft/ft)	0.01	0.01	0.01	0.01
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	1.38	1.29	1.27
Tti (min) [e	9.5	10.9	11.2	11.3

Tti = 11.3 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.213
S (%)	0.5
V (ft/s) [ec	0.494013
L (ft)	114.572
Tt (min) [e	3.87

Tti = 15.18 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.75
R (ft)	0.375
s (ft/ft)	0.02
V (ft/s)	8.43
L (ft)	243.13
Tt (min)	0.48

Tti = 15.66 min

Basin J (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration 1	2	3	4
Tti (min) [a	5	2.71	2.38	2.31
n	0.013	0.013	0.013	0.013
L (ft)	50	50	50	50
S (ft/ft)	0.005	0.005	0.005	0.005
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	2.69	2.88	2.92
Tti (min) [e	2.7	2.4	2.3	2.3

Tti = 2.3 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.619
S (%)	0.5
V (ft/s) [ec	1.435653
L (ft)	238.0112
Tt (min) [e	2.76

Tti = 5.06 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.5
R (ft)	0.25
s (ft/ft)	0.05
V (ft/s)	10.17
L (ft)	0
Tt (min)	0.00

Tti = 5.06 min

Basin K (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration 1	2	3	4
Tti (min) [a	5	6.86	7.33	7.43
n	0.15	0.15	0.15	0.15
L (ft)	50	50	50	50
S (ft/ft)	0.03	0.03	0.03	0.03
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	1.65	1.59	1.58
Tti (min) [e	6.9	7.3	7.4	7.5

Tti =	7.5 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.213
S (%)	2
V (ft/s) [ec	0.988026
L (ft)	262.088
Tt (min) [e	4.42

Tti =	11.88 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.5
R (ft)	0.25
s (ft/ft)	0.005
V (ft/s)	3.22
L (ft)	374.422
Tt (min)	1.94

Tti =	13.82 min

Basin L (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration 1	2	3	4
Tti (min) [a	5	6.86	7.33	7.43
n	0.15	0.15	0.15	0.15
L (ft)	50	50	50	50
S (ft/ft)	0.03	0.03	0.03	0.03
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	1.65	1.59	1.58
Tti (min) [e	6.9	7.3	7.4	7.5

Tti =	7.5 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.213
S (%)	2
V (ft/s) [ec	0.988026
L (ft)	796.1483
Tt (min) [e	13.43

Tti =	20.89 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.5
R (ft)	0.25
s (ft/ft)	0.005
V (ft/s)	3.22
L (ft)	0
Tt (min)	0.00

Tti =	20.89 min

Basin M (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration 1	2	3	4
Tti (min) [a	5	1.79	1.44	1.37
n	0.013	0.013	0.013	0.013
L (ft)	50	50	50	50
S (ft/ft)	0.02	0.02	0.02	0.02
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	3.35	3.75	3.84
Tti (min) [e	1.8	1.4	1.4	1.4

Tti = 1.4 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.619
S (%)	2
V (ft/s) [ec	2.871306
L (ft)	435.5465
Tt (min) [e	2.53

Tti = 3.89 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.5
R (ft)	0.25
s (ft/ft)	0.05
V (ft/s)	10.17
L (ft)	0
Tt (min)	0.00

Tti = 5.00 min

Basin N (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration 1	2	3	4
Tti (min) [a	5	2.71	2.38	2.31
n	0.013	0.013	0.013	0.013
L (ft)	50	50	50	50
S (ft/ft)	0.005	0.005	0.005	0.005
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	2.69	2.88	2.92
Tti (min) [e	2.7	2.4	2.3	2.3

Tti = 2.3 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.619
S (%)	0.5
V (ft/s) [ec	1.435653
L (ft)	275.8083
Tt (min) [e	3.20

Tti = 5.50 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.5
R (ft)	0.25
s (ft/ft)	0.005
V (ft/s)	3.22
L (ft)	80
Tt (min)	4.29

Tti = 9.79 min

Basin O (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration 1	2	3	4
Tti (min) [a	5	2.71	2.38	2.31
n	0.013	0.013	0.013	0.013
L (ft)	50	50	50	50
S (ft/ft)	0.005	0.005	0.005	0.005
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	2.69	2.88	2.92
Tti (min) [e	2.7	2.4	2.3	2.3

Tti = 2.3 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.619
S (%)	0.5
V (ft/s) [ec	1.435653
L (ft)	183.188
Tt (min) [e	2.13

Tti = 4.43 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.75
R (ft)	0.375
s (ft/ft)	0.005
V (ft/s)	4.21
L (ft)	241.08
Tt (min)	0.95

Tti = 5.38 min

Basin P (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration 1	2	3	4
Tti (min) [a	5	2.71	2.38	2.31
n	0.013	0.013	0.013	0.013
L (ft)	50	50	50	50
S (ft/ft)	0.005	0.005	0.005	0.005
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	2.69	2.88	2.92
Tti (min) [e	2.7	2.4	2.3	2.3

Tti = 2.3 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.619
S (%)	0.5
V (ft/s) [ec	1.435653
L (ft)	33.0348
Tt (min) [e	0.38

Tti = 2.68 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.75
R (ft)	0.375
s (ft/ft)	0.005
V (ft/s)	4.21
L (ft)	1842.96
Tt (min)	7.29

Tti = 9.97 min

Basin Q (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration			
	1	2	3	4
Tti (min) [assumed]	5	2.08	1.73	1.66
n	0.013	0.013	0.013	0.013
L (ft)	50	50	50	50
S (ft/ft)	0.012	0.012	0.012	0.012
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	3.09	3.40	3.47
Tti (min) [equated]	2.1	1.7	1.7	1.7

Tti = 1.7 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.619
S (%)	1.2
V (ft/s) [equated]	2.224104
L (ft)	2571.4
Tt (min) [equated]	19.27

Tti = 20.92 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0
R (ft)	0
s (ft/ft)	0
V (ft/s)	0.00
L (ft)	0
Tt (min)	0.00

Tti = 20.92 min

Basin R (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration			
	1	2	3	4
Tti (min) [a	5	2.08	1.73	1.66
n	0.013	0.013	0.013	0.013
L (ft)	50	50	50	50
S (ft/ft)	0.012	0.012	0.012	0.012
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	3.09	3.40	3.47
Tti (min) [e	2.1	1.7	1.7	1.7

Tti = 1.7 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.619
S (%)	1.2
V (ft/s) [ec	2.224104
L (ft)	321.71
Tt (min) [ec	2.41

Tti = 4.06 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.5
R (ft)	0.25
s (ft/ft)	0.005
V (ft/s)	3.22
L (ft)	2306.79
Tt (min)	11.95

Tti = 16.01 min

Basin S (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration 1	2	3	4
Tti (min) [a	5	7.53	8.21	8.36
n	0.15	0.15	0.15	0.15
L (ft)	50	50	50	50
S (ft/ft)	0.022	0.022	0.022	0.022
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	1.57	1.50	1.48
Tti (min) [e	7.5	8.2	8.4	8.4

Tti = 8.4 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.213
S (%)	2.2
V (ft/s) [ec	1.036251
L (ft)	495.24
Tt (min) [ec	7.97

Tti = 16.35 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.5
R (ft)	0.25
S (ft/ft)	0.005
V (ft/s)	3.22
L (ft)	1835.694
Tt (min)	9.51

Tti = 25.87 min

Basin T (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration 1	2	3	4
Tti (min) [a	5	9.54	10.93	11.24
n	0.15	0.15	0.15	0.15
L (ft)	50	50	50	50
S (ft/ft)	0.01	0.01	0.01	0.01
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	1.38	1.29	1.27
Tti (min) [e	9.5	10.9	11.2	11.3

Tti = 11.3 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.213
S (%)	1.0
V (ft/s) [ec	0.69864
L (ft)	369.0765
Tt (min) [ec	8.80

Tti = 20.12 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.5
R (ft)	0.25
s (ft/ft)	0.005
V (ft/s)	3.22
L (ft)	1368.849
Tt (min)	7.09

Tti = 27.21 min

Basin U (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration			
	1	2	3	4
Tti (min) [a	5	8.44	9.43	9.65
n	0.15	0.15	0.15	0.15
L (ft)	50	50	50	50
S (ft/ft)	0.015	0.015	0.015	0.015
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	1.48	1.39	1.38
Tti (min) [e	8.4	9.4	9.7	9.7

Tti =	9.7 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.213
S (%)	1.5
V (ft/s) [ec	0.855656
L (ft)	1397.021
Tt (min) [ec	27.21

Tti =	36.91 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.5
R (ft)	0.25
s (ft/ft)	0.005
V (ft/s)	3.22
L (ft)	0
Tt (min)	0.00

Tti =	36.91 min

Basin V (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration			
	1	2	3	4
Tti (min) [a	5	8.44	9.43	9.65
n	0.15	0.15	0.15	0.15
L (ft)	50	50	50	50
S (ft/ft)	0.015	0.015	0.015	0.015
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	1.48	1.39	1.38
Tti (min) [e	8.4	9.4	9.7	9.7

Tti =	9.7 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.213
S (%)	1.5
V (ft/s) [ec	0.855656
L (ft)	153.27
Tt (min) [ec	2.99

Tti =	12.68 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.5
R (ft)	0.25
s (ft/ft)	0.005
V (ft/s)	3.22
L (ft)	1406.641
Tt (min)	7.29

Tti =	19.97 min

Basin W (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration			
	1	2	3	4
Tti (min) [a	5	8.44	9.43	9.65
n	0.15	0.15	0.15	0.15
L (ft)	50	50	50	50
S (ft/ft)	0.015	0.015	0.015	0.015
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	1.48	1.39	1.38
Tti (min) [e	8.4	9.4	9.7	9.7

Tti = 9.7 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.213
S (%)	1.5
V (ft/s) [ec	0.855656
L (ft)	596.82
Tt (min) [ec	11.63

Tti = 21.32 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.5
R (ft)	0.25
s (ft/ft)	0.05
V (ft/s)	10.17
L (ft)	0
Tt (min)	0.00

Tti = 21.32 min

Basin X (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration			
	1	2	3	4
Tti (min) [a	5	2.45	2.11	2.04
n	0.011	0.011	0.011	0.011
L (ft)	50	50	50	50
S (ft/ft)	0.005	0.005	0.005	0.005
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	2.83	3.07	3.12
Tti (min) [e	2.4	2.1	2.0	2.0

Tti = 2.0 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.619
S (%)	0.5
V (ft/s) [ec	1.435653
L (ft)	64.2201
Tt (min) [ec	0.75

Tti = 2.77 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.5
R (ft)	0.25
s (ft/ft)	0.005
V (ft/s)	3.22
L (ft)	249.7159
Tt (min)	1.29

Tti = 5.00 min

Basin Y (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration			
	1	2	3	4
Tti (min) [a	5	8.44	9.43	9.65
n	0.15	0.15	0.15	0.15
L (ft)	50	50	50	50
S (ft/ft)	0.015	0.015	0.015	0.015
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	1.48	1.39	1.38
Tti (min) [e	8.4	9.4	9.7	9.7

Tti =	9.7 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.213
S (%)	1.5
V (ft/s) [ec	0.855656
L (ft)	400.6462
Tt (min) [ec	7.80

Tti =	17.50 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.75
R (ft)	0.375
s (ft/ft)	0.02
V (ft/s)	8.43
L (ft)	0.00
Tt (min)	0.00

Tti =	17.50 min

Basin Z (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration			
	1	2	3	4
Tti (min) [a	5	2.45	2.11	2.04
n	0.011	0.011	0.011	0.011
L (ft)	50	50	50	50
S (ft/ft)	0.005	0.005	0.005	0.005
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	2.83	3.07	3.12
Tti (min) [e	2.4	2.1	2.0	2.0

Tti = 2.0 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.619
S (%)	0.5
V (ft/s) [ec	1.435653
L (ft)	481.9302
Tt (min) [ec	5.59

Tti = 7.62 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.5
R (ft)	0.25
s (ft/ft)	0.05
V (ft/s)	10.17
L (ft)	0
Tt (min)	0.00

Tti = 7.62 min

Basin AA (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration			
	1	2	3	4
Tti (min) [a	5	7.75	8.49	8.66
n	0.15	0.15	0.15	0.15
L (ft)	50	50	50	50
S (ft/ft)	0.02	0.02	0.02	0.02
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	1.54	1.47	1.46
Tti (min) [e	7.7	8.5	8.7	8.7

Tti = 8.7 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.213
S (%)	2
V (ft/s) [ec	0.988026
L (ft)	203.3843
Tt (min) [ec	3.43

Tti = 12.13 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.5
R (ft)	0.25
s (ft/ft)	0.005
V (ft/s)	3.22
L (ft)	0
Tt (min)	0.00

Tti = 12.13 min

Basin AB (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration			
	1	2	3	4
Tti (min) [a	5	1.95	1.60	1.53
n	0.013	0.013	0.013	0.013
L (ft)	50	50	50	50
S (ft/ft)	0.015	0.015	0.015	0.015
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	3.20	3.55	3.63
Tti (min) [e	1.9	1.6	1.5	1.5

Tti =	1.5 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.619
S (%)	1.5
V (ft/s) [ec	2.486624
L (ft)	395.0046
Tt (min) [ec	2.65

Tti =	4.16 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.5
R (ft)	0.25
s (ft/ft)	0.005
V (ft/s)	3.22
L (ft)	0
Tt (min)	0.00

Tti =	5.00 min

Basin AC (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration			
	1	2	3	4
Tti (min) [a	5	1.95	1.60	1.53
n	0.013	0.013	0.013	0.013
L (ft)	50	50	50	50
S (ft/ft)	0.015	0.015	0.015	0.015
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	3.20	3.55	3.63
Tti (min) [e	1.9	1.6	1.5	1.5

Tti =	1.5 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.619
S (%)	1.5
V (ft/s) [ec	2.486624
L (ft)	448.3525
Tt (min) [ec	3.01

Tti =	4.52 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.5
R (ft)	0.25
s (ft/ft)	0.05
V (ft/s)	10.17
L (ft)	0
Tt (min)	0.00

Tti =	5.00 min

Basin AD (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration			
	1	2	3	4
Tti (min) [a	5	1.95	1.60	1.53
n	0.013	0.013	0.013	0.013
L (ft)	50	50	50	50
S (ft/ft)	0.015	0.015	0.015	0.015
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	3.20	3.55	3.63
Tti (min) [e	1.9	1.6	1.5	1.5

Tti =	1.5 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.619
S (%)	1.5
V (ft/s) [ec	2.486624
L (ft)	509.9771
Tt (min) [ec	3.42

Tti =	4.93 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.5
R (ft)	0.25
s (ft/ft)	0.005
V (ft/s)	3.22
L (ft)	0
Tt (min)	0.00

Tti =	5.00 min

Basin AE (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration			
	1	2	3	4
Tti (min) [a	5	1.95	1.60	1.53
n	0.013	0.013	0.013	0.013
L (ft)	50	50	50	50
S (ft/ft)	0.015	0.015	0.015	0.015
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	3.20	3.55	3.63
Tti (min) [e	1.9	1.6	1.5	1.5

Tti =	1.5 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.619
S (%)	1.5
V (ft/s) [ec	2.486624
L (ft)	449.9551
Tt (min) [e	3.02

Tti =	4.53 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.75
R (ft)	0.375
s (ft/ft)	0.005
V (ft/s)	4.21
L (ft)	0.00
Tt (min)	0.00

Tti =	5.00 min

Basin AF (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration			
	1	2	3	4
Tti (min) [a	5	1.76	1.41	1.35
n	0.011	0.011	0.011	0.011
L (ft)	50	50	50	50
S (ft/ft)	0.015	0.015	0.015	0.015
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	3.37	3.79	3.88
Tti (min) [e	1.8	1.4	1.3	1.3

Tti =	1.3 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.619
S (%)	1.5
V (ft/s) [ec	2.486624
L (ft)	530.7147
Tt (min) [ec	3.56

Tti =	4.89 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.75
R (ft)	0.375
s (ft/ft)	0.005
V (ft/s)	4.21
L (ft)	0.00
Tt (min)	0.00

Tti =	5.00 min

Basin AG (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration			
	1	2	3	4
Tti (min) [a	5	2.71	1.83	1.68
n	0.013	0.013	0.013	0.013
L (ft)	50	50	50	50
S (ft/ft)	0.005	0.012	0.012	0.012
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	2.69	3.30	3.45
Tti (min) [e	2.7	1.8	1.7	1.7

Tti =	1.7 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.619
S (%)	0.5
V (ft/s) [ec	1.435653
L (ft)	2846.75
Tt (min) [ec	33.05

Tti =	34.70 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.5
R (ft)	0.25
s (ft/ft)	0.005
V (ft/s)	3.22
L (ft)	745.89
Tt (min)	3.87

Tti =	38.57 min

Basin AH (5 year)

Sheet Flow Travel Time

Tti = Kc/I^0.4 (nL/sqrt(S))^0.6

	Iteration			
	1	2	3	4
Tti (min) [a	5	8.44	9.43	9.65
n	0.15	0.15	0.15	0.15
L (ft)	50	50	50	50
S (ft/ft)	0.015	0.015	0.015	0.015
Kc	0.933	0.933	0.933	0.933
I (in/hr)	1.94	1.48	1.39	1.38
Tti (min) [e	8.4	9.4	9.7	9.7

Tti =	9.7 min

Shallow Concentrated

V=(3.28)kS^1/2

k	0.213
S (%)	1.5
V (ft/s) [ec	0.855656
L (ft)	900.595
Tt (min) [ec	17.54

Tti =	27.24 min

Open Channel and Pipe Flow Velocity

V=(1.49/n)*(R^(2/3))*(S^1/2) Tt=L/60V

n	0.013
r (ft)	0.75
R (ft)	0.375
s (ft/ft)	0.005
V (ft/s)	4.21
L (ft)	0.00
Tt (min)	0.00

Tti =	27.24 min

APPENDIX B

CALTRANS IDF CURVE

245	MORGAN HILL 6 WSW	640	37.094	121.742	SCL	0.59	0.99	1.18	1.32	1.46	2.30	-0.378	D105846 00	1945	1975
246	MORGAN HILL BOSSANA	770	37.150	121.783	SCL	0.56	0.94	1.12	1.26	1.39	2.19	-0.250	D105847 00	1945	1970
247	MORGAN HILL	320	37.178	121.575	SCL	0.46	0.78	0.94	1.05	1.16	1.83	-0.398	D105853 00	1946	1998
248	MOUNT MADONNA	1800	37.017	121.717	SCR	0.69	1.15	1.38	1.54	1.70	2.69	-0.354	D105973 00	1945	1985
249	PEABODY RANCH	472	37.046	121.509	SCL	0.43	0.73	0.88	0.99	1.10	1.77	-0.545	D106770 00	1972	1992
250	SAN BENITO	1355	36.508	121.082	SBT	0.35	0.59	0.70	0.79	0.87	1.38	-0.461	D107719 00	1940	1998
251	SAN FELIPE HIGHWAY S	365	37.017	121.333	SCL	0.43	0.72	0.86	0.97	1.06	1.68	-0.403	D107755 00	1944	1974
252	SAN JUAN BAUTIST 3SS	615	36.817	121.517	SBT	0.42	0.70	0.84	0.95	1.04	1.66	-0.461	D107834 00	1944	1987
253	SUNSET BEACH STATE P	85	36.900	121.833	SCR	0.48	0.80	0.96	1.08	1.19	1.89	-0.455	D108680 00	1940	1998
254	UPPER TRES PINOS	2050	36.633	121.033	SBT	0.36	0.56	0.64	0.70	0.75	1.04	-0.395	D109189 00	1940	1976
255	UVAS DAM	412	37.067	121.700	SCL	0.57	0.97	1.16	1.30	1.44	2.28	-0.398	D109196 00	1975	1981
256	UVIS RESERVOIR	489	37.066	121.688	SCL	0.56	0.95	1.14	1.29	1.42	2.29	-0.349	D109196 80	1975	1992
257	ARROYO SECO	800	36.233	121.483	MON	0.47	0.79	0.95	1.07	1.18	1.86	-0.295	D200322 00	1940	1998
258	CASTROVILLE TREATMNT	13	36.767	121.767	MON	0.43	0.71	0.85	0.95	1.05	1.66	-0.449	D201586 25	1971	1981
259	DEL MONTE	46	36.600	121.867	MON	0.42	0.70	0.84	0.94	1.04	1.64	-0.527	D202362 00	1940	1986
260	GONZALES 9 ENE	2350	36.550	121.300	SBT	0.34	0.57	0.68	0.76	0.84	1.33	-0.495	D203502 00	1944	1976
261	KING CITY	320	36.200	121.133	MON	0.37	0.63	0.75	0.84	0.93	1.48	-0.395	D204555 00	1940	1998
262	LAURELES GRADE	1350	36.550	121.750	MON	0.40	0.67	0.80	0.90	0.99	1.56	-0.565	D204836 50	1971	1981
263	MT TORO	2370	36.550	121.633	MON	0.41	0.68	0.82	0.91	1.01	1.59	-0.407	D205998 80	1971	1981
264	PRUNEDALE ECHO VALLE	525	36.833	121.667	MON	0.44	0.74	0.89	0.99	1.09	1.73	-0.494	D207156 50	1971	1981
265	SALINAS COUNTRY CLUB	160	36.750	121.633	MON	0.44	0.73	0.87	0.97	1.07	1.69	-0.469	D207669 30	1971	1981
266	SLACK CANYON	1730	36.083	120.667	MON	0.41	0.69	0.83	0.93	1.02	1.62	-0.437	D208276 00	1944	1989
267	SOLEDAD	204	36.433	121.317	MON	0.36	0.59	0.71	0.79	0.88	1.38	-0.577	D208338 00	1976	1982
268	AIRFIELD HLMR	1040	36.000	121.317	MON	0.55	0.92	1.10	1.23	1.36	2.15	-0.484	D300050 50	1964	1973
269	BRYSON	925	35.800	121.083	MON	0.60	1.02	1.22	1.37	1.51	2.39	-0.404	D301142 00	1946	1998
270	LOCKWOOD 2 N	1104	35.967	121.083	MON	0.39	0.65	0.77	0.86	0.95	1.50	-0.485	D305017 00	1940	1978
271	VALLETON	950	35.883	120.700	MON	0.37	0.62	0.74	0.83	0.92	1.45	-0.522	D309221 00	1943	1973
272	CARMEL VALLEY ROBINS	125	36.533	121.800	MON	0.45	0.76	0.90	1.01	1.11	1.76	-0.440	D401534 25	1971	1981
273	LUCIA WILLOW SPRINGS	360	35.883	121.450	MON	0.68	1.14	1.37	1.53	1.69	2.68	-0.488	D405184 00	1941	1993
274	S E FARALLON	27	37.700	123.000	SF	0.45	0.76	0.91	1.02	1.13	1.82	-0.532	E008376 00	1904	1978
275	KENT LAKE	360	37.998	122.708	MRN	0.77	1.33	1.56	1.75	1.94	3.11	-0.400	E104502 00	1955	1979
276	LAGUNITAS LAKE	785	37.947	122.595	MRN	0.79	1.36	1.60	1.80	1.98	3.18	-0.397	E104652 00	1930	1986
277	NACASIO TOWN 1 SE	265	38.042	122.693	MRN	0.81	1.39	1.64	1.83	2.03	3.25	-0.460	E106187 00	1954	1980
278	NACASIO DAM	315	38.108	122.720	MRN	0.61	1.04	1.23	1.37	1.52	2.44	-0.457	E106187 02	1975	1990
279	PT REYES LIGHT STA	510	37.995	123.017	MRN	0.47	0.80	0.96	1.07	1.19	1.90	-0.468	E107027 00	1906	1926
280	POINT REYES STATION	31	38.067	122.800	MRN	0.63	1.05	1.26	1.42	1.57	2.52	-0.437	E107088 20	1975	1994
281	TOMALES	80	38.247	122.903	MRN	0.53	0.89	1.07	1.20	1.32	2.12	-0.520	E108954 00	1970	1994
282	EL VERANO CORP YARD	100	38.300	122.483	SON	0.53	0.83	0.98	1.08	1.18	1.80	-0.449	E202822 20	1958	1976
283	KENTFIELD	80	37.946	122.551	MRN	0.74	1.25	1.50	1.68	1.86	2.99	-0.317	E204500 00	1984	1994
284	MILL VALLEY	10	37.896	122.527	MRN	0.61	1.02	1.23	1.38	1.53	2.45	-0.524	E205647 00	1958	1994
285	MT TAMALPAIS 2 SW	1480	37.900	122.600	MRN	0.63	1.07	1.28	1.44	1.59	2.55	-0.378	E205996 00	1940	1998
286	MT TAMALPAIS	2600	37.917	122.583	MRN	0.55	0.92	1.11	1.24	1.37	2.20	-0.422	E205998 00	1905	1982
287	NOVATO 8 WNW	350	38.133	122.717	MRN	0.53	0.89	1.07	1.20	1.33	2.12	-0.496	E206290 00	1943	1995
288	NOVATO FS #1	35	38.105	122.537	MRN	0.55	0.92	1.10	1.24	1.37	2.20	-0.460	E206290 01	1958	1994
289	PETALUMA F S NO 2	16	38.241	122.629	SON	0.45	0.76	0.91	1.02	1.13	1.81	-0.449	E206826 00	1944	1998
290	SAN ANSELMO	100	37.976	122.562	MRN	0.78	1.32	1.58	1.77	1.96	3.15	-0.409	E207707 00	1958	1994
291	SAN RAFAEL FS #4	5	37.967	122.533	MRN	0.70	1.18	1.42	1.60	1.76	2.83	-0.489	E207880 10	1977	1994
292	SAN RAFAEL CIVIC CEN	120	37.996	122.530	MRN	0.57	0.95	1.15	1.29	1.42	2.28	-0.413	E207880 21	1964	1994
293	STENSON BEACH	10	37.914	122.645	MRN	0.52	0.88	1.05	1.18	1.31	2.09	-0.443	E208518 50	1979	1994
294	WOODACRE FD	430	38.007	122.642	MRN	0.65	1.09	1.31	1.47	1.63	2.61	-0.417	E209770 21	1964	1994
295	ANGWIN PACIFIC UNION	1815	38.571	122.435	NAP	0.56	0.95	1.14	1.28	1.41	2.26	-0.437	E300212 00	1968	1998
296	ATLAS ROAD	1660	38.643	121.248	NAP	0.61	1.03	1.23	1.39	1.53	2.46	-0.413	E300372 00	1940	1994
297	FAIRFIELD 3 NNE	110	38.283	122.033	SOL	0.48	0.81	0.97	1.09	1.21	1.93	-0.542	E302933 00	1940	1998
298	OAKVILLE 4 SW	1465	38.383	122.467	NAP	0.59	1.00	1.20	0.35	1.49	2.38	-0.410	E306354 00	1940	1987
299	SAINT HELENA 4 WSW	1792	38.500	122.533	NAP	0.60	1.01	1.21	1.36	1.50	2.41	-0.452	E307646 00	1940	1998
300	BERKELEY	345	37.867	122.250	ALA	0.53	0.90	1.08	1.21	1.34	2.15	-0.389	E400693 00	1950	1989
301	CASTRO VALLEY FIRE D	255	37.697	122.081	ALA	0.51	0.86	1.04	1.17	1.29	2.06	-0.504	E401583 80	1968	1980
302	CROCKETT C&H	9	38.051	122.217	CC	0.51	0.86	1.03	1.15	1.28	2.05	-0.550	E402177 80	1978	1994
303	CULL CANYON	620	37.770	122.062	ALA	0.48	0.81	0.97	1.09	1.21	1.94	-0.484	E402213 50	1975	1980
304	DANVILLE WU	330	37.830	122.002	CC	0.53	0.88	1.06	1.19	1.32	2.11	-0.478	E402279 50	1973	1994
305	HAYWARD 6 ESE	715	37.652	121.986	ALA	0.56	0.95	1.14	1.28	1.41	2.26	-0.450	E403863 00	1941	1988
306	HAYWARD CORP YARD	55	37.647	122.095	ALA	0.53	0.89	1.07	1.20	1.33	2.13	-0.506	E403863 02	1957	1978
307	MARSH CREEK FS	680	37.897	121.865	CC	0.41	0.68	0.82	0.92	1.02	1.63	-0.457	E405366 50	1973	1994
308	MARTINEZ 3 S	225	37.967	122.133	CC	0.49	0.82	0.98	1.10	1.22	1.95	-0.441	E405371 00	1944	1998
309	MARTINEZ FCD	49	37.988	122.087	CC	0.40	0.67	0.81	0.91	1.00	1.61	-0.522	E405371 50	1972	1994
310	MT DIABLO ST PK	1600	37.850	121.933	CC	0.49	0.78	0.93	1.05	1.16	1.86	-0.496	E405916 00	1956	1995
311	MT DIABLO	3690	37.880	121.918	CC	0.47	0.79	0.95	1.06	1.18	1.89	-0.443	E405916 20	1976	1994
312	OAKLAND AP NWS	3	37.733	122.200	ALA	0.47	0.80	0.96	1.07	1.19	1.90	-0.484	E406335 00	1940	1985
313	ORINDA FILTERS	370	37.893	122.200	CC	0.66	1.14	1.34	1.50	1.66	2.67	-0.500	E406501 01	1958	1989
314	ORINDA FIRE STATION	700	37.895	122.170	CC	0.53	0.89	1.07	1.20	1.33	2.14	-0.460	E406502 22	1974	1994
315	PIEDMONT FIRE DEPT	330	37.823	122.232	ALA	0.50	0.85	1.02	1.14	1.26	2.02	-0.526	E406856 70	1967	1980
316	RICHMOND CITY HALL	55	37.933	122.350	CC	0.55	0.92	1.11	1.24	1.37	2.20	-0.523	E407414 50	1975	1994
317	RODEO FIRE STATION	30	38.035	122.270	CC	0.43	0.89	1.07	1.20	1.33	2.13	-0.570	E407528 10	1973	1994
318	ST MARYS COLLEGE	620	37.841	122.107	CC	0.60	1.01	1.22	1.37	1.51	2.42	-0.463	E407661 00	1955	1994
319	UPPER SAN LEANDRO FT	413	37.774	122.164	ALA	0.55	0.94	1.11	1.24	1.37	2.20	-0.543	E409185 00	1945	1989
320	WALNUT CREEK FILTERS	384	37.913	122.085	CC	0.48	0.82	0.97	1.09	1.20	1.92	-0.305	E409421 01	1973	1989
321	WALNUT CREEK 2 ESE	245	37.883	122.033	CC	0.51	0.86	1.03	1.16	1.28	2.05	-0.574	E409423 00	1945	1983
322	WALNUT CREEK 2 ENE	80	37.935	122.044	CC	0.58	1.00	1.18	1.32	1.46	2.34	-0.574	E409429 50	1949	1983
323	ARROYO DEL VALLE WTP	640	37.631	121.784	ALA	0.47	0.79	0.95	1.07	1.18	1.90	-0.495	E500310 00	1978	1999
324	ARROV DEL VALLE WATE	640	37.631	121.784	ALA	0.44	0.74	0.88	0.99	1.10	1.76	-0.527	E500311 20	1975	1985
325	ARROYO DEL VALLE TAIN	700	37.617	121.750	ALA	0.39	0.65	0.78	0.88	0.97	1.55	-0.484	E500312 00	1958	1975
326	BIEL RANCH	3399	37.467	121.530	SCL	0.33	0.56	0.67	0.75	0.83	1.34	-0.587	E500728 50	1965	1992

APPENDIX C

FAA UFC EXCERPTS

Figure 2-3. Approximate Geographic Areas for SCS Rainfall Distributions

Although the SCS distributions shown do not agree exactly with IDF curves for all locations in the region for which they are intended, the differences are within the accuracy limits of the rainfall depths from the Weather Bureau's rainfall frequency atlases.

2-3.2 Determination of Peak Flow Rates. Peak flows are generally adequate for design and analysis of conveyance systems such as storm drains or open channels; however, if the design or analysis must include flood routing (e.g., storage basins or complex conveyance networks), a flood hydrograph is required. This section discusses three methods, the Rational Method, the SCS TR-55 method, and the USGS regression equations, that are used to derive peak flows for both gaged and ungaged sites. Each method can be used to develop a peak discharge. The drainage area of the project usually dictates which of these methods should be used. The Rational Method is the most commonly used method, but due to its assumptions, it is limited to drainage areas smaller than 200 acres. For drainage areas up to 2000 acres, the SCS TR-55 method is commonly used. Due to the way in which the regression equations were developed, they are usually not appropriate for very small areas, but each set of equations has its own limitations and those should be understood before the equations are applied. The regression equations are often used to compute the discharges for larger areas such as those necessary for culvert design.

2-3.2.1 **Rational Method.** One of the most commonly used equations for the calculation of peak flow from small areas is the Rational Formula, given as Equation 2-1:

$$Q = CIA \quad (2\text{-}1)$$

where:

Q = flow, ft^3/s

C = dimensionless runoff coefficient representing the characteristics of the watershed

I = rainfall intensity, in/hr

A = drainage area, hectares, acres

2-3.2.1.1 **Assumptions**. Assumptions inherent in the Rational Formula are that:

- Peak flow occurs when the entire watershed is contributing to the flow.
- Rainfall intensity is the same over the entire drainage area.
- Rainfall intensity is uniform over a time duration equal to the time of concentration (t_c). The time of concentration is the time required for water to travel from the hydraulically most remote point of the basin to the point of interest.
- The frequency of the computed peak flow is the same as that of the rainfall intensity, i.e., the 10-year rainfall intensity is assumed to produce the 10-year peak flow.
- The coefficient of runoff is the same for all storms of all recurrence probabilities.

2-3.2.1.2 **Limitations**. Because of the inherent assumptions, the Rational Formula should be applied only to drainage areas smaller than 200 acres.

2-3.2.2 **Runoff Coefficient**

2-3.2.2.1 The runoff coefficient, *C*, in Equation 2-1 is a function of the ground cover and a host of other hydrologic abstractions. It relates the estimated peak discharge to a theoretical maximum of 100 percent runoff. Typical values for *C* are given in Table 2-1. If the basin contains varying amounts of different land cover or other abstractions, a composite coefficient can be calculated through area weighing using Equation 2-2:

$$\text{weighted } C = \frac{\sum (C_x A_x)}{A_{total}} \quad (2\text{-}2)$$

where:

x = subscript designating values for incremental areas with consistent land cover

Table 2-1. Runoff Coefficients for Rational Formula

Type of Drainage Area	Runoff Coefficient, *C**
Business:	
Downtown areas	0.70 - 0.95
Neighborhood areas	0.50 - 0.70
Residential:	
Single-family areas	0.30 - 0.50
Multi-units, detached	0.40 - 0.60
Multi-units, attached	0.60 - 0.75
Suburban	0.25 - 0.40
Apartment dwelling areas	0.50 - 0.70
Industrial:	
Light areas	0.50 - 0.80
Heavy areas	0.60 - 0.90
Parks, cemeteries	0.10 - 0.25
Playgrounds	0.20 - 0.40
Railroad yard areas	0.20 - 0.40
Unimproved areas	0.10 - 0.30
Lawns:	
Sandy soil, flat, 2 percent	0.05 - 0.10
Sandy soil, average, 2 to 7 percent	0.10 - 0.15
Sandy soil, steep, 7 percent	0.15 - 0.20
Heavy soil, flat, 2 percent	0.13 - 0.17
Heavy soil, average, 2 to 7 percent	0.18 - 0.22
Heavy soil, steep, 7 percent	0.25 - 0.35
Streets:	
Asphaltic	0.70 - 0.95
Concrete	0.80 - 0.95
Brick	0.70 - 0.85
Drives and walks	0.75 - 0.85
Roofs	0.75 - 0.95
*Higher values are usually appropriate for steeply sloped areas and longer return periods because infiltration and other losses have a proportionally smaller effect on runoff in these cases.	

2-3.2.2.2 Example 2-1 illustrates the calculation of the runoff coefficient, *C*, using area weighing.

Example 2-1

Given: These existing and proposed land uses:

Existing conditions (unimproved):

Land Use	**Area, acres**	**Runoff Coefficient, *C***
Unimproved Grass	22.1	0.25
Grass	21.2	0.22
Total =	43.3	

Proposed conditions (improved):

Land Use	**Area, acres**	**Runoff Coefficient, *C***
Paved	5.4	0.90
Lawn	1.6	0.15
Unimproved Grass	18.6	0.25
Grass	17.7	0.22
Total =	43.3	

Find: Weighted runoff coefficient, *C*, for the existing and proposed conditions.

Solution:

Step 1. Determine weighted *C* for existing (unimproved) conditions using Equation 2-2.

$$\text{weighted } C = \frac{\sum (C_x A_x)}{A}$$

$$\text{weighted } C = \frac{[(22.1)(0.25)+(21.2)(0.22)]}{(43.3)}$$

$$\text{weighted } C = 0.235$$

Step 2. Determine weighted *C* for proposed (improved) conditions using Equation 2-2.

$$\text{weighted } C = \frac{[(5.4)(0.90)+(1.6)(0.15)+(18.6)(0.25)+(17.7)(0.22)]}{(43.3)}$$

$$\text{weighted } C = 0.315$$

2-3.2.3 **Rainfall Intensity.** Rainfall intensity, duration, and frequency curves are necessary to use the Rational Method. Regional IDF curves are available in most state

and local highway agency manuals and are also available from NOAA. If the IDF curves are not available, they should be developed.

2-3.2.4 **Time of Concentration.** A number of methods can be used to estimate time of concentration, t_c, some of which are intended to calculate the flow velocity within individual segments of the flow path (e.g., shallow concentrated flow, open channel flow, etc.). The time of concentration can be calculated as the sum of the travel times within the various consecutive flow segments. For additional discussion on establishing the time of concentration for inlets and drainage systems, see Chapters 3 and 6 of this manual.

2-3.2.4.1 **Sheet Flow Travel Time**. Sheet flow is the shallow mass of runoff on a planar surface with a uniform depth across the sloping surface. This usually occurs at the headwater of streams over relatively short distances, rarely more than about 400 feet (ft), and possibly less than 80 feet. Sheet flow is commonly estimated with a version of the kinematic wave equation, a derivative of Manning's equation, shown as Equation 2-3:

$$T_{ti} = \frac{K_c}{I^{0.4}}\left(\frac{nL}{\sqrt{S}}\right)^{0.6} \quad (2\text{-}3)$$

where:

T_{ti} = sheet flow travel time, minutes (min)

n = roughness coefficient (see Table 2-2)

L = flow length, ft

I = rainfall intensity, in/hr

S = surface slope, feet per feet (ft/ft)

K_c = empirical coefficient equal to 0.933

Table 2-2. Manning's Roughness Coefficient (*n*) for Overland Sheet Flow

Surface Description	*n*
Smooth asphalt	0.011
Smooth concrete	0.012
Ordinary concrete lining	0.013
Good wood	0.014
Brick with cement mortar	0.014
Vitrified clay	0.015
Cast iron	0.015

Surface Description	*n*
Corrugated metal pipe	0.024
Cement rubble surface	0.024
Fallow (no residue)	0.05
Cultivated soils	
Residue cover < 20 percent	0.06
Residue cover > 20 percent	0.17
Range (natural)	0.13
Grass	
Short grass prairie	0.15
Dense grasses	0.24
Bermuda grass	0.41
Woods*	
Light underbrush	0.40
Dense underbrush	0.80
*When selecting *n*, consider cover to a height of about 1.2 inches. This is only part of the plant cover that will obstruct sheet flow.	

Since the rainfall intensity value, *I*, depends on t_{ti} and t_{ti} is not initially known, the computation of t_{ti} is an iterative process. An initial estimate of t_{ti} is assumed and used to obtain *I* from the IDF curve for the locality. The t_{ti} is then computed from Equation 2-3 and used to check the initial value of t_{ti}. If they are not the same, the process is repeated until two successive t_{ti} estimates are the same.

2-3.2.4.2 **Shallow Concentrated Flow Velocity**. After short distances of at most 300 ft, sheet flow tends to concentrate in rills and then gullies of increasing proportions. Such flow is usually referred to as shallow concentrated flow. The velocity of such flow can be estimated using a relationship between velocity and slope as shown in Equation 2-4:

$$V = (3.28)kS_p^{0.5} \quad (2\text{-}4)$$

where:

V = velocity, ft/s

k = intercept coefficient (see Table 2-3)

S_p = slope, percent

Table 2-3. Intercept Coefficients for Velocity vs. Slope Relationship of Equation 2-4

Land Cover/Flow Regime	*k*
Forest with heavy ground litter; hay meadow (overland flow)	0.076
Trash fallow or minimum tillage cultivation; contour or strip cropped; woodland (overland flow)	0.152
Short grass pasture (overland flow)	0.213
Cultivated straight row (overland flow)	0.274
Nearly bare and untilled (overland flow); alluvial fans in western mountain regions	0.305
Grassed waterway (shallow concentrated flow)	0.457
Unpaved (shallow concentrated flow)	0.491
Paved area (shallow concentrated flow); small upland gullies	0.619

2-3.2.4.3 **Open Channel and Pipe Flow Velocity**. Flow in gullies empties into channels or pipes. Open channels are assumed to begin where either the blue stream line shows on USGS quadrangle sheets or the channel is visible on aerial photographs. Cross-section geometry and roughness should be obtained for all channel reaches in the watershed. Manning's equation can be used to estimate average flow velocities in pipes and open channels as follows:

$$V = \frac{1.49}{n} R^{2/3} S^{1/2} \qquad (2\text{-}5)$$

where:

n = roughness coefficient (see Table 2-4)

V = velocity, ft/s

R = hydraulic radius (defined as the flow area divided by the wetted perimeter), ft

S = slope, ft/ft

Table 2-4. Values of Manning's Coefficient (*n*) for Channels and Pipes

Conduit Material	Manning's *n**
Closed Conduits	
Brick	0.013 - 0.017
Cast iron pipe	
Cement-lined and seal coated	0.011 - 0.015

Conduit Material	Manning's *n**
Concrete (monolithic)	0.012 - 0.014
Concrete pipe	0.011 - 0.015
Corrugated-metal pipe – 0.5 inch by 2.5 inch corrugations	
Plain	0.022 - 0.026
Paved invert	0.018 - 0.022
Spun asphalt lines	0.011 - 0.015
Plastic pipe (smooth)	0.011 - 0.015
Vitrified clay	
Pipes	0.011 - 0.015
Liner plates	0.013 - 0.017
Open Channels	
Lined channels	
Asphalt	0.013 - 0.017
Brick	0.012 - 0.018
Concrete	0.011 - 0.020
Rubble or riprap	0.020 - 0.035
Vegetal	0.030 - 0.400
Excavated or dredged	
Earth, straight and uniform	0.020 - 0.030
Earth, winding, fairly uniform	0.025 - 0.040
Rock	0.030 - 0.045
Unmaintained	0.050 - 0.140
Natural channels (minor streams, top width at flood stage < 100 feet)	
Fairly regular section	0.030 - 0.070
Irregular section with pools	0.040 - 0.100
*Lower values are usually for well-constructed and maintained (smoother) pipes and channels.	

For a circular pipe flowing full, the hydraulic radius is one-fourth of the diameter. For a wide rectangular channel ($W > 10\ d$), the hydraulic radius is approximately equal to the depth. The travel time is then calculated as follows:

$$T_{ti} = \frac{L}{60V} \qquad (2\text{-}6)$$

where:

T_{ti} = travel time for segment i, min

L = flow length for segment i, ft

V = velocity for segment i, ft/s

Example 2-2

Given: These flow path characteristics:

Flow Segment	Length (ft)	Slope (ft/ft)	Segment Description
1 (sheet flow)	223	0.005	Bermuda grass
2 (shallow conduit)	259	0.006	Grassed waterway
3 (flow in conduit)	479	0.008	15-in concrete pipe

Find: Time of concentration, t_c, for the area.

Solution:

Step 1. Calculate time of concentration for each segment.

Segment 1

Obtain Manning's n roughness coefficient from Table 2-2: $n = 0.41$

Determine the sheet flow travel time using Equation 2-3:

$$T_{ti} = \frac{K_c}{I^{0.4}}\left(\frac{nL}{\sqrt{S}}\right)^{0.6}$$

Since the rainfall intensity value, I, is being sought and is also in the equation, an iterative approach must be used. From experience, estimate a time of concentration and read a rainfall intensity from the appropriate IDF curve. In this example, try a time of concentration of 30 min and read from the IDF curve in Figure 2-1 an intensity of 3.4 in/hr. Now use Equation 2-3 to see how good the 30-min estimate was.

First, solve the equation in terms of I.

$$T_{ti1} = \left[\frac{0.933}{(I)^{0.4}}\right]\left[\frac{(0.41)(223)}{(0.005)^{0.5}}\right]^{0.6} = \frac{(68.68)}{I^{0.4}}$$

Inserting 3.4 in/hr for I, the result is 42.1 min. Since 42.1 is greater than the assumed 30 min, try the intensity for 42 min from Figure 2-1, which is 2.8 in/hr.

Using 2.8 in/hr, the result is 45.4 min. Repeat the process with 2.7 in/hr for 45 min and the result is a time of 46.2. This value is close to the 45.2 min.

Use 46 min for segment 1.

Segment 2

Obtain the intercept coefficient, *k*, from Table 2-3: *k* = 0.457 and K_c = 3.281

Determine the concentrated flow velocity from Equation 2-4:

$$V = 3.28kS_p^{0.5} = (3.28)(0.457)(0.6)^{0.5} = 116 \text{ ft/s}$$

Determine the travel time from Equation 2-6:

$$T_{ti2} = \frac{L}{(60V)} = \frac{259}{[(60)(1.16)]} = 3.7 \text{ min}$$

Segment 3

Obtain Manning's *n* roughness coefficient from Table 2-4: *n* = 0.011

Determine the pipe flow velocity from Equation 2-5 (assuming full flow)

V = (1.49/0.011)(1.25/4)0.67 (0.008)0.5 = 5.58 ft/s

Determine the travel time from Equation 2-6:

$$T_{ti3} = \frac{L}{(60V)} = \frac{479}{[(60)(5.58)]} = 1.4 \text{ min}$$

Step 2. Determine the total travel time by summing the individual travel times:

$t_c = T_{ti1} + T_{ti2} + T_{ti3}$ = 46.0 + 3.7 + 1.4 = 51.1 min Use 51 min

Example 2-3

Given: Land use conditions from Example 2-1 and the following times of concentration:

Condition	**Time of concentration t_c (min)**	**Weighted *C* (from Example 2-1)**
Existing condition (unimproved)	88	0.235
Proposed condition (improved)	66	0.315

Area = 43.36 acres

Find: The 10-year peak flow using the Rational Formula and the IDF curve shown in Figure 2-1.

Solution:

Step 1. Determine the rainfall intensity, *I*, from the 10-yr IDF curve for each time of concentration.

Existing condition (unimproved) 1.9 in/hr

Proposed condition (improved) 2.3 in/hr

Step 2. Determine peak flow rate, *Q*.

Existing condition (unimproved):

$Q = CIA$

$= (0.235)(1.9)(43.3)$

$= 19.3\ ft^3/s$

Proposed condition (improved):

$Q = CIA$

$= (0.315)(2.3)(43.3)$

$= 31.4\ ft^3/s$

2-3.3 USGS Regression Equations. Regression equations are commonly used for estimating peak flows at ungaged sites or sites with limited data. The USGS has developed and compiled regional regression equations that are included in a computer program called the National Flood Frequency program (NFF). NFF allows quick and easy estimation of peak flows throughout the United States. All the USGS regression equations were developed using dependent variables in English units. Local equations may be available to provide better correspondence to local hydrology than the regional equations found in NFF. For more information on NFF, refer to paragraph 12-7.7.

2-3.3.1 **Rural Equations.** The rural equations are based on watershed and climatic characteristics within specific regions of each state that can be obtained from topographic maps, rainfall reports, and atlases. These regression equations are generally of the following form:

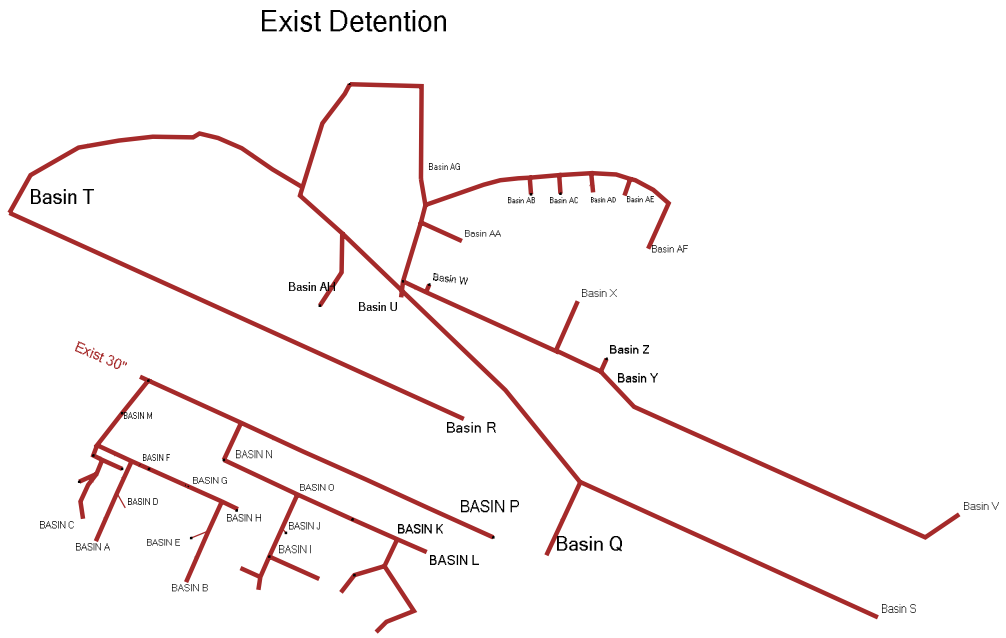
$$RQ_T = aA^bB^cC^d \qquad (2\text{-}7)$$

where:

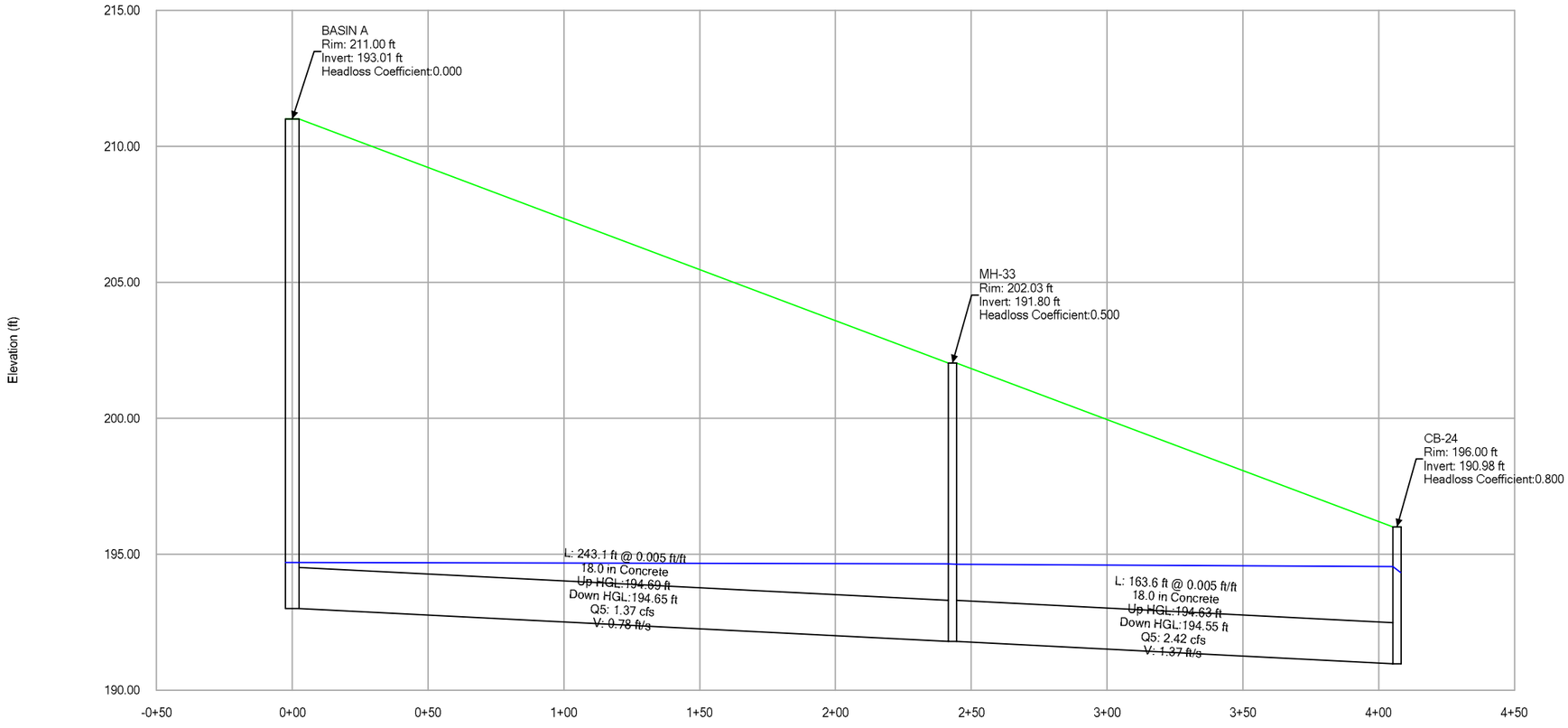
APPENDIX D

HYDRAULIC ANALYSIS

Scenario: Base

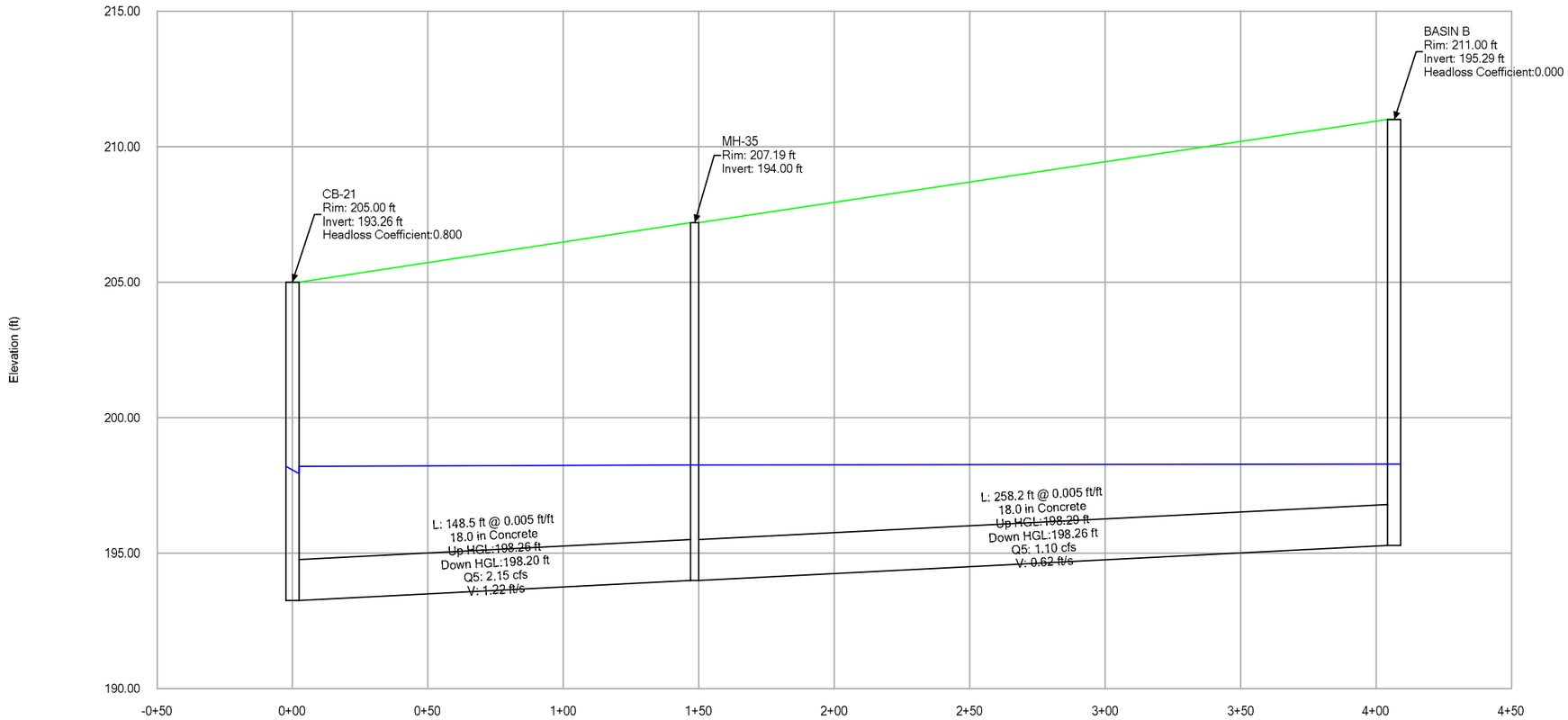


Profile Report
Engineering Profile - BASIN AF (Proposed Monterey Airport Terminal.stsw)

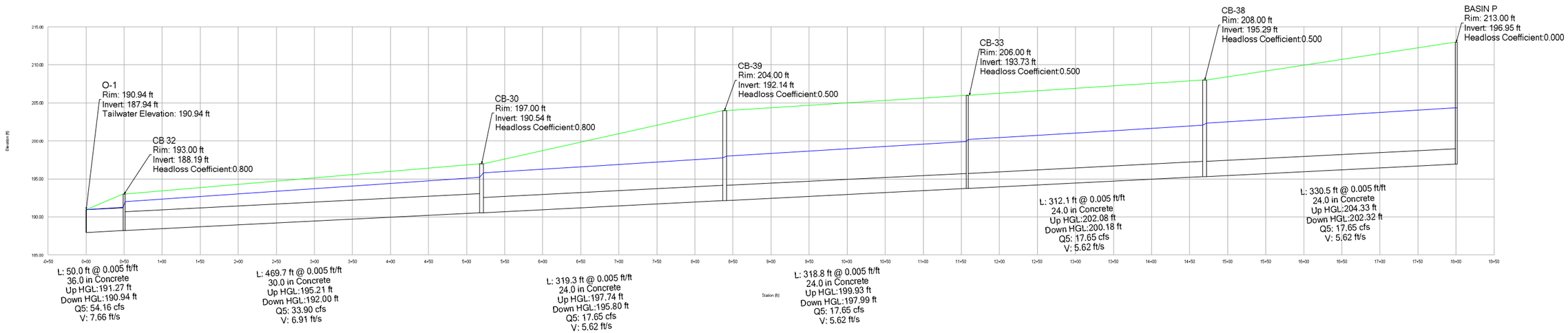


Profile Report

Engineering Profile - BASIN BH (Proposed Monterey Airport Terminal.stsw)

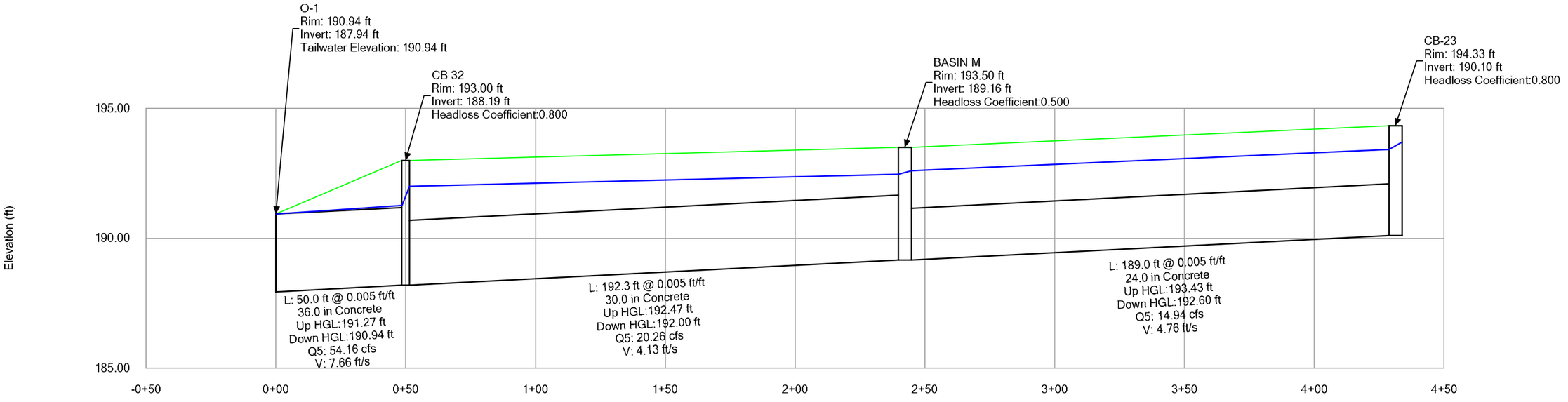


Profile Report
Engineering Profile - BASIN P (Proposed Monterey Airport Terminal.stsw)



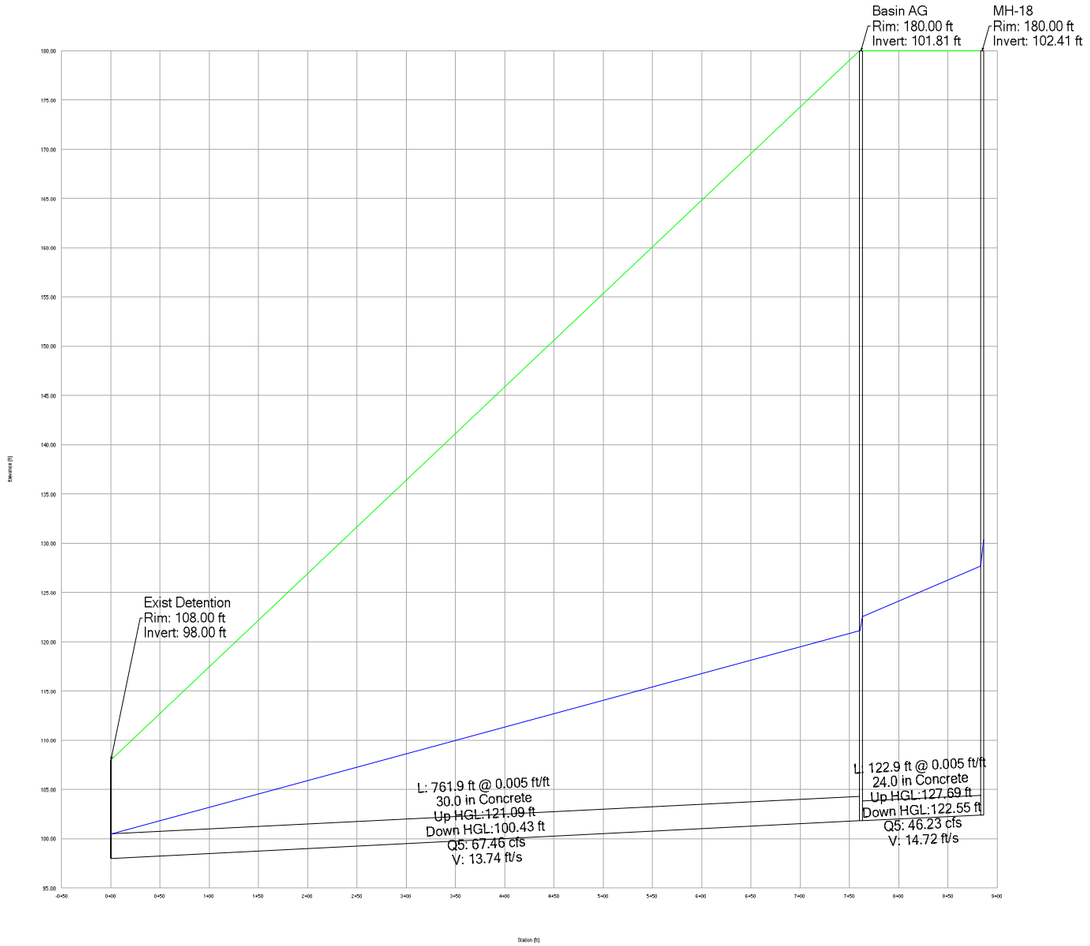
Profile Report

Engineering Profile - BASIN Outfall to M (Proposed Monterey Airport Terminal.stsw)



Profile Report

Engineering Profile - 30" Outfall (Proposed Monterey Airport Terminal.stsw)



TECHNICAL MEMORANDUM
ON SOILS
AT THE MONTEREY REGIONAL AIRPORT

Prepared by
Sherman W. Low, PE
Neill Engineers Corp.
May 19, 2017

This technical memorandum on the soil conditions at the Monterey Regional Airport is based on historical information and personal experience while working on past projects there for over 40 years.

Generally the soil conditions at the Monterey Regional Airport comprises mostly of sands varying from silty to clayey sands.

The westerly portion of the airfield consist mostly of good quality sandy subgrade. When the airfield was originally constructed, the westerly portion of the airport was mostly constructed from fill material (probably imported fill) and the easterly portion was mostly in cut. The fill is evidenced by the higher airfield elevation than the surrounding golf course area and the adjacent Navy property to the north. The excavated cut area for the easterly portion of the airfield is evidenced by the cut slope along the south side of Taxiway A the cut slope north of the General Utility Runway and Taxiway C. The easterly portion of the airfield consists of varying degrees of silty to clayey sands, which are poorer subgrade materials. Correspondingly, the runway structural pavement section is thicker at the east end of the runway than for the west end.

In general, the predominantly sandy soils existing on the airport provides a good subgrade foundation for the airfield pavements. For the most part, the airfield pavements are in sound condition due to the underlying sandy-type soils and the airport's diligence in keeping a good pavement maintenance program.

However; the southeasterly area of the airport contains some of the poorer soils. The soils encountered in this area consists of varying degrees of clayey material with sub-surface water issues. Sub-surface water was encountered during the initial construction of the ARFF/Safety Building in 1977. The aircraft parking apron pavement located east of the large FBO maintenance hangar and the pavement area east of the southeast T-hangars had to be reconstructed due to prior pavement failures. The pavement failures were caused by the poor quality clayey material and wet soil conditions. The reconstruction of the pavements in these areas required installation of sub-surface drainage facilities such as sub-drains, curtain walls,

drain rock stabilization, pavement stabilization fabric and thicker structural pavement sections to mitigate the presence of clayey sand soils. Groundwater was encountered in these areas during trench excavation. I would expect that similar conditions will be encountered for the future construction projects anticipated for this area of the airport.

Mass grading for the general utility runway, taxiways and aircraft parking apron site was performed in 1986. The excavation material from the mass grading was used to construct the fill area and fill slopes for the expansion of the parking apron area to the west and also for the earth berm located on the northside adjacent to the Del Rey Oaks residential properties. These soils generally consisted of native silty-sands. The fill area for the future expansion of the parking apron area to the west was placed and compacted as engineered fill.

Excavated soil from the grading of the northside detention pond was also used to construct the earth berm located on the northside adjacent to the Del Rey Oaks properties. During the excavation of the detention pond, significant groundwater was encounter near the pond bottom. The bottom of the pond was very unstable due to high groundwater. The soil at the detention pond is classified as a sandy clay.

The southwesterly area at the Del Monte Aviation and Monterey Jet Center FBO's leasehold sites generally consists of silty sands. During the roadway construction for Sky Park Drive, groundwater was encountered along the cut slopes on the southside of the roadway. A sub-drain had to be installed along the southwesterly portion of the cut slope west of Sky Park Way. The northerly portion of Sky Park Drive was constructed mostly with fill material. This northerly portion of Sky Park Drive was previously utilized as a dumping/disposal site. As a result, isolated settlement areas in the roadway had occurred and is still occurring due to the underlying material shifting or organic material decomposing or degradation underneath. Fills for the roadway construction and adjacent fill areas is probably in the neighborhood of 15-20 foot depths.

The pavement section for Sky Park Drive is not very thick (3" AC, over 4" AB), but has held up well for over 20 years. This roadway has been subjected to heavy use by construction vehicles and trucks.

The soils for the proposed future Del Rey Oaks access road to the undeveloped northside area of the airport generally consist of sands with varying degrees of silt and clay binder and cementation. Based on the geotechnical investigation report, the proposed roadway alignment is compatible with the site provided geotechnical recommendations are incorporated in the design and construction of the project.

While the sandy-type soil provides a stable foundation for structural support, it is a highly erodible material and will require some type of treatment if left unprotected and subject to erosion. Some localized areas of erosion had occurred and been mitigated over the years.

This technical memorandum is intended to provide a general overview of the soil conditions at the Monterey Regional Airport. There are areas of the airport that have not been developed and therefore, the soil conditions in these areas are not known.

As the Airport continues to expand, additional and more detailed geotechnical investigation and analysis will need to be prepared on a specific project basis. Current and updated design parameters and requirements will need to be met and incorporated into the design and construction of the anticipated future projects.

TECHNICAL MEMORANDUM
FOR DRAINAGE
AT THE MONTEREY REGIONAL AIRPORT

Prepared by
Sherman W. Low, PE
Neill Engineers Corp.
May 19, 2017

The storm runoff from the Monterey Regional Airport is mostly collected by a system of catch basins and storm drain pipes. Basically, there are three large drainage areas that discharge storm runoff from the airport. These drainage areas discharge into the drainage facilities of adjacent municipalities at three different locations of the airport.

The airport is situated at a higher elevation of the surrounding terrain and is not subject to flooding from natural watershed areas. As identified by FEMA maps, the airport is not located in a flood plain.

The airfield drainage facilities are designed for a 5-yr return period storm per the FAA Advisory Circular. The rainfall intensity is based on Monterey County Standard Details.

The three main drainage areas are:

A. The southwesterly portion of the airport
B. The northeasterly portion of the airport
C. The northwesterly portion of the airport

Smaller drainage areas such as the southwesterly portion of the airport drains toward State Highway 68 via surface flows; the easterly end portion of the airport drains toward State Highway 68 and Del Rey Oaks.

A. Southwesterly portion of the airport

This drainage basin comprises of approximately 116 acres and consists of generally the area southerly the main Runway 10R-28L centerline between Taxiway E and Taxiway L including this corresponding segment of Taxiway A, the southside aircraft parking ramp areas, the airport's terminal building area and parking lots, FBO sites, and all the areas to the south and southwest.

Storm water runoff is collected by a system of catch basins and storm drain pipes. The storm drain trunkline for this drainage area runs downhill along Taxiway A beginning at connector Taxiway L through the infield safety areas, then across and along Taxiway A, then turning in the southwesterly direction through the Del Monte Aviation and Monterey Jet Center FBO sites, then crossing Sky Park Drive through the Monterey Pines (Navy) Golf Course and ultimately

connecting into the City of Monterey storm drain system discharging along State Highway 68 and ultimately ending up in Del Monte Lake located at the Navy Postgraduate School.

In 2009, storm drainage improvements were constructed to increase the capacity of the storm drain trunkline in the apron area at the Del Monte Aviation FBO site. There were pipe segments in the trunkline that could not accommodate the design runoff for a 5-yr return storm. Additional pipes were installed that greatly reduced the flooding problems encountered for the airfield site and Del Monte Aviation parking apron areas.

However; it must be pointed out that a drainage problem still exists at the southwest corner bend at Sky Park Drive adjacent to the Monarch Pines Golf Course. At this location, 3-36" storm drain pipes connects into a single 36" discharge pipe running through the Golf Course. This results in occasional short-term flooding of the roadway during heavy storms. The situation needs to be addressed and remedied at a future time, and will require collaboration with the Navy Golf Course and City of Monterey.

Any new development that will cause an increase in pre-development runoff is required to construct detention and/or retention facilities. Detention facilities were constructed for the development of the Monterey Jet Center FBO site.

B. Northeasterly portion of the airport

This drainage basin is initially comprised of approximately over 245 acres and consists generally of all of the airfield area north of the centerline of main Runway 10R-28L between the east end of the runway and connector Taxiway G, including this segment of Taxiway B, the General Utility Runway 10L-28R, taxiways, and aircraft parking areas, and the entire undeveloped northside area. The airfield area including Taxiway D for the Old Northside drainage basin and the NSSI hangars site located at the northeasterly end of Taxilane E were added to this drainage basin at a later date, after the construction of the detention pond. It added approximately 17 acres to this drainage basin.

This area is collected by a series of catch basins and storm drain pipes that discharges into a large detention pond located at the northside of the airport. This pond was constructed in 1986 as part of the mass grading work for the General Utility Runway 10L-28R, taxiways, and parking apron project. The detention pond drains into a natural drainage channel that runs along Rosita Road in Del Rey Oaks, and into Canyon Del Rey Creek, ultimately ending up into Laguna Grande Lake in Seaside.

The detention pond was designed to accommodate future development. It is designed to allow the 10 year existing storm to pass, but detain the difference between the projected 100 year future developed runoff and the existing 10 year runoff. The existing 10 year runoff discharges through a 30" storm drain outlet pipe through the pond embankment. The pond was designed to provide approximately 409,000 cubic feet of available pond storage.

Although the detention pond was designed to accommodate future development, future projects should be reviewed for drainage impacts to the pond storage capacity on a project by project basis.

C. Northwesterly portion of the airport

This westerly portion of this drainage basin comprises of approximately 30 acres and consists generally of the northwesterly portion of the airfield area from Taxiway E to the west, including the westerly portion of Taxiway B and northerly infield safety area between connector Taxiways E & G, and the northerly portion of the Monterey Jet Center FBO site. The airport's storm drain system connects to storm drain pipes through the adjacent Navy property and then into the City of Monterey's storm drain facilities along Airport Road and Euclid Avenue at two separate locations. These two locations discharges into the same City storm drain line that ultimately ends up in Laguna Grande Lake in Seaside.

The westerly end of the airfield drains toward the adjacent Navy Golf Course and the adjacent Navy property to the north. This runoff is collected by a system of catch basins and storm pipe that connects to the Navy storm drain facilities before entering the City of Monterey facilities on Airport Road. Previously, there had been some property transfer between the Airport and the Navy. This may be why the Airport's storm drains are connected to the portions of the Navy's storm drain system.

This northerly portion of this drainage basin includes the Old Northside area. The Old Northside drainage area contains approximately 26 acres and drains to the northeast corner of the Airport property. The runoff discharges from the Airport property into an old 18" concrete storm drain line that runs through private property. This 18" line runs underneath the house on the residential property to connect to the City of Monterey's storm drain system along Euclid Avenue. In order to alleviate a potential for flood damage to the lower neighboring properties, the Airport installed an oversized 30" storm drain pipe under a large oversized concrete open drainage channel in 1991 to provide back-up and storage on the airport property in event the 18" storm drain discharge pipe exceeds its capacity during a heavy rainfall event.

The existing 18" concrete storm drain pipe was also mortar-lined for structural integrity and to protect against exfiltration and leakage.

In 1994, the existing storm drain system for the airfield portion of the Old Northside was re-routed and re-directed to discharge into the detention pond serving the northeasterly drainage basin. This eliminated approximately 17 acres from the Old Northside drainage area and thereby reduced the amount of storm runoff from draining into the 18" storm drain discharge pipe running under the house. It significantly reduces the risk of flooding the downstream homes adjacent to Airport property.

Overall the Airport's drainage system have been functioning properly. Historically, no major flooding has occurred. As previously noted, the airfield facilities have been designed for a 5-yr return storm based on the FAA Advisory Circular requirements. While this may be adequate for the airfield facilities, the new terminal building and supporting roadways and public use parking lots are recommended to be designed to a higher standard. A minimum of a 10-yr return storm is recommended for roadways, and a minimum of a 25-yr storm event should be used for terminal area facilities, depending on the impact from potential flooding.

Any increase in runoff generated from new development/construction should be mitigated by use of retention and/or detention facilities or application of L.I.D. (low impact development) methods.)

MONTEREY
REGIONAL AIRPORT

Appendix J

CARBON SEQUESTRATION ANALYSIS

Carbon Sequestration Analysis
for the
Monterey Regional Airport's Proposed Master Plan and Associated Development Projects,
Monterey County, California

Prepared for:

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JULY 2018

Carbon Sequestration Analysis for the Monterey Regional Airport's Proposed Master Plan and Associated Development Projects

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1 INTRODUCTION

1.1 Report Purpose and Scope

The purpose of this report is to estimate and evaluate the potential net change in sequestered carbon associated with implementation of the proposed Monterey Regional Airport's (Airport) Proposed Master Plan and Associated Development Projects. This report estimates the potential net change in sequestered carbon associated with implementation of the Proposed Project and Alternative 1 (the environmentally superior alternative).

This carbon sequestration analysis estimates carbon dioxide (CO_2) emissions associated with the one-time loss of sequestered carbon resulting from proposed removal of trees and vegetation. This analysis also estimates a one-time carbon-stock change associated with the proposed planting of trees that will sequester new CO_2.

This introductory section provides a description of the Proposed Project and Alternative 1. Section 2, Setting, provides a brief overview of the scientific basis and regulatory setting for carbon sequestration. Section 3, Methodology, describes the approach and modeling assumptions applied to conduct the analysis. Section 4, Loss of Sequestered Carbon, estimates the loss of sequestered carbon from the proposed removal of trees and vegetation. Section 5, Gain of Sequestered Carbon from Tree Plantings, estimates the gain of sequestered carbon from the proposed planting of trees. Section 6, Conclusions, provides a summary of the results. Section 7, References, includes a list of the references cited, and Section 8, Preparers, includes a list of those who prepared this report.

1.2 Project Description

Proposed Project

The projects that are evaluated within the Draft Environmental Impact Report (EIR), prepared pursuant to the California Environmental Quality Act, include the projects recommended in the Airport Master Plan's (AMP) capital improvement program, as well as the AMP's overall on-airport land use plan (which could include non-aviation development and redevelopment on the airport property). Proposed short-term development projects (occurring within ten years) are evaluated within the EIR at a project-specific level, while future long-term development projects (occurring within 20 years) are evaluated to the level of detail feasible based on available project information (i.e., at a programmatic level). Proposed long-term development projects would likely develop in phases over a long period of time, and future environmental analysis could be required prior to their approval and construction.

One primary aspect of the proposed AMP is a multi-component airport safety enhancement project. This project is known as the Airport Safety Enhancement Project for Taxiway "A" Relocation & Associated Building Relocations (Airport Safety Enhancement Project). Due to the need for federal funding and approval, a federal Environmental Assessment is also being prepared consistent with the requirements of the National Environmental Policy Act. The Federal Aviation Administrative is the lead agency for the Environmental Assessment.

The proposed Airport Safety Enhancement Project includes the following and would be phased over approximately ten years (see Table 1, below):

- Relocate 44 general aviation (GA) hangars and a fuel tank from the southeast side of the Airport to the north side of the Airport
- Add up to 7 new GA hangars on the north side of the Airport
- Relocate the existing aircraft rescue and firefighting (ARFF) building and construct an ARFF service road
- Relocate the commercial terminal and necessary apron pavement (and associated parking and roadway improvements)
- Close Taxiway "K" at its connection with the new commercial terminal apron
- Implement a 52.5-foot southerly shift of 1,850 linear feet of Taxiway "A" and associated lighting, signage, and markings
- Remark hold lines on Taxiway "A" at Taxiway Connectors "G" and "J" to a 250-foot separation from the Runway 10L-28R centerline
- Install taxiway "islands" at Taxiway Connectors "G" and "J"
- Construct replacement vehicular parking along Fred Kane Drive

Other proposed short-term AMP projects include:

- Acquire a 5.5-acre private parcel near the proposed commercial terminal complex
- Construct a Highway 68 frontage road

Proposed long-term AMP projects include:

- Construct 106 new GA hangars on the north side of the Airport
- Redevelop the existing GA (small aircraft) hangar area (no increase in use intensity)
- Redevelop the existing airport industrial area (no increase in use intensity)

- Construct non-aviation uses on the north side of the Airport (north of Airport Road)
- Construct non-aviation uses on the south side of the Airport (north of Highway 68)
- Upgrade the perimeter fence
- Construct a consolidated maintenance building
- Acquire runway protection zone (RPZ) land (20 acres)
- Acquire RPZ navigation easement (14 acres)
- Extend Taxiway "B" to the Runway 28L threshold and construct geometry improvements for Taxiways "K" and "L"

One additional AMP project is construction of a new "north side" road, which would extend from Del Rey Gardens Drive in Del Rey Oaks (off Highway 218) to the northeast side of the Airport. Access to the north side of the Airport is currently provided via Airport Road, which runs through the Casanova Oak Knoll neighborhood, located northwest of the Airport. The new "north side" road would provide additional access to the north side of the Airport and would allow access through the Casanova Oak Knoll neighborhood for areas east of Gate 22 to be discontinued.

Comparison of Project Alternatives

There are two alternatives being considered in detail in the EIR: the Proposed Project and Alternative 1. The major difference between the two projects is the location of the permanent ARFF building and the timing of the construction of the "north side" road. Under the Proposed Project, the existing ARFF building would be permanently relocated on the south side of the Airport in the general location of the existing commercial terminal building. Since there would be up to a six- or seven-year gap between when the existing ARFF building would be demolished and the permanent ARFF building would be constructed, a temporary ARFF building would be necessary. This temporary ARFF building would be installed on the north side GA apron. An on-airport ARFF service road would be constructed to maintain acceptable on-airport emergency response times. However, for off-airport calls, the ARFF emergency vehicles would use existing Airport Road west through the Casanova Oak Knoll neighborhood since the new "north side" road would not yet be constructed. This would create longer off-airport emergency response times than currently occur.

Under Alternative 1, the existing ARFF building would be permanently relocated to the north GA apron at the same time as the southeast GA hangars and fuel tank are relocated to the north side. The new "north side" road would be constructed, as well as an on-airport ARFF service road, to provide acceptable on- and off-airport emergency response times.

Table 1 compares the phasing of the Safety Enhancement Project between the two alternatives:

Table 1
Comparison of Phasing for the Safety Enhancement Project
Proposed Project versus Alternative 1

Construction Phases	Proposed Project	Alternative 1
Phase 1	Years 1-3: Construct the necessary pavement and infrastructure to relocate approximately 44 GA tenants from the southeast part of the Airport to north of the airfield. Install a temporary ARFF facility on the Navy Flying Club apron.	Years 1-3: Construct the necessary pavement and infrastructure to relocate approximately 44 GA tenants from the southeast part of the Airport to north of the airfield. Concurrent with site preparation for the north side GA area, construct a 24-foot-wide "north side" road that would go from the north GA area to State Route 218 via a connection with Del Rey Garden Drive. Construct a permanent ARFF building in the general location of the existing Navy Flying Club buildings.
Phase 2	Years 4-8: Demolish the existing ARFF building and demolish or relocate the southeast GA facilities Construct a new commercial terminal complex (including apron, terminal loop road and roundabout, and vehicular parking lots and garage). Close Taxiway "K" between Runway 10R-28L and Taxiway "A."	Years 4-7: Demolish the existing ARFF building and demolish or relocate southeast GA facilities. Construct a new commercial terminal complex (including apron, terminal loop road and roundabout, and vehicular parking lots). Close Taxiway "K" between Runway 10R-28L and Taxiway "A."
Phase 3	Year 9: Demolish the existing terminal building. Construct a new ARFF building.	Year 8: Remark 1,850-lf portion of Taxiway "A" to 327.5 feet from Runway 10R-28L and relocate taxiway signage and lighting. Remark hold lines on Taxiways "G" and "J" at 250 feet from the Runway 10R-28L centerline. Provide apron islands at Taxiways "G" and "J." Demolish the existing terminal building.
Phase 4	Year 10: Remark 1,850-lf portion of Taxiway "A" to 327.5 feet from Runway 10R-28L and relocate taxiway signage and lighting. Remark hold lines on Taxiways "G" and "J" at 250 feet from the Runway 10R-28L centerline. Provide apron islands at Taxiways "G" and "J." Realign Fred Kane Drive and construct a second parking structure and surface parking lots, as needed.	Year 9: Construct replacement surface parking along Fred Kane Drive.

In addition to the new permanent ARFF building, the Proposed Project and Alternative 1 have differences in the type and amount of vehicular parking proposed for south of the new commercial terminal and along Fred Kane Drive. Under the Proposed Project, a net increase of 669 vehicular parking spaces for the commercial terminal complex in two parking garages and three surface lots is planned. Under Alternative 1, a net increase of 321 vehicular parking spaces for the commercial terminal complex in three surface lots is proposed.

Finally, depending on the alternative, a proposed Highway 68 frontage road would also be changed. Under the Proposed Project it is planned as a full loop, while under Alternative 1 it is planned as a cul-de-sac to avoid some of the rare plants located in the area. The proposed acquisition of a 5.5-acre parcel near the proposed commercial terminal complex would occur under either alternative as would all future long-term projects.

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2 SETTING

2.1 Carbon Sequestration Scientific Basis

Carbon sequestration is the process by which CO_2 is removed from the atmosphere and deposited into a carbon reservoir (e.g., vegetation). Trees and vegetation take in CO_2 from the atmosphere during photosynthesis, break down the CO_2, store the carbon within plant parts, and release the oxygen back into the atmosphere. The removal of trees and other vegetation would be required as a result of the Proposed Project and Alternative 1, thereby removing stored carbon from the site and reducing future sequestration capability. The Proposed Project and Alternative 1 would also plant trees to mitigate potential impacts, and these newly planted trees would store new carbon as their wood mass increases via normal growth.

2.2 Regulatory Setting

The Proposed Project site is located within the North Central Coast Air Basin and is within the jurisdictional boundaries of the Monterey Bay Air Resources District. Currently, neither the County of Monterey nor the Monterey Bay Air Resources District has adopted or established guidance for carbon sequestration analyses.

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3 METHODOLOGY

3.1 Overview

Two models were used to estimate the carbon loss associated with removal of trees and vegetation, as well as the carbon gain from planting new trees. The analysis of loss of sequestered carbon from removing trees and the carbon sequestration associated with planting new trees is based on calculation tools included in the i-Tree software package for the Proposed Project and Alternative 1. Specifically, carbon values were calculated for all mapped trees on site as well as projected values associated with proposed tree plantings.

To evaluate the loss of sequestered carbon associated with removal of vegetation, the calculation methodology and default values provided in the California Emission Estimator Model (CalEEMod) Version 2016.3.2, User's Guide (Appendix A Calculation Details) were used (CAPCOA 2017). To calculate potential CO_2 emissions associated with the one-time change in carbon sequestration capacity of a vegetation land use type, CalEEMod utilizes data and formulas based on the Intergovernmental Panel on Climate Change (IPCC) reports.

Planting trees that will sequester new CO_2 is considered in CalEEMod to result in a one-time carbon-stock change. Consistent with CalEEMod, which is the industry standard criteria air pollutant and greenhouse gas emissions estimator model, this analysis assumes that the sequestered carbon from planting new trees is a one-time occurrence. Trees sequester CO_2 while they are actively growing and the amount of CO_2 sequestered depends on the type of tree. Thereafter, the accumulation of carbon in biomass slows with age, and is assumed to be offset by losses from clipping, pruning, and occasional death. Active growing periods are subject to, among other things, species, climate regime, and planting density; however, for modeling purposes, CalEEMod assumes the IPCC active growing period of 20 years.

It is assumed that all sequestered carbon from the removed vegetation will be returned to the atmosphere; that is, the wood from removed trees and vegetation would not be re-used in a solid form or another form that would retain carbon. The loss of sequestered carbon modeling does not include CO_2 emissions estimates associated with vegetation clearing or removal activities (i.e., "clear and grub"), the transport of vegetative biomass offsite, or the disposal process (e.g., chipping or burning). Greenhouse gas emissions generated during construction activities, including clearing, tree removal, and grading, are estimated in the EIR analysis prepared for the Proposed Project. The sequestered carbon from new trees modeling does not include CO_2 emissions estimates associated with planting, care, and maintenance activities (e.g., tree planting and care, vehicle travel, and maintenance equipment operation). Maintenance activities are anticipated to include the use of hand and small power tools and would not require routine

operation of heavy equipment. Furthermore, maintenance is anticipated to be performed by existing staff. As such, operational greenhouse gas emissions associated with these maintenance activities are anticipated to be minimal.

3.2 Carbon Content Factors

3.2.1 Individual Tree Carbon Content

To evaluate the carbon content of trees proposed for removal, calculations of sequestered carbon, by individually-mapped tree, were performed using i-Tree software, as described below.

To calculate the carbon content of trees on the project site, an analysis of the tree inventory data for the project site (SWCA Environmental Consultants 2018) was conducted using the i-Tree software suite. The i-Tree software suite is a peer-reviewed software program developed and provided by the United States Forest Service (USFS). Eco, an application of the i-Tree software suite (i-Tree Eco 2018), is a model based application that allows users to collect data on an entire tree population and estimate the ecosystem services that the trees provide. Ecosystem services are the environmental benefits provided by urban trees, which include sequestering atmospheric carbon. Eco requires users to collect a minimum of two tree measurements to run the model, species, and trunk diameter at breast height (DBH). While this approach allows users with limited existing inventories to run the model, it also has limitations.

To initiate the i-Tree Eco analysis, the project site's tree inventory data was imported into the Eco application. Specifically, tree identification number, species, and DBH were imported from the inventory to optimize the accuracy of the ecosystem service estimates based on all available information. The data used to run the models discussed herein (SWCA Environmental Consultants 2018) only included species and DBH; therefore, inclusion of additional tree measurement data (e.g., tree height, canopy width, tree health) was not possible. Accordingly, the Eco application makes assumptions based on typical characteristics of the species to create these additional tree measurements.

Following data entry, the i-Tree Eco model was run and total carbon storage estimates were calculated for each tree. The i-Tree Eco software presents sequestered carbon totals in pounds of carbon. To convert this value to metric tons (MT) CO_2, the following equation was used:

$$\text{MT } CO_2 = (\text{Carbon (pounds)} \times 3.67) \times 0.0004535924$$

A summary of estimated sequestered carbon for the project's tree inventory for the Monterey Airport Master Plan (SWCA Environmental Consultants 2018), by tree species, is presented in Table 2. Individual tree carbon storage estimates are presented in Appendix A.

Table 2
Total Estimated Sequestered Carbon for the Monterey Regional Airport's Proposed Master Plan and Associated Development Projects Tree Inventory

Species	Tree Quantity	Total Metric Tons CO_2
Acacia sp.	13	20.74
Black Cottonwood	2	1.66
Coast Live Oak	1,031	1,358.65
Eucalyptus	8	91.28
Italian Stone Pine	2	0.77
Monterey Cypress	34	62.48
Monterey Pine	695	692.44
Pepper	9	8.69
Total	**1,794**	**2,236.71**

Notes: See Appendix A.
CO_2 = carbon dioxide.

To evaluate the quantity of carbon to be sequestered through future tree planting efforts, calculations were made using the i-Tree Planting Calculator (v1.1.3). The i-Tree Planting Calculator (i-Tree Planting 2018) uses species-based biomass equations and geographic variables to calculate sequestered carbon content for tree planting projects. For this analysis, it was assumed that the Airport will mitigate for a portion of the tree impacts associated with implementation of the Proposed Project and Alternative 1 by replanting 200 coast live oak (*Quercus agrifolia*) trees. Trees were assumed to be commonly-available 15-gallon container stock with trunk diameter measurements of 1-inch at the time of planting. The analysis also assumed that the trees would be planted in full sun and included a tree mortality factor of 10 percent. Finally, consistent with the CalEEMod program and IPCC standards, an active growing period of 20 years was assumed. As with the i-Tree Eco software, the i-Tree Planting Calculator presents sequestered carbon totals in pounds of carbon. To convert this value to MT CO_2, the following equation was used:

$$\text{MT } CO_2 = (\text{Carbon (pounds)} \times 3.67) \times 0.0004535924$$

The output summary table generated from the i-Tree Planting Calculator is included as Appendix B.

3.2.2 Default CalEEMod Carbon Content Factors

CalEEMod calculates potential CO_2 releases associated with vegetation removal activities resulting from land use change and provides default annual carbon accumulation per acre for six[1]

[1] Forest land (scrub), forest land (trees), cropland, grassland, wetlands, and other.

general IPCC vegetation classifications. The mass of sequestered carbon per unit area (expressed in units of MT of CO_2 per acre) is dependent on the vegetation type. Assuming that the sequestered carbon is released as CO_2 after removal of the vegetation, CalEEMod estimates annual CO_2 by multiplying total biomass (metric tons of dry matter per acre) from IPCC data by the carbon fraction in plant material, and then converts metric tons of carbon to metric tons of CO_2 based on the molecular weights of carbon and CO_2. CalEEMod default carbon content values were assumed to estimate the loss of sequestered carbon (release of CO_2) from the removal of grassland/ruderal (represented in CalEEMod as grassland, 4.31 MT CO_2 per acre) and shrubland (represented in CalEEMod as scrub, 14.3 MT CO_2 per acre) vegetation categories, which are based on data and formulas provided in the IPCC reports.

4 LOSS OF SEQUESTERED CARBON

4.1 Loss of Sequestered Carbon in Trees

Inventory data provided for the project (SWCA Environmental Consultants 2018) included designations of impact (removal), by individual tree for the Proposed Project and Alternative 1. Following calculations of MT CO_2 sequestered by individual trees, the data set was queried to determine the quantity of sequestered carbon in trees proposed for removal.

Table 3 presents the loss of sequestered carbon in trees for the Proposed Project.

Table 3
Estimated Loss of Sequestered Carbon in Trees - Proposed Project

Species	Tree Quantity	Total Metric Tons CO_2
Acacia sp.	9	16.44
Black Cottonwood	2	1.66
Coast Live Oak	705	917.42
Eucalyptus	6	55.48
Italian Stone Pine	2	0.77
Monterey Cypress	8	20.73
Monterey Pine	323	381.62
Pepper	9	8.69
Total	**1,064**	**1,402.81**

Notes: See Appendix A.
CO_2 = carbon dioxide.

As presented in Table 3, the loss of sequestered carbon resulting from removal of 1,064 trees for the Proposed Project would be approximately 1,403 metric tons CO_2.

Table 4 presents the loss of sequestered carbon in trees for Alternative 1.

Table 4
Estimated Loss of Sequestered Carbon in Trees - Alternative 1

Species	Tree Quantity	Total Metric Tons CO_2
Acacia sp.	9	16.44
Black Cottonwood	2	1.66
Coast Live Oak	657	905.71
Eucalyptus	6	55.48
Italian Stone Pine	2	0.77
Monterey Cypress	24	42.23
Monterey Pine	305	384.25

Table 4
Estimated Loss of Sequestered Carbon in Trees - Alternative 1

Species	Tree Quantity	Total Metric Tons CO_2
Pepper	9	8.69
Total	**1,014**	**1,415.22**

Notes: See Appendix A.
CO_2 = carbon dioxide.

As presented in Table 4, the loss of sequestered carbon resulting from removal of 1,014 trees for Alternative 1 would be approximately 1,415 metric tons CO_2. While there is a net reduction in the quantity of trees removed under Alternative 1 as compared with the Proposed Project, the higher sequestered carbon loss value under Alternative 1 is attributed to the sizes of the removed trees. Specifically, there is a higher number of larger trees identified for removal under Alternative 1 than under the Proposed Project. This difference results in a higher sequestered carbon loss total as tree size is directly correlated with the quantity of sequestered carbon for each tree.

4.2 Loss of Sequestered Carbon from Vegetation

As discussed in Section 3.2.2, the loss of sequestered carbon is estimated based on the carbon content for each vegetation land use type (MT CO_2 per acre) as provided in CalEEMod (CAPCOA 2017) and the loss of acreage for each vegetation land use type as provided in the *Monterey Regional Airport Master Plan Tree and Vegetation Type Inventory* report (SWCA Environmental Consultants 2018). The vegetation classifications provided in the *Monterey Regional Airport Master Plan Tree and Vegetation Type Inventory* report reflect the vegetation community (understory) without the tree species considered to avoid double counting.

The Proposed Project would permanently impact 25.6 acres of grassland/ruderal and 18.90 acres of shrubland (SWCA Environmental Consultants 2018). The loss of sequestered carbon associated with Proposed Project vegetation removal is presented in Table 5.

Table 5
Estimated Loss of Sequestered Carbon in Vegetation - Proposed Project

Project Vegetation Land Use	Vegetation Land Use Category	Vegetation Land Use Category Subtype	Biogenic CO_2 Emissions (MT CO_2/acre)	Net Loss (acres)	Sequestered Carbon (Metric Tons CO_2)
Grassland/Ruderal	Grassland	Grassland	4.31	25.60	110.34
Shrubland	Forest Land	Scrub	14.3	18.90	270.27
Total					**380.61**

Notes: See Appendix C.
CO_2 – carbon dioxide.

As presented in Table 5, Proposed Project removal of grassland/ruderal and shrubland would result in the release of approximately 381 MT CO_2.

Alternative 1 would permanently impact 25.2 acres of grassland/ruderal and 18.20 acres of shrubland (SWCA Environmental Consultants 2018). The loss of sequestered carbon associated with Alternative 1 vegetation removal is presented in Table 6.

Table 6
Estimated Loss of Sequestered Carbon in Vegetation – Alternative 1

Project Vegetation Land Use	Vegetation Land Use Category	Vegetation Land Use Category Subtype	Biogenic CO_2 Emissions (MT CO_2/acre)	Net Loss (acres)	Sequestered Carbon (Metric Tons CO_2)
Grassland/Ruderal	Grassland	Grassland	4.31	25.20	108.61
Shrubland	Forest Land	Scrub	14.3	18.20	260.26
Total					**368.87**

Notes: See Appendix C.
CO_2 – carbon dioxide.

As presented in Table 6, Alternative 1 removal of grassland/ruderal and shrubland would result in the release of approximately 369 MT CO_2.

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5 GAIN OF SEQUESTERED CARBON FROM TREE PLANTINGS

The results of the i-Tree Planting Calculator revealed that a total of 2,537.2 pounds of CO_2 would be sequestered by each planted coast live oak tree at the end of a 20-year growing period. Collectively, 200 planted trees would sequester 507,440 pounds of CO_2 over this same timeframe. Based on the conversion formula presented in Section 3.2.1, the 200 planted coast live oak trees during implementation of the Proposed Project or Alternative 1 would sequester 844.73 MT CO_2 at the end of a 20-year growing period.

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6 CONCLUSIONS

Implementation of the Proposed Project and Alternative 1 would result in a loss of sequestered carbon due to tree and vegetation removal on site, but would also sequester new carbon by planting trees onsite. Table 7 presents the estimate net change in sequestered carbon resulting from implementation of the Proposed Project and Alternative 1.

Table 7
Estimated Net Change in Sequestered Carbon

Category	Metric Tons CO_2
Proposed Project	
Loss of Sequestered Carbon in Trees	1,402.81
Loss of Sequestered Carbon in Vegetation	380.61
Gain of Sequestered Carbon from Tree Plantings	(844.73)
Net Change	**938.69**
Alternative 1	
Loss of Sequestered Carbon in Trees	1,415.22
Loss of Sequestered Carbon in Vegetation	368.87
Gain of Sequestered Carbon from Tree Plantings	(844.73)
Net Change	**939.36**

Notes: See Appendices A and B.
CO_2 – carbon dioxide.
Numbers in parentheses represent negative numbers.

As shown in Table 7, the net change in sequestered CO_2 from implementation of the Proposed Project is approximately 939 MT CO_2. The net change in sequestered CO_2 from implementation of Alternative 1 is approximately 939 MT CO_2. Accordingly, implementation of the Proposed Project and Alternative 1 would result in approximately the same release of CO_2 into the atmosphere as a result of loss of sequestered carbon associated with tree and vegetation removal, and the gain of sequestered carbon from planting trees.

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8 PREPARERS

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APPENDIX A

Individual Existing Tree Carbon Storage Estimates

Maintenance Task Proposed Alternative	Maintenance Task ESA	Common Name	Field DBH Measurement	MultBranch	# of Branches	Proposed Alternative	Environmentally Sensitive Alternative	Branch 1	Branch 2	Branch 3	Branch 4	Branch 5	Branch 6	Branch 7	Branch 8	Branch 9	Branch 10	Branch 11	Branch 12	Branch 13	TOTAL	AverageDBH	Carbon Storage(lb)	MTCO2
Remove	Remove	Acacia sp.	5.8	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	5.8	4.8												10.6	5.3	166.40	0.276752
Remove	Remove	Acacia sp.	6.2	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	6.2													6.2	6.2	107.10	0.178126
Remove	Remove	Acacia sp.	9.2	Yes	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	9.2	8.2												17.4	8.7	515.50	0.857364
Remove	Remove	Acacia sp.	13.2	Yes	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	13.2	12.2												25.4	12.7	1233.70	2.051854
Remove	Remove	Acacia sp.	14.2	Yes	7	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	14.2	13.2	12.2	11.2	10.2	9.2	8.2							78.4	11.2	3784.50	6.294269
Remove	Remove	Acacia sp.	8.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0													8.0	8.0	190.90	0.317499
Remove	Remove	Acacia sp.	8.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.2													8.2	8.2	202.10	0.336127
Remove	Remove	Acacia sp.	6.5	No	4	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.5	5.5	4.5	3.5										20.0	5.0	336.80	0.560156
Remove	Remove	Acacia sp.	27.5	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	27.5													27.5	27.5	3345.20	5.563639
		Acacia sp.	5.3	No	1			5.3													5.3	5.3	75.70	0.125902
		Acacia sp.	4.5	Yes	2			4.5	3.5												8.0	4.0	88.80	0.14769
		Acacia sp.	4.6	Yes	2			4.6	3.6												8.2	4.1	94.00	0.156338
		Acacia sp.	23.6	No	1			23.6													23.6	23.6	2327.90	3.871695
Remove	Remove	Black Cottonwood	5.4	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	5.4													5.4	5.4	46.40	0.077171
Remove	Remove	Black Cottonwood	18.3	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	18.3													18.3	18.3	951.30	1.582174
Remove	Remove	Coast Live Oak	8.3	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	8.3													8.3	8.3	228.70	0.380367
Remove		Coast Live Oak	8.7	No	1	Proposed Project - Highway68FrontLoop		8.7													8.7	8.7	257.00	0.427435
Remove	Remove	Coast Live Oak	5.1	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	5.1													5.1	5.1	69.30	0.115258
Remove		Coast Live Oak	6.2	No	1	Proposed Project - Highway68FrontLoop		6.2													6.2	6.2	111.60	0.18561
Remove	Remove	Coast Live Oak	6.5	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	6.5													6.5	6.5	125.40	0.208562
Remove		Coast Live Oak	7.6	No	1	Proposed Project - Highway68FrontLoop		7.6													7.6	7.6	184.00	0.306023
Remove		Coast Live Oak	9.7	No	1	Proposed Project - Highway68FrontLoop		9.7													9.7	9.7	336.00	0.558825
Remove	Remove	Coast Live Oak	10.3	Yes	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	10.3													10.3	10.3	389.70	0.648138
Remove	Remove	Coast Live Oak	12.0	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	12.0													12.0	12.0	568.00	0.944681
Remove	Remove	Coast Live Oak	12.1	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	12.1													12.1	12.1	579.80	0.964306
Remove	Remove	Coast Live Oak	13.1	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	13.1													13.1	13.1	704.90	1.172369
Remove	Remove	Coast Live Oak	4.8	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	4.8													4.8	4.8	59.90	0.099624
Remove	Remove	Coast Live Oak	4.9	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	4.9													4.9	4.9	63.00	0.10478
Remove	Remove	Coast Live Oak	5.1	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	5.1													5.1	5.1	69.30	0.115258
Remove	Remove	Coast Live Oak	6.1	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	6.1													6.1	6.1	107.30	0.178458
Remove	Remove	Coast Live Oak	5.4	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	5.4													5.4	5.4	79.60	0.132388
Remove	Remove	Coast Live Oak	5.5	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	5.5													5.5	5.5	83.30	0.138542
Remove	Remove	Coast Live Oak	6.1	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	6.1													6.1	6.1	107.30	0.178458
Remove	Remove	Coast Live Oak	5.6	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	5.6													5.6	5.6	87.00	0.144696
Remove	Remove	Coast Live Oak	6.2	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	6.2													6.2	6.2	111.60	0.18561
Remove		Coast Live Oak	5.7	No	1	Proposed Project - Highway68FrontLoop		5.7													5.7	5.7	90.90	0.151182
Remove	Remove	Coast Live Oak	5.8	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	5.8													5.8	5.8	94.80	0.157669
Remove		Coast Live Oak	6.4	No	1	Proposed Project - Highway68FrontLoop		6.4													6.4	6.4	120.70	0.200745
Remove	Remove	Coast Live Oak	6.5	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	6.5													6.5	6.5	125.40	0.208562
Remove	Remove	Coast Live Oak	7.2	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	7.2													7.2	7.2	161.20	0.268103
Remove	Remove	Coast Live Oak	7.3	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	7.3													7.3	7.3	166.70	0.277251
Remove	Remove	Coast Live Oak	7.6	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	7.6													7.6	7.6	184.00	0.306023
Remove	Remove	Coast Live Oak	6.4	Yes	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	6.4	5.4												11.8	5.9	233.70	0.388683
Remove	Remove	Coast Live Oak	6.4	Yes	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	6.4	5.4												11.8	5.9	233.70	0.388683
Remove		Coast Live Oak	7.4	Yes	2	Proposed Project - Highway68FrontLoop		7.4	6.4												13.8	6.9	343.30	0.570966
Remove	Remove	Coast Live Oak	8.0	Yes	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	8.0	7												15.0	7.5	421.20	0.700527
Remove	Remove	Coast Live Oak	8.4	Yes	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	8.4	7.4												15.8	7.9	478.60	0.795993
Remove	Remove	Coast Live Oak	8.4	Yes	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	8.4	7.4												15.8	7.9	478.60	0.795993
Remove	Remove	Coast Live Oak	8.6	Yes	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	8.6	7.6												16.2	8.1	509.00	0.846554
Remove		Coast Live Oak	9.2	Yes	2	Proposed Project - Highway68FrontLoop		9.2	8.2												17.4	8.7	606.50	1.008713
Remove	Remove	Coast Live Oak	9.8	Yes	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	9.8	8.8												18.6	9.3	714.40	1.188169
Remove	Remove	Coast Live Oak	8.2	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	8.2													8.2	8.2	222.10	0.36939
Remove	Remove	Coast Live Oak	8.2	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	8.2													8.2	8.2	222.10	0.36939
Remove	Remove	Coast Live Oak	8.6	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	8.6													8.6	8.6	249.70	0.415294
Remove	Remove	Coast Live Oak	8.8	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	8.8													8.8	8.8	264.30	0.439576
Remove	Remove	Coast Live Oak	8.9	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	8.9													8.9	8.9	271.80	0.45205
Remove		Coast Live Oak	9.9	No	2	Proposed Project - Highway68FrontLoop		9.9	8.9												18.8	9.4	733.40	1.219769
Remove		Coast Live Oak	10.3	Yes	2	Proposed Project - Highway68FrontLoop		10.3	9.3												19.6	9.8	812.40	1.35116
Remove	Remove	Coast Live Oak	10.2	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	10.2													10.2	10.2	380.40	0.63267
Remove	Remove	Coast Live Oak	10.8	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	10.8													10.8	10.8	438.00	0.728469
Remove	Remove	Coast Live Oak	11.1	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	11.1													11.1	11.1	468.70	0.779528
Remove	Remove	Coast Live Oak	11.2	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	11.2													11.2	11.2	479.10	0.796825
Remove	Remove	Coast Live Oak	11.3	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	11.3													11.3	11.3	489.80	0.814621
Remove	Remove	Coast Live Oak	11.5	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	11.5													11.5	11.5	511.50	0.850712
Remove		Coast Live Oak	12.3	No	1	Proposed Project - Highway68FrontLoop		12.3													12.3	12.3	603.60	1.00389
Remove	Remove	Coast Live Oak	12.4	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	12.4													12.4	12.4	615.70	1.024014
Remove	Remove	Coast Live Oak	12.6	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	12.6													12.6	12.6	640.60	1.065427
Remove	Remove	Coast Live Oak	13.6	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	13.6													13.6	13.6	773.00	1.285631
Remove	Remove	Coast Live Oak	4.5	Yes	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	4.5	3.5												8.0	4.0	90.90	0.151182
Remove	Remove	Coast Live Oak	4.5	Yes	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	4.5	3.5												8.0	4.0	90.90	0.151182
Remove	Remove	Coast Live Oak	4.5	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	4.5	3.5												8.0	4.0	90.90	0.151182
Remove		Coast Live Oak	11.5	Yes	2	Proposed Project - Highway68FrontLoop		11.5	10.5												22.0	11.0	1073.30	1.785081
Remove	Remove	Coast Live Oak	5.1	Yes	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	5.1	4.1												9.2	4.6	127.40	0.211888
Remove		Coast Live Oak	5.1	Yes	2	Proposed Project - Highway68FrontLoop		5.1	4.1												9.2	4.6	127.40	0.211888
Remove		Coast Live Oak	12.9	Yes	2	Proposed Project - Highway68FrontLoop		12.9	11.9												24.8	12.4	1445.40	2.403947
Remove	Remove	Coast Live Oak	13.2	Yes	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	13.2	12.2												25.4	12.7	1533.40	2.550306
Remove		Coast Live Oak	13.6	Yes	2	Proposed Project - Highway68FrontLoop		13.6	12.6												26.2	13.1	1656.40	2.754876
Remove		Coast Live Oak	13.9	Yes	2	Proposed Project - Highway68FrontLoop		13.9	12.9												26.8	13.4	1752.50	2.914707
Remove	Remove	Coast Live Oak	17.6	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	17.6	16.6												34.2	17.1	3218.70	5.353247
Remove	Remove	Coast Live Oak	18.5	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	18.5	17.5												36.0	18.0	3658.40	6.084544
Remove	Remove	Coast Live Oak	19.2	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	19.2	18.2												37.4	18.7	4023.10	6.691102
Remove	Remove	Coast Live Oak	19.2	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	19.2	18.2												37.4	18.7	4023.10	6.691102
Remove	Remove	Coast Live Oak	31.0	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	31.0	30												61.0	30.5	13336.60	22.18104
Remove		Coast Live Oak	6.1	Yes	3	Proposed Project - Highway68FrontLoop		6.1	5.1	4.1											15.3	5.1	275.20	0.457705
Remove	Remove	Coast Live Oak	6.4	Yes	3	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	6.4	5.4	4.4											16.2	5.4	315.80	0.525229
Remove		Coast Live Oak	7.1	Yes	3	Proposed Project - Highway68FrontLoop		7.1	6.1	5.1											18.3	6.1	424.20	0.705517
Remove	Remove	Coast Live Oak	8.2	Yes	3	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	8.2	7.2	6.2											21.6	7.2	634.40	1.055115
Remove	Remove	Coast Live Oak	9.0	Yes	3	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	9.0	8	7											24.0	8.0	819.80	1.363467
Remove		Coast Live Oak	9.2	Yes	3	Proposed Project - Highway68FrontLoop		9.2	8.2	7.2											24.6	8.2	870.50	1.44779
Remove		Coast Live Oak	10.8	Yes	3	Proposed Project - Highway68FrontLoop		10.8	9.8	8.8											29.4	9.8	1341.60	2.23131

Appendix A
Individual Existing Tree Carbon Storage Estimates

Maintenance Task Proposed Alternative	Maintenance Task ESA	Common Name	Field DBH Measurement	MultBranch	# of Branches	Proposed Alternative	Environmentally Sensitive Alternative	Branch 1	Branch 2	Branch 3	Branch 4	Branch 5	Branch 6	Branch 7	Branch 8	Branch 9	Branch 10	Branch 11	Branch 12	Branch 13	TOTAL	AverageDBH	Carbon Storage(lb)	MTCO2
Remove	Remove	Coast Live Oak	14.2	No	3	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	14.2	13.2	12.2											39.6	13.2	2807.90	4.670017
Remove	Remove	Coast Live Oak	16.7	Yes	3	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	16.7	15.7	14.7											47.1	15.7	4324.30	7.192049
Remove	Remove	Coast Live Oak	17.2	Yes	3	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	17.2	16.2	15.2											48.6	16.2	4675.90	7.77682
Remove	Remove	Coast Live Oak	20.7	Yes	3	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	20.7	19.7	18.7											59.1	19.7	7620.00	12.67336
Remove	Remove	Coast Live Oak	21.6	Yes	3	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	21.6	20.6	19.6											61.8	20.6	8520.20	14.17055
Remove	Remove	Coast Live Oak	8.9	Yes	4	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	8.9	7.9	6.9	5.9										29.6	7.4	972.70	1.617766
Remove	Remove	Coast Live Oak	9.6	Yes	4	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	9.6	8.6	7.6	6.6										32.4	8.1	1212.30	2.016262
Remove	Remove	Coast Live Oak	8.2	Yes	8	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	8.2	7.2	6.2	5.2	4.2	3.2	2.2	1.2						37.6	4.7	916.60	1.524462
Remove	Remove	Coast Live Oak	8.4	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	8.4													8.4	8.4	235.60	0.391843
Remove	Remove	Coast Live Oak	8.5	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	8.5													8.5	8.5	242.60	0.403485
Remove	Remove	Coast Live Oak	8.9	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	8.9													8.9	8.9	271.80	0.45205
Remove	Remove	Coast Live Oak	4.5	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	4.5													4.5	4.5	51.20	0.085154
Remove	Remove	Coast Live Oak	5.0	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	5.0													5.0	5.0	66.00	0.109769
Remove	Remove	Coast Live Oak	5.0	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	5.0													5.0	5.0	66.00	0.109769
Remove	Remove	Coast Live Oak	5.0	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	5.0													5.0	5.0	66.00	0.109769
Remove	Remove	Coast Live Oak	9.1	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	9.1													9.1	9.1	287.00	0.47733
Remove	Remove	Coast Live Oak	5.0	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	5.0													5.0	5.0	66.00	0.109769
Remove	Remove	Coast Live Oak	5.2	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	5.2													5.2	5.2	72.70	0.120913
Remove	Remove	Coast Live Oak	6.0	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	6.0													6.0	6.0	103.00	0.171307
Remove	Remove	Coast Live Oak	6.1	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	6.1													6.1	6.1	107.30	0.178458
Remove	Remove	Coast Live Oak	6.2	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	6.2													6.2	6.2	111.60	0.18561
Remove	Remove	Coast Live Oak	6.3	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	6.3													6.3	6.3	116.10	0.193094
Remove	Remove	Coast Live Oak	6.7	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	6.7													6.7	6.7	135.00	0.224528
Remove	Remove	Coast Live Oak	6.8	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	6.8													6.8	6.8	140.10	0.23301
Remove	Remove	Coast Live Oak	6.9	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	6.9													6.9	6.9	145.10	0.241326
Remove	Remove	Coast Live Oak	6.9	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	6.9													6.9	6.9	145.10	0.241326
Remove	Remove	Coast Live Oak	7.1	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	7.1													7.1	7.1	155.70	0.258956
Remove	Remove	Coast Live Oak	7.7	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	7.7													7.7	7.7	190.10	0.316169
Remove	Remove	Coast Live Oak	8.0	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	8.0													8.0	8.0	208.90	0.347436
Remove	Remove	Coast Live Oak	9.8	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	9.8													9.8	9.8	344.70	0.573295
Remove	Remove	Coast Live Oak	10.0	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	10.0													10.0	10.0	362.30	0.602567
Remove	Remove	Coast Live Oak	8.0	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	8.0													8.0	8.0	208.90	0.347436
Remove	Remove	Coast Live Oak	10.0	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	10.0													10.0	10.0	362.30	0.602567
Remove	Remove	Coast Live Oak	10.1	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	10.1													10.1	10.1	371.30	0.617535
Remove	Remove	Coast Live Oak	10.6	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	10.6													10.6	10.6	418.30	0.695704
Remove	Remove	Coast Live Oak	11.1	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	11.1													11.1	11.1	468.70	0.779528
Remove	Remove	Coast Live Oak	11.2	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	11.2													11.2	11.2	479.10	0.796825
Remove	Remove	Coast Live Oak	11.7	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	11.7													11.7	11.7	533.60	0.887468
Remove	Remove	Coast Live Oak	12.0	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	12.0													12.0	12.0	568.00	0.944681
Remove	Remove	Coast Live Oak	13.4	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	13.4													13.4	13.4	745.40	1.239727
Remove	Remove	Coast Live Oak	13.5	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	13.5													13.5	13.5	759.10	1.262513
Remove	Remove	Coast Live Oak	14.0	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	14.0													14.0	14.0	830.20	1.380764
Remove	Remove	Coast Live Oak	15.0	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	15.0													15.0	15.0	978.00	1.626581
Remove	Remove	Coast Live Oak	15.5	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	15.5													15.5	15.5	1061.00	1.764624
Remove	Remove	Coast Live Oak	15.5	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	15.5													15.5	15.5	1061.00	1.764624
Remove	Remove	Coast Live Oak	17.7	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	17.7													17.7	17.7	1476.20	2.455173
Remove	Remove	Coast Live Oak	21.2	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	21.2													21.2	21.2	2314.20	3.84891
Remove	Remove	Coast Live Oak	6.0	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	6.0													6.0	6.0	103.00	0.171307
Remove	Remove	Coast Live Oak	6.1	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	6.1													6.1	6.1	107.30	0.178458
Remove	Remove	Coast Live Oak	6.3	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	6.3													6.3	6.3	116.10	0.193094
Remove	Remove	Coast Live Oak	6.3	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	6.3													6.3	6.3	116.10	0.193094
Remove	Remove	Coast Live Oak	6.7	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	6.7													6.7	6.7	135.00	0.224528
Remove	Remove	Coast Live Oak	6.9	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	6.9													6.9	6.9	145.10	0.241326
Remove	Remove	Coast Live Oak	6.9	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	6.9													6.9	6.9	145.10	0.241326
Remove	Remove	Coast Live Oak	6.3	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	6.3	5.3												11.6	5.8	224.20	0.372883
Remove	Remove	Coast Live Oak	6.6	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	6.6	5.6												12.2	6.1	253.70	0.421946
Remove	Remove	Coast Live Oak	6.6	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	6.6	5.6												12.2	6.1	253.70	0.421946
Remove	Remove	Coast Live Oak	6.9	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	6.9	5.9												12.8	6.4	285.40	0.474669
Remove	Remove	Coast Live Oak	7.1	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	7.1	6.1												13.2	6.6	307.80	0.511924
Remove	Remove	Coast Live Oak	7.1	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	7.1	6.1												13.2	6.6	307.80	0.511924
Remove	Remove	Coast Live Oak	8.6	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	8.6	7.6												16.2	8.1	509.00	0.846554
Remove	Remove	Coast Live Oak	8.9	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	8.9	7.9												16.8	8.4	556.40	0.925388
Remove	Remove	Coast Live Oak	9.8	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	9.8	8.8												18.6	9.3	714.40	1.188169
Remove	Remove	Coast Live Oak	9.9	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	9.9	8.9												18.8	9.4	733.40	1.219769
Remove	Remove	Coast Live Oak	8.2	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	8.2													8.2	8.2	222.10	0.36939
Remove	Remove	Coast Live Oak	8.6		1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	8.6													8.6	8.6	249.70	0.415294
Remove	Remove	Coast Live Oak	8.7	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	8.7													8.7	8.7	257.00	0.427435
Remove	Remove	Coast Live Oak	9.2		1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	9.2													9.2	9.2	294.90	0.490469
Remove	Remove	Coast Live Oak	10.1	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	10.1	9.1												19.2	9.6	772.30	1.284467
Remove	Remove	Coast Live Oak	10.3	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	10.3	9.3												19.6	9.8	812.40	1.35116
Remove	Remove	Coast Live Oak	10.3	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	10.3	9.3												19.6	9.8	812.40	1.35116
Remove	Remove	Coast Live Oak	10.3	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	10.3	9.3												19.6	9.8	812.40	1.35116
Remove	Remove	Coast Live Oak	9.9	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	9.9													9.9	9.9	353.50	0.587931
Remove	Remove	Coast Live Oak	10.2	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	10.2													10.2	10.2	380.40	0.63267
Remove	Remove	Coast Live Oak	10.6	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	10.6													10.6	10.6	418.30	0.695704
Remove	Remove	Coast Live Oak	11.3	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	11.3													11.3	11.3	489.80	0.814621
Remove	Remove	Coast Live Oak	11.3	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	11.3													11.3	11.3	489.80	0.814621
Remove	Remove	Coast Live Oak	11.5	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	11.5													11.5	11.5	511.50	0.850712
Remove	Remove	Coast Live Oak	13.4	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	13.4													13.4	13.4	745.40	1.239727
Remove	Remove	Coast Live Oak	13.8	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	13.8													13.8	13.8	801.30	1.332699
Remove	Remove	Coast Live Oak	15.1	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	15.1													15.1	15.1	994.10	1.653358
Remove	Remove	Coast Live Oak	15.2	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	15.2													15.2	15.2	1010.70	1.680967
Remove	Remove	Coast Live Oak	16.7	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	16.7													16.7	16.7	1277.20	2.124202
Remove	Remove	Coast Live Oak	5.0	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	5.0	4												9.0	4.5	120.80	0.200911
Remove	Remove	Coast Live Oak	5.0	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	5.0	4												9.0	4.5	120.80	0.200911
Remove	Remove	Coast Live Oak	10.9	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	10.9	9.9												20.8	10.4	939.90	1.563214
Remove	Remove	Coast Live Oak	11.1	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	11.1	10.1												21.2	10.6	979.10	1.62841
Remove	Remove	Coast Live Oak	11.3	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	11.3	10.3												21.6	10.8	1025.60	1.705748
Remove	Remove	Coast Live Oak	11.6	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	11.6	10.6												22.2	11.1	1097.70	1.825662

Maintenance Task Proposed Alternative	Maintenance Task ESA	Common Name	Field DBH Measurement	MultBranch	# of Branches	Proposed Alternative	Environmentally Sensitive Alternative	Branch 1	Branch 2	Branch 3	Branch 4	Branch 5	Branch 6	Branch 7	Branch 8	Branch 9	Branch 10	Branch 11	Branch 12	Branch 13	TOTAL	AverageDBH	Carbon Storage(lb)	MTCO2
Remove	Remove	Coast Live Oak	11.8	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	11.8	10.8												22.6	11.3	1147.40	1.908322
Remove	Remove	Coast Live Oak	12.0	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	12.0	11												23.0	11.5	1198.50	1.99331
Remove	Remove	Coast Live Oak	12.2	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	12.2	11.2												23.4	11.7	1251.00	2.080627
Remove	Remove	Coast Live Oak	5.0	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	5.0	4												9.0	4.5	120.80	0.200911
Remove	Remove	Coast Live Oak	5.0	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	5.0	4												9.0	4.5	120.80	0.200911
Remove	Remove	Coast Live Oak	5.0	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	5.0	4												9.0	4.5	120.80	0.200911
Remove	Remove	Coast Live Oak	6.0	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	6.0	5												11.0	5.5	197.00	0.327645
Remove	Remove	Coast Live Oak	13.1	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	13.1	12.1												25.2	12.6	1504.10	2.501575
Remove	Remove	Coast Live Oak	13.4	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	13.4	12.4												25.8	12.9	1594.20	2.651427
Remove	Remove	Coast Live Oak	14.3	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	14.3	13.3												27.6	13.8	1885.60	3.136075
Remove	Remove	Coast Live Oak	21.0	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	21.0	20												41.0	20.5	5062.00	8.41897
Remove	Remove	Coast Live Oak	5.5	Yes	3	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	5.5	4.5	3.5											13.5	4.5	203.90	0.33912
Remove	Remove	Coast Live Oak	5.8	Yes	3	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	5.8	4.8	3.8											14.4	4.8	237.90	0.395668
Remove	Remove	Coast Live Oak	6.0	Yes	3	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	6.0	5	4											15.0	5.0	262.40	0.436416
Remove	Remove	Coast Live Oak	6.1	Yes	3	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	6.1	5.1	4.1											15.3	5.1	275.20	0.457705
Remove	Remove	Coast Live Oak	7.0	Yes	3	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	7.0	6	5											18.0	6.0	407.50	0.677742
Remove	Remove	Coast Live Oak	7.2	Yes	3	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	7.2	6.2	5.2											18.6	6.2	441.30	0.733957
Remove	Remove	Coast Live Oak	7.9	Yes	3	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	7.9	6.9	5.9											20.7	6.9	572.10	0.9515
Remove	Remove	Coast Live Oak	8.2	Yes	3	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	8.2	7.2	6.2											21.6	7.2	634.40	1.055115
Remove	Remove	Coast Live Oak	8.4	Yes	3	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	8.4	7.4	6.4											22.2	7.4	678.10	1.127796
Remove	Remove	Coast Live Oak	9.1	Yes	3	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	9.1	8.1	7.1											24.3	8.1	844.90	1.405213
Remove	Remove	Coast Live Oak	9.5	Yes	3	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	9.5	8.5	7.5											25.5	8.5	944.30	1.570532
Remove	Remove	Coast Live Oak	9.6	Yes	3	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	9.6	8.6	7.6											25.8	8.6	971.80	1.616269
Remove	Remove	Coast Live Oak	9.6	Yes	3	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	9.6	8.6	7.6											25.8	8.6	971.80	1.616269
Remove	Remove	Coast Live Oak	10.5	Yes	3	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	10.5	9.5	8.5											28.5	9.5	1242.40	2.066323
Remove	Remove	Coast Live Oak	10.5	Yes	3	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	10.5	9.5	8.5											28.5	9.5	1242.40	2.066323
Remove	Remove	Coast Live Oak	12.6	Yes	3	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	12.6	11.6	10.6											34.8	11.6	2036.80	3.387546
Remove	Remove	Coast Live Oak	12.9	Yes	3	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	12.9	11.9	10.9											35.7	11.9	2169.90	3.608914
Remove	Remove	Coast Live Oak	13.3	Yes	3	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	13.3	12.3	11.3											36.9	12.3	2355.60	3.917765
Remove	Remove	Coast Live Oak	14.2	Yes	3	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	14.2	13.2	12.2											39.6	13.2	2807.90	4.670017
Remove	Remove	Coast Live Oak	16.4	Yes	3	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	16.4	15.4	14.4											46.2	15.4	4121.10	6.854093
Remove	Remove	Coast Live Oak	20.2	Yes	3	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	20.2	19.2	18.2											57.6	19.2	7145.80	11.88468
Remove	Remove	Coast Live Oak	4.5	Yes	4	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	4.5	3.5	2.5	1.5										12.0	3.0	120.80	0.200911
Remove	Remove	Coast Live Oak	9.7	Yes	4	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	9.7	8.7	7.7	6.7										32.8	8.2	1249.20	2.077633
Remove	Remove	Coast Live Oak	10.1	Yes	4	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	10.1	9.1	8.1	7.1										34.4	8.6	1403.50	2.33426
Remove	Remove	Coast Live Oak	11.7	Yes	4	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	11.7	10.7	9.7	8.7										40.8	10.2	2134.20	3.549539
Remove	Remove	Coast Live Oak	12.9	Yes	4	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	12.9	11.9	10.9	9.9										45.6	11.4	2808.70	4.671347
Remove	Remove	Coast Live Oak	12.9	Yes	4	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	12.9	11.9	10.9	9.9										45.6	11.4	2808.70	4.671347
Remove	Remove	Coast Live Oak	13.3	Yes	4	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	13.3	12.3	11.3	10.3										47.2	11.8	3059.00	5.087639
Remove	Remove	Coast Live Oak	9.9	Yes	5	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	9.9	8.9	7.9	6.9	5.9									39.5	7.9	1527.90	2.541158
Remove	Remove	Coast Live Oak	12.0	Yes	5	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	12.0	11	10	9	8									50.0	10.0	2709.90	4.507026
Remove	Remove	Coast Live Oak	15.1	Yes	5	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	15.1	14.1	13.1	12.1	11.1									65.5	13.1	5266.50	8.759088
Remove	Remove	Coast Live Oak	12.8	Yes	7	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	12.8	11.8	10.8	9.8	8.8	7.8	6.8							68.6	9.8	3697.50	6.149574
Remove	Remove	Coast Live Oak	9.8	Yes	9	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	9.8	8.8	7.8	6.8	5.8	4.8	3.8	2.8	1.8					52.2	5.8	1617.70	2.690511
Remove	Remove	Coast Live Oak	9.0	Yes	10	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	9.0	8	7	6	5	4	3	2	1	1				46.0	4.6	1232.50	2.049858
Remove	Remove	Coast Live Oak	11.0	Yes	11	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	11.0	10	9	8	7	6	5	4	3	2	1			66.0	6.0	2324.40	3.865874
Remove	Remove	Coast Live Oak	8.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0													8.0	8.0	208.90	0.347436
Remove	Remove	Coast Live Oak	8.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0													8.0	8.0	208.90	0.347436
Remove	Remove	Coast Live Oak	8.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0													8.0	8.0	208.90	0.347436
Remove	Remove	Coast Live Oak	8.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0													8.0	8.0	208.90	0.347436
Remove	Remove	Coast Live Oak	8.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0													8.0	8.0	208.90	0.347436
Remove	Remove	Coast Live Oak	8.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0													8.0	8.0	208.90	0.347436
Remove	Remove	Coast Live Oak	8.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0													8.0	8.0	208.90	0.347436
Remove	Remove	Coast Live Oak	8.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0													8.0	8.0	208.90	0.347436
Remove	Remove	Coast Live Oak	8.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0													8.0	8.0	208.90	0.347436
Remove	Remove	Coast Live Oak	8.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.2													8.2	8.2	222.10	0.36939
Remove	Remove	Coast Live Oak	8.8	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.8													8.8	8.8	264.30	0.439576
Remove	Remove	Coast Live Oak	9.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.0													9.0	9.0	279.40	0.46469
Remove	Remove	Coast Live Oak	9.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.0													9.0	9.0	279.40	0.46469
Remove	Remove	Coast Live Oak	9.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.0													9.0	9.0	279.40	0.46469
Remove	Remove	Coast Live Oak	9.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.0													9.0	9.0	279.40	0.46469
Remove	Remove	Coast Live Oak	9.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.0													9.0	9.0	279.40	0.46469
Remove	Remove	Coast Live Oak	9.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.0													9.0	9.0	279.40	0.46469
Remove	Remove	Coast Live Oak	4.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.5													4.5	4.5	51.20	0.085154
Remove	Remove	Coast Live Oak	4.8	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.8													4.8	4.8	59.90	0.099624
Remove	Remove	Coast Live Oak	4.9	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.9													4.9	4.9	63.00	0.10478
Remove	Remove	Coast Live Oak	9.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.0													9.0	9.0	279.40	0.46469
Remove	Remove	Coast Live Oak	4.9	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.9													4.9	4.9	63.00	0.10478
Remove	Remove	Coast Live Oak	4.9	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.9													4.9	4.9	63.00	0.10478
Remove	Remove	Coast Live Oak	4.9	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.9													4.9	4.9	63.00	0.10478
Remove	Remove	Coast Live Oak	5.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.0													5.0	5.0	66.00	0.109769
Remove	Remove	Coast Live Oak	5.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.1													5.1	5.1	69.30	0.115258
Remove	Remove	Coast Live Oak	5.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.1													5.1	5.1	69.30	0.115258
Remove	Remove	Coast Live Oak	5.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.2													5.2	5.2	72.70	0.120913
Remove	Remove	Coast Live Oak	9.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.1													9.1	9.1	287.00	0.47733
Remove	Remove	Coast Live Oak	9.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.1													9.1	9.1	287.00	0.47733
Remove	Remove	Coast Live Oak	9.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.2													9.2	9.2	294.90	0.490469
Remove	Remove	Coast Live Oak	9.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.3													9.3	9.3	302.90	0.503774
Remove	Remove	Coast Live Oak	5.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.4													5.4	5.4	79.60	0.132388
Remove	Remove	Coast Live Oak	5.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.4													5.4	5.4	79.60	0.132388
Remove	Remove	Coast Live Oak	9.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.6													9.6	9.6	327.60	0.544855
Remove	Remove	Coast Live Oak	9.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.6													9.6	9.6	327.60	0.544855
Remove	Remove	Coast Live Oak	5.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.5													5.5	5.5	83.30	0.138542
Remove	Remove	Coast Live Oak	5.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.5													5.5	5.5	83.30	0.138542
Remove	Remove	Coast Live Oak	5.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.5													5.5	5.5	83.30	0.138542
Remove	Remove	Coast Live Oak	5.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.5													5.5	5.5	83.30	0.138542
Remove	Remove	Coast Live Oak	5.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.5													5.5	5.5	83.30	0.138542
Remove	Remove	Coast Live Oak	5.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.5													5.5	5.5	83.30	0.138542
Remove	Remove	Coast Live Oak	5.7	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.7													5.7	5.7	90.90	0.151182

Maintenance Task Proposed Alternative	Maintenance Task ESA	Common Name	Field DBH Measurement	MultBranch	# of Branches	Proposed Alternative	Environmentally Sensitive Alternative	Branch 1	Branch 2	Branch 3	Branch 4	Branch 5	Branch 6	Branch 7	Branch 8	Branch 9	Branch 10	Branch 11	Branch 12	Branch 13	TOTAL	AverageDBH	Carbon Storage(lb)	MTCO2
Remove	Remove	Coast Live Oak	5.9	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.9													5.9	5.9	98.90	0.164488
Remove	Remove	Coast Live Oak	5.9	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.9													5.9	5.9	98.90	0.164488
Remove	Remove	Coast Live Oak	6.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.0													6.0	6.0	103.00	0.171307
Remove	Remove	Coast Live Oak	6.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.0													6.0	6.0	103.00	0.171307
Remove	Remove	Coast Live Oak	6.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.0													6.0	6.0	103.00	0.171307
Remove	Remove	Coast Live Oak	6.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.0													6.0	6.0	103.00	0.171307
Remove	Remove	Coast Live Oak	6.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.0													6.0	6.0	103.00	0.171307
Remove	Remove	Coast Live Oak	6.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.0													6.0	6.0	103.00	0.171307
Remove	Remove	Coast Live Oak	6.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.0													6.0	6.0	103.00	0.171307
Remove	Remove	Coast Live Oak	6.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.0													6.0	6.0	103.00	0.171307
Remove	Remove	Coast Live Oak	6.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.0													6.0	6.0	103.00	0.171307
Remove	Remove	Coast Live Oak	6.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.1													6.1	6.1	107.30	0.178458
Remove	Remove	Coast Live Oak	6.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.1													6.1	6.1	107.30	0.178458
Remove	Remove	Coast Live Oak	6.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.2													6.2	6.2	111.60	0.18561
Remove	Remove	Coast Live Oak	6.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.2													6.2	6.2	111.60	0.18561
Remove	Remove	Coast Live Oak	6.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.4													6.4	6.4	120.70	0.200745
Remove	Remove	Coast Live Oak	6.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.4													6.4	6.4	120.70	0.200745
Remove	Remove	Coast Live Oak	6.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.5													6.5	6.5	125.40	0.208562
Remove	Remove	Coast Live Oak	6.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.6													6.6	6.6	130.10	0.216379
Remove	Remove	Coast Live Oak	6.7	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.7													6.7	6.7	135.00	0.224528
Remove	Remove	Coast Live Oak	7.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.0													7.0	7.0	150.40	0.250141
Remove	Remove	Coast Live Oak	7.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.0													7.0	7.0	150.40	0.250141
Remove	Remove	Coast Live Oak	7.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.0													7.0	7.0	150.40	0.250141
Remove	Remove	Coast Live Oak	7.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.0													7.0	7.0	150.40	0.250141
Remove	Remove	Coast Live Oak	7.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.0													7.0	7.0	150.40	0.250141
Remove	Remove	Coast Live Oak	7.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.0													7.0	7.0	150.40	0.250141
Remove	Remove	Coast Live Oak	7.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.0													7.0	7.0	150.40	0.250141
Remove	Remove	Coast Live Oak	7.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.0													7.0	7.0	150.40	0.250141
Remove	Remove	Coast Live Oak	7.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.0													7.0	7.0	150.40	0.250141
Remove	Remove	Coast Live Oak	7.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.2													7.2	7.2	161.20	0.268103
Remove	Remove	Coast Live Oak	7.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.2													7.2	7.2	161.20	0.268103
Remove	Remove	Coast Live Oak	7.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.2													7.2	7.2	161.20	0.268103
Remove	Remove	Coast Live Oak	7.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.2													7.2	7.2	161.20	0.268103
Remove	Remove	Coast Live Oak	7.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.3													7.3	7.3	166.70	0.277251
Remove	Remove	Coast Live Oak	7.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.5													7.5	7.5	178.20	0.296377
Remove	Remove	Coast Live Oak	7.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.6													7.6	7.6	184.00	0.306023
Remove	Remove	Coast Live Oak	7.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.6													7.6	7.6	184.00	0.306023
Remove	Remove	Coast Live Oak	7.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.6													7.6	7.6	184.00	0.306023
Remove	Remove	Coast Live Oak	7.7	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.7													7.7	7.7	190.10	0.316169
Remove	Remove	Coast Live Oak	7.7	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.7													7.7	7.7	190.10	0.316169
Remove	Remove	Coast Live Oak	7.8	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.8													7.8	7.8	196.30	0.32648
Remove	Remove	Coast Live Oak	7.8	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.8													7.8	7.8	196.30	0.32648
Remove	Remove	Coast Live Oak	7.9	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.9													7.9	7.9	202.50	0.336792
Remove	Remove	Coast Live Oak	9.9	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.9													9.9	9.9	353.50	0.587931
Remove	Remove	Coast Live Oak	8.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0													8.0	8.0	208.90	0.347436
Remove	Remove	Coast Live Oak	8.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0													8.0	8.0	208.90	0.347436
Remove	Remove	Coast Live Oak	8.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0													8.0	8.0	208.90	0.347436
Remove	Remove	Coast Live Oak	8.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0													8.0	8.0	208.90	0.347436
Remove	Remove	Coast Live Oak	10.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.0													10.0	10.0	362.30	0.602567
Remove	Remove	Coast Live Oak	10.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.0													10.0	10.0	362.30	0.602567
Remove	Remove	Coast Live Oak	10.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.1													10.1	10.1	371.30	0.617535
Remove	Remove	Coast Live Oak	10.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.2													10.2	10.2	380.40	0.63267
Remove	Remove	Coast Live Oak	10.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.4													10.4	10.4	399.10	0.663771
Remove	Remove	Coast Live Oak	10.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.5													10.5	10.5	408.60	0.679572
Remove	Remove	Coast Live Oak	11.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.0													11.0	11.0	458.30	0.762231
Remove	Remove	Coast Live Oak	11.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.5													11.5	11.5	511.50	0.850712
Remove	Remove	Coast Live Oak	11.7	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.7													11.7	11.7	533.60	0.887468
Remove	Remove	Coast Live Oak	12.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	12.0													12.0	12.0	568.00	0.944681
Remove	Remove	Coast Live Oak	12.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	12.0													12.0	12.0	568.00	0.944681
Remove	Remove	Coast Live Oak	12.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	12.0													12.0	12.0	568.00	0.944681
Remove	Remove	Coast Live Oak	12.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	12.1													12.1	12.1	579.80	0.964306
Remove	Remove	Coast Live Oak	12.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	12.3													12.3	12.3	603.60	1.00389
Remove	Remove	Coast Live Oak	12.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	12.3													12.3	12.3	603.60	1.00389
Remove	Remove	Coast Live Oak	13.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	13.2													13.2	13.2	718.30	1.194655
Remove	Remove	Coast Live Oak	13.9	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	13.9													13.9	13.9	815.60	1.356482
Remove	Remove	Coast Live Oak	16.9	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	16.9													16.9	16.9	1315.60	2.188067
Remove	Remove	Coast Live Oak	20.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	20.1													20.1	20.1	2026.20	3.369916
Remove	Remove	Coast Live Oak	4.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.5													4.5	4.5	51.20	0.085154
Remove	Remove	Coast Live Oak	4.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.5													4.5	4.5	51.20	0.085154
Remove	Remove	Coast Live Oak	4.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.5													4.5	4.5	51.20	0.085154
Remove	Remove	Coast Live Oak	4.5	Yes	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.5													4.5	4.5	51.20	0.085154
Remove	Remove	Coast Live Oak	4.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.5													4.5	4.5	51.20	0.085154
Remove	Remove	Coast Live Oak	4.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.6													4.6	4.6	54.00	0.089811
Remove	Remove	Coast Live Oak	4.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.6													4.6	4.6	54.00	0.089811
Remove	Remove	Coast Live Oak	4.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.6													4.6	4.6	54.00	0.089811
Remove	Remove	Coast Live Oak	4.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.6													4.6	4.6	54.00	0.089811
Remove	Remove	Coast Live Oak	4.7	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.7													4.7	4.7	56.90	0.094634
Remove	Remove	Coast Live Oak	4.7	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.7													4.7	4.7	56.90	0.094634
Remove	Remove	Coast Live Oak	4.7	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.7													4.7	4.7	56.90	0.094634
Remove	Remove	Coast Live Oak	4.9	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.9													4.9	4.9	63.00	0.10478
Remove	Remove	Coast Live Oak	4.9	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.9													4.9	4.9	63.00	0.10478
Remove	Remove	Coast Live Oak	5.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.0													5.0	5.0	66.00	0.109769
Remove	Remove	Coast Live Oak	5.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.2													5.2	5.2	72.70	0.120913
Remove	Remove	Coast Live Oak	5.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.2													5.2	5.2	72.70	0.120913
Remove	Remove	Coast Live Oak	5.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.2													5.2	5.2	72.70	0.120913
Remove	Remove	Coast Live Oak	5.9	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.9													5.9	5.9	98.90	0.164488
Remove	Remove	Coast Live Oak	5.9	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.9													5.9	5.9	98.90	0.164488
Remove	Remove	Coast Live Oak	6.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.0													6.0	6.0	103.00	0.171307
Remove	Remove	Coast Live Oak	6.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.0													6.0	6.0	103.00	0.171307
Remove	Remove	Coast Live Oak	5.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.3													5.3	5.3	76.20	0.126734

Maintenance Task Proposed Alternative	Maintenance Task ESA	Common Name	Field DBH Measurement	MultBranch	# of Branches	Proposed Alternative	Environmentally Sensitive Alternative	Branch 1	Branch 2	Branch 3	Branch 4	Branch 5	Branch 6	Branch 7	Branch 8	Branch 9	Branch 10	Branch 11	Branch 12	Branch 13	TOTAL	AverageDBH	Carbon Storage(lb)	MTCO2
Remove	Remove	Coast Live Oak	5.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.3													5.3	5.3	76.20	0.126734
Remove	Remove	Coast Live Oak	5.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.3													5.3	5.3	76.20	0.126734
Remove	Remove	Coast Live Oak	5.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.3													5.3	5.3	76.20	0.126734
Remove	Remove	Coast Live Oak	6.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.1													6.1	6.1	107.30	0.178458
Remove	Remove	Coast Live Oak	6.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.1													6.1	6.1	107.30	0.178458
Remove	Remove	Coast Live Oak	5.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.3													5.3	5.3	76.20	0.126734
Remove	Remove	Coast Live Oak	5.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.4													5.4	5.4	79.60	0.132388
Remove	Remove	Coast Live Oak	5.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.6													5.6	5.6	87.00	0.144696
Remove	Remove	Coast Live Oak	5.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.6													5.6	5.6	87.00	0.144696
Remove	Remove	Coast Live Oak	5.8	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.8													5.8	5.8	94.80	0.157669
Remove	Remove	Coast Live Oak	5.8	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.8													5.8	5.8	94.80	0.157669
Remove	Remove	Coast Live Oak	6.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.3													6.3	6.3	116.10	0.193094
Remove	Remove	Coast Live Oak	6.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.3													6.3	6.3	116.10	0.193094
Remove	Remove	Coast Live Oak	6.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.3													6.3	6.3	116.10	0.193094
Remove	Remove	Coast Live Oak	6.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.4													6.4	6.4	120.70	0.200745
Remove	Remove	Coast Live Oak	6.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.4													6.4	6.4	120.70	0.200745
Remove	Remove	Coast Live Oak	6.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.6													6.6	6.6	130.10	0.216379
Remove	Remove	Coast Live Oak	6.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.6													6.6	6.6	130.10	0.216379
Remove	Remove	Coast Live Oak	6.8	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.8													6.8	6.8	140.10	0.23301
Remove	Remove	Coast Live Oak	6.9	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.9													6.9	6.9	145.10	0.241326
Remove	Remove	Coast Live Oak	7.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.0													7.0	7.0	150.40	0.250141
Remove	Remove	Coast Live Oak	7.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.0													7.0	7.0	150.40	0.250141
Remove	Remove	Coast Live Oak	7.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.1													7.1	7.1	155.70	0.258956
Remove	Remove	Coast Live Oak	7.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.1													7.1	7.1	155.70	0.258956
Remove	Remove	Coast Live Oak	7.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.1													7.1	7.1	155.70	0.258956
Remove	Remove	Coast Live Oak	7.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.2													7.2	7.2	161.20	0.268103
Remove	Remove	Coast Live Oak	7.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.2													7.2	7.2	161.20	0.268103
Remove	Remove	Coast Live Oak	7.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.2													7.2	7.2	161.20	0.268103
Remove	Remove	Coast Live Oak	7.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.2													7.2	7.2	161.20	0.268103
Remove	Remove	Coast Live Oak	7.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.2													7.2	7.2	161.20	0.268103
Remove	Remove	Coast Live Oak	7.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.2													7.2	7.2	161.20	0.268103
Remove	Remove	Coast Live Oak	7.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.3													7.3	7.3	166.70	0.277251
Remove	Remove	Coast Live Oak	7.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.3													7.3	7.3	166.70	0.277251
Remove	Remove	Coast Live Oak	7.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.4													7.4	7.4	172.40	0.286731
Remove	Remove	Coast Live Oak	7.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.4													7.4	7.4	172.40	0.286731
Remove	Remove	Coast Live Oak	7.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.5													7.5	7.5	178.20	0.296377
Remove	Remove	Coast Live Oak	7.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.5													7.5	7.5	178.20	0.296377
Remove	Remove	Coast Live Oak	7.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.6													7.6	7.6	184.00	0.306023
Remove	Remove	Coast Live Oak	7.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.6													7.6	7.6	184.00	0.306023
Remove	Remove	Coast Live Oak	7.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.6													7.6	7.6	184.00	0.306023
Remove	Remove	Coast Live Oak	7.7	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.7													7.7	7.7	190.10	0.316169
Remove	Remove	Coast Live Oak	7.7	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.7													7.7	7.7	190.10	0.316169
Remove	Remove	Coast Live Oak	7.7	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.7													7.7	7.7	190.10	0.316169
Remove	Remove	Coast Live Oak	6.2	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.2	5.2												11.4	5.7	214.90	0.357415
Remove	Remove	Coast Live Oak	6.2	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.2	5.2												11.4	5.7	214.90	0.357415
Remove	Remove	Coast Live Oak	6.3	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.3	5.3												11.6	5.8	224.20	0.372883
Remove	Remove	Coast Live Oak	6.3	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.3	5.3												11.6	5.8	224.20	0.372883
Remove	Remove	Coast Live Oak	6.5	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.5	5.5												12.0	6.0	243.70	0.405315
Remove	Remove	Coast Live Oak	6.6	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.6	5.6												12.2	6.1	253.70	0.421946
Remove	Remove	Coast Live Oak	6.6	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.6	5.6												12.2	6.1	253.70	0.421946
Remove	Remove	Coast Live Oak	6.6	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.6	5.6												12.2	6.1	253.70	0.421946
Remove	Remove	Coast Live Oak	6.9	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.9	5.9												12.8	6.4	285.40	0.474669
Remove	Remove	Coast Live Oak	7.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.0	6												13.0	6.5	296.40	0.492964
Remove	Remove	Coast Live Oak	7.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.0	6												13.0	6.5	296.40	0.492964
Remove	Remove	Coast Live Oak	7.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.0	6												13.0	6.5	296.40	0.492964
Remove	Remove	Coast Live Oak	7.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.0	6												13.0	6.5	296.40	0.492964
Remove	Remove	Coast Live Oak	7.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.0	6												13.0	6.5	296.40	0.492964
Remove	Remove	Coast Live Oak	7.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.0	6												13.0	6.5	296.40	0.492964
Remove	Remove	Coast Live Oak	7.3	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.3	6.3												13.6	6.8	331.10	0.550676
Remove	Remove	Coast Live Oak	7.3	No	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.3	6.3												13.6	6.8	331.10	0.550676
Remove	Remove	Coast Live Oak	7.4	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.4	6.4												13.8	6.9	343.30	0.570966
Remove	Remove	Coast Live Oak	7.7	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.7	6.7												14.4	7.2	381.10	0.633834
Remove	Remove	Coast Live Oak	7.7	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.7	6.7												14.4	7.2	381.10	0.633834
Remove	Remove	Coast Live Oak	7.8	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.8	6.8												14.6	7.3	394.30	0.655788
Remove	Remove	Coast Live Oak	8.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0	7												15.0	7.5	421.20	0.700527
Remove	Remove	Coast Live Oak	8.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0	7												15.0	7.5	421.20	0.700527
Remove	Remove	Coast Live Oak	8.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0	7												15.0	7.5	421.20	0.700527
Remove	Remove	Coast Live Oak	8.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0	7												15.0	7.5	421.20	0.700527
Remove	Remove	Coast Live Oak	8.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0	7												15.0	7.5	421.20	0.700527
Remove	Remove	Coast Live Oak	8.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0	7												15.0	7.5	421.20	0.700527
Remove	Remove	Coast Live Oak	8.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0	7												15.0	7.5	421.20	0.700527
Remove	Remove	Coast Live Oak	7.8	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.8													7.8	7.8	196.30	0.32648
Remove	Remove	Coast Live Oak	8.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0	7												15.0	7.5	421.20	0.700527
Remove	Remove	Coast Live Oak	8.1	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.1	7.1												15.2	7.6	435.30	0.723978
Remove	Remove	Coast Live Oak	8.1	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.1	7.1												15.2	7.6	435.30	0.723978
Remove	Remove	Coast Live Oak	8.2	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.2	7.2												15.4	7.7	449.40	0.747429
Remove	Remove	Coast Live Oak	8.5	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.5	7.5												16.0	8.0	493.70	0.821107
Remove	Remove	Coast Live Oak	8.6	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.6	7.6												16.2	8.1	509.00	0.846554
Remove	Remove	Coast Live Oak	8.6	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.6	7.6												16.2	8.1	509.00	0.846554
Remove	Remove	Coast Live Oak	9.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.0	8												17.0	8.5	572.90	0.95283
Remove	Remove	Coast Live Oak	9.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.0	8												17.0	8.5	572.90	0.95283
Remove	Remove	Coast Live Oak	9.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.0	8												17.0	8.5	572.90	0.95283
Remove	Remove	Coast Live Oak	9.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.0	8												17.0	8.5	572.90	0.95283
Remove	Remove	Coast Live Oak	9.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.0	8												17.0	8.5	572.90	0.95283
Remove	Remove	Coast Live Oak	9.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.0	8												17.0	8.5	572.90	0.95283
Remove	Remove	Coast Live Oak	9.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.0	8												17.0	8.5	572.90	0.95283

Maintenance Task Proposed Alternative	Maintenance Task ESA	Common Name	Field DBH Measurement	MultBranch	# of Branches	Proposed Alternative	Environmentally Sensitive Alternative	Branch 1	Branch 2	Branch 3	Branch 4	Branch 5	Branch 6	Branch 7	Branch 8	Branch 9	Branch 10	Branch 11	Branch 12	Branch 13	TOTAL	AverageDBH	Carbon Storage(lb)	MTCO2
Remove	Remove	Coast Live Oak	9.1	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.1	8.1												17.2	8.6	589.50	0.980439
Remove	Remove	Coast Live Oak	8.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0													8.0	8.0	208.90	0.347436
Remove	Remove	Coast Live Oak	8.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.1													8.1	8.1	215.40	0.358247
Remove	Remove	Coast Live Oak	8.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.2													8.2	8.2	222.10	0.36939
Remove	Remove	Coast Live Oak	8.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.2													8.2	8.2	222.10	0.36939
Remove	Remove	Coast Live Oak	8.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.2													8.2	8.2	222.10	0.36939
Remove	Remove	Coast Live Oak	9.6	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.6	8.6												18.2	9.1	677.30	1.126465
Remove	Remove	Coast Live Oak	8.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.2													8.2	8.2	222.10	0.36939
Remove	Remove	Coast Live Oak	8.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.2													8.2	8.2	222.10	0.36939
Remove	Remove	Coast Live Oak	9.9	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.9	8.9												18.8	9.4	733.40	1.219769
Remove	Remove	Coast Live Oak	8.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.2													8.2	8.2	222.10	0.36939
Remove	Remove	Coast Live Oak	8.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.3													8.3	8.3	228.70	0.380367
Remove	Remove	Coast Live Oak	8.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.3													8.3	8.3	228.70	0.380367
Remove	Remove	Coast Live Oak	8.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.4													8.4	8.4	235.60	0.391843
Remove	Remove	Coast Live Oak	8.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.5													8.5	8.5	242.60	0.403485
Remove	Remove	Coast Live Oak	8.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.5													8.5	8.5	242.60	0.403485
Remove	Remove	Coast Live Oak	8.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.6													8.6	8.6	249.70	0.415294
Remove	Remove	Coast Live Oak	8.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.6													8.6	8.6	249.70	0.415294
Remove	Remove	Coast Live Oak	8.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.6													8.6	8.6	249.70	0.415294
Remove	Remove	Coast Live Oak	8.7	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.7													8.7	8.7	257.00	0.427435
Remove	Remove	Coast Live Oak	8.8	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.8													8.8	8.8	264.30	0.439576
Remove	Remove	Coast Live Oak	8.9	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.9													8.9	8.9	271.80	0.45205
Remove	Remove	Coast Live Oak	8.9	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.9													8.9	8.9	271.80	0.45205
Remove	Remove	Coast Live Oak	9.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.0													9.0	9.0	279.40	0.46469
Remove	Remove	Coast Live Oak	9.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.2													9.2	9.2	294.90	0.490469
Remove	Remove	Coast Live Oak	9.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.2													9.2	9.2	294.90	0.490469
Remove	Remove	Coast Live Oak	9.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.4													9.4	9.4	310.90	0.51708
Remove	Remove	Coast Live Oak	9.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.4													9.4	9.4	310.90	0.51708
Remove	Remove	Coast Live Oak	9.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.4													9.4	9.4	310.90	0.51708
Remove	Remove	Coast Live Oak	10.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.0	9												19.0	9.5	752.60	1.251702
Remove	Remove	Coast Live Oak	10.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.0	9												19.0	9.5	752.60	1.251702
Remove	Remove	Coast Live Oak	10.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.0	9												19.0	9.5	752.60	1.251702
Remove	Remove	Coast Live Oak	9.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.4													9.4	9.4	310.90	0.51708
Remove	Remove	Coast Live Oak	9.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.4													9.4	9.4	310.90	0.51708
Remove	Remove	Coast Live Oak	9.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.4													9.4	9.4	310.90	0.51708
Remove	Remove	Coast Live Oak	9.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.6													9.6	9.6	327.60	0.544855
Remove	Remove	Coast Live Oak	9.7	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.7													9.7	9.7	336.00	0.558825
Remove	Remove	Coast Live Oak	9.8	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.8													9.8	9.8	344.70	0.573295
Remove	Remove	Coast Live Oak	9.8	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.8													9.8	9.8	344.70	0.573295
Remove	Remove	Coast Live Oak	9.8	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.8													9.8	9.8	344.70	0.573295
Remove	Remove	Coast Live Oak	9.9	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.9													9.9	9.9	353.50	0.587931
Remove	Remove	Coast Live Oak	10.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.1													10.1	10.1	371.30	0.617535
Remove	Remove	Coast Live Oak	10.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.2													10.2	10.2	380.40	0.63267
Remove	Remove	Coast Live Oak	10.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.2													10.2	10.2	380.40	0.63267
Remove	Remove	Coast Live Oak	10.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.2													10.2	10.2	380.40	0.63267
Remove	Remove	Coast Live Oak	10.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.3													10.3	10.3	389.70	0.648138
Remove	Remove	Coast Live Oak	10.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.5													10.5	10.5	408.60	0.679572
Remove	Remove	Coast Live Oak	10.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.5													10.5	10.5	408.60	0.679572
Remove	Remove	Coast Live Oak	10.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.6													10.6	10.6	418.30	0.695704
Remove	Remove	Coast Live Oak	10.7	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.7													10.7	10.7	428.00	0.711837
Remove	Remove	Coast Live Oak	10.8	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.8													10.8	10.8	438.00	0.728469
Remove	Remove	Coast Live Oak	10.9	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.9													10.9	10.9	448.20	0.745433
Remove	Remove	Coast Live Oak	11.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.0													11.0	11.0	458.30	0.762231
Remove	Remove	Coast Live Oak	11.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.2													11.2	11.2	479.10	0.796825
Remove	Remove	Coast Live Oak	11.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.4													11.4	11.4	500.60	0.832583
Remove	Remove	Coast Live Oak	11.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.4													11.4	11.4	500.60	0.832583
Remove	Remove	Coast Live Oak	11.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.4													11.4	11.4	500.60	0.832583
Remove	Remove	Coast Live Oak	11.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.4													11.4	11.4	500.60	0.832583
Remove	Remove	Coast Live Oak	11.7	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.7													11.7	11.7	533.60	0.887468
Remove	Remove	Coast Live Oak	11.8	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.8													11.8	11.8	545.00	0.906428
Remove	Remove	Coast Live Oak	11.9	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.9													11.9	11.9	556.40	0.925388
Remove	Remove	Coast Live Oak	12.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	12.1													12.1	12.1	579.80	0.964306
Remove	Remove	Coast Live Oak	12.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	12.1													12.1	12.1	579.80	0.964306
Remove	Remove	Coast Live Oak	12.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	12.4													12.4	12.4	615.70	1.024014
Remove	Remove	Coast Live Oak	12.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	12.4													12.4	12.4	615.70	1.024014
Remove	Remove	Coast Live Oak	14.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	14.0													14.0	14.0	830.20	1.380764
Remove	Remove	Coast Live Oak	14.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	14.3													14.3	14.3	874.60	1.454609
Remove	Remove	Coast Live Oak	15.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	15.5													15.5	15.5	1061.00	1.764624
Remove	Remove	Coast Live Oak	16.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	16.0													16.0	16.0	1148.10	1.909486
Remove	Remove	Coast Live Oak	16.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	16.4													16.4	16.4	1220.90	2.030565
Remove	Remove	Coast Live Oak	17.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	17.3													17.3	17.3	1394.60	2.319458
Remove	Remove	Coast Live Oak	17.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	17.3													17.3	17.3	1394.60	2.319458
Remove	Remove	Coast Live Oak	19.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	19.2													19.2	19.2	1807.40	3.006015
Remove	Remove	Coast Live Oak	21.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	21.0													21.0	21.0	2260.30	3.759265
Remove	Remove	Coast Live Oak	2.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	2.0	1												3.0	1.5	10.20	0.016964
Remove	Remove	Coast Live Oak	4.5	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.5	3.5												8.0	4.0	90.90	0.151182
Remove	Remove	Coast Live Oak	4.5	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.5	3.5												8.0	4.0	90.90	0.151182
Remove	Remove	Coast Live Oak	4.5	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.5	3.5												8.0	4.0	90.90	0.151182
Remove	Remove	Coast Live Oak	4.5	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.5	3.5												8.0	4.0	90.90	0.151182
Remove	Remove	Coast Live Oak	4.5	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.5	3.5												8.0	4.0	90.90	0.151182
Remove	Remove	Coast Live Oak	4.6	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.6	3.6												8.2	4.1	96.50	0.160496
Remove	Remove	Coast Live Oak	4.6	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.6	3.6												8.2	4.1	96.50	0.160496
Remove	Remove	Coast Live Oak	4.6	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.6	3.6												8.2	4.1	96.50	0.160496
Remove	Remove	Coast Live Oak	4.6	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.6	3.6												8.2	4.1	96.50	0.160496
Remove	Remove	Coast Live Oak	10.5	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.5	9.5												20.0	10.0	853.60	1.419682
Remove	Remove	Coast Live Oak	4.8	No	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.8	3.8												8.6	4.3	108.20	0.179955
Remove	Remove	Coast Live Oak	4.9	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.9	3.9												8.8	4.4	114.40	0.190267
Remove	Remove	Coast Live Oak	10.5	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.5	9.5												20.0	10.0	853.60	1.419682
Remove	Remove	Coast Live Oak	11.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.0	10												21.0	10.5	956.40	1.590656
Remove	Remove	Coast Live Oak	11.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.0	10												21.0	10.5	956.40	1.590656

Maintenance Task Proposed Alternative	Maintenance Task ESA	Common Name	Field DBH Measurement	MultBranch	# of Branches	Proposed Alternative	Environmentally Sensitive Alternative	Branch 1	Branch 2	Branch 3	Branch 4	Branch 5	Branch 6	Branch 7	Branch 8	Branch 9	Branch 10	Branch 11	Branch 12	Branch 13	TOTAL	AverageDBH	Carbon Storage(lb)	MTCO2
Remove	Remove	Coast Live Oak	11.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.0	10												21.0	10.5	956.40	1.590656
Remove	Remove	Coast Live Oak	11.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.0	10												21.0	10.5	956.40	1.590656
Remove	Remove	Coast Live Oak	11.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.0	10												21.0	10.5	956.40	1.590656
Remove	Remove	Coast Live Oak	12.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	12.0	11												23.0	11.5	1198.50	1.99331
Remove	Remove	Coast Live Oak	12.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	12.0	11												23.0	11.5	1198.50	1.99331
Remove	Remove	Coast Live Oak	12.5	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	12.5	11.5												24.0	12.0	1332.20	2.215676
Remove	Remove	Coast Live Oak	5.0	No	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.0	4												9.0	4.5	120.80	0.200911
Remove	Remove	Coast Live Oak	5.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.0	4												9.0	4.5	120.80	0.200911
Remove	Remove	Coast Live Oak	5.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.0	4												9.0	4.5	120.80	0.200911
Remove	Remove	Coast Live Oak	5.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.0	4												9.0	4.5	120.80	0.200911
Remove	Remove	Coast Live Oak	5.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.0	4												9.0	4.5	120.80	0.200911
Remove	Remove	Coast Live Oak	5.3	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.3	4.3												9.6	4.8	141.30	0.235006
Remove	Remove	Coast Live Oak	5.4	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.4	4.4												9.8	4.9	148.60	0.247147
Remove	Remove	Coast Live Oak	5.5	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.5	4.5												10.0	5.0	156.00	0.259455
Remove	Remove	Coast Live Oak	5.5	No	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.5	4.5												10.0	5.0	156.00	0.259455
Remove	Remove	Coast Live Oak	5.5	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.5	4.5												10.0	5.0	156.00	0.259455
Remove	Remove	Coast Live Oak	5.5	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.5	4.5												10.0	5.0	156.00	0.259455
Remove	Remove	Coast Live Oak	5.5	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.5	4.5												10.0	5.0	156.00	0.259455
Remove	Remove	Coast Live Oak	5.5	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.5	4.5												10.0	5.0	156.00	0.259455
Remove	Remove	Coast Live Oak	5.5	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.5	4.5												10.0	5.0	156.00	0.259455
Remove	Remove	Coast Live Oak	5.5	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.5	4.5												10.0	5.0	156.00	0.259455
Remove	Remove	Coast Live Oak	5.8	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.8	4.8												10.6	5.3	179.90	0.299204
Remove	Remove	Coast Live Oak	13.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	13.0	12												25.0	12.5	1474.50	2.452345
Remove	Remove	Coast Live Oak	5.9	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.9	4.9												10.8	5.4	188.30	0.313175
Remove	Remove	Coast Live Oak	5.9	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.9	4.9												10.8	5.4	188.30	0.313175
Remove	Remove	Coast Live Oak	6.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.0	5												11.0	5.5	197.00	0.327645
Remove	Remove	Coast Live Oak	6.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.0	5												11.0	5.5	197.00	0.327645
Remove	Remove	Coast Live Oak	6.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.0	5												11.0	5.5	197.00	0.327645
Remove	Remove	Coast Live Oak	6.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.0	5												11.0	5.5	197.00	0.327645
Remove	Remove	Coast Live Oak	6.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.0	5												11.0	5.5	197.00	0.327645
Remove	Remove	Coast Live Oak	6.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.0	5												11.0	5.5	197.00	0.327645
Remove	Remove	Coast Live Oak	13.4	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	13.4	12.4												25.8	12.9	1594.20	2.651427
Remove	Remove	Coast Live Oak	14.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	14.0	13												27.0	13.5	1785.30	2.969259
Remove	Remove	Coast Live Oak	15.1	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	15.1	14.1												29.2	14.6	2169.80	3.608748
Remove	Remove	Coast Live Oak	15.2	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	15.2	14.2												29.4	14.7	2207.10	3.670784
Remove	Remove	Coast Live Oak	16.9	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	16.9	15.9												32.8	16.4	2899.80	4.822862
Remove	Remove	Coast Live Oak	28.0	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	28.0	27												55.0	27.5	10554.90	17.5546
Remove	Remove	Coast Live Oak	4.5	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.5	3.5	2.5											10.5	3.5	112.70	0.187439
Remove	Remove	Coast Live Oak	5.0	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.0	4	3											12.0	4.0	154.10	0.256295
Remove	Remove	Coast Live Oak	5.5	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.5	4.5	3.5											13.5	4.5	203.90	0.33912
Remove	Remove	Coast Live Oak	5.5	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.5	4.5	3.5											13.5	4.5	203.90	0.33912
Remove	Remove	Coast Live Oak	5.6	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.6	4.6	3.6											13.8	4.6	214.90	0.357415
Remove	Remove	Coast Live Oak	6.0	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.0	5	4											15.0	5.0	262.40	0.436416
Remove	Remove	Coast Live Oak	6.0	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.0	5	4											15.0	5.0	262.40	0.436416
Remove	Remove	Coast Live Oak	6.0	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.0	5	4											15.0	5.0	262.40	0.436416
Remove	Remove	Coast Live Oak	6.0	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.0	5	4											15.0	5.0	262.40	0.436416
Remove	Remove	Coast Live Oak	6.7	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.7	5.7	4.7											17.1	5.7	360.00	0.598741
Remove	Remove	Coast Live Oak	6.8	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.8	5.8	4.8											17.4	5.8	375.50	0.624521
Remove	Remove	Coast Live Oak	7.4	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.4	6.4	5.4											19.2	6.4	476.50	0.792501
Remove	Remove	Coast Live Oak	7.5	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.5	6.5	5.5											19.5	6.5	494.80	0.822937
Remove	Remove	Coast Live Oak	7.5	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.5	6.5	5.5											19.5	6.5	494.80	0.822937
Remove	Remove	Coast Live Oak	7.8	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.8	6.8	5.8											20.4	6.8	552.10	0.918237
Remove	Remove	Coast Live Oak	8.0	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0	7	6											21.0	7.0	592.40	0.985262
Remove	Remove	Coast Live Oak	8.0	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0	7	6											21.0	7.0	592.40	0.985262
Remove	Remove	Coast Live Oak	8.0	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0	7	6											21.0	7.0	592.40	0.985262
Remove	Remove	Coast Live Oak	8.0	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0	7	6											21.0	7.0	592.40	0.985262
Remove	Remove	Coast Live Oak	8.0	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0	7	6											21.0	7.0	592.40	0.985262
Remove	Remove	Coast Live Oak	8.0	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0	7	6											21.0	7.0	592.40	0.985262
Remove	Remove	Coast Live Oak	8.0	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0	7	6											21.0	7.0	592.40	0.985262
Remove	Remove	Coast Live Oak	8.6	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.6	7.6	6.6											22.8	7.6	723.50	1.203304
Remove	Remove	Coast Live Oak	8.7	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.7	7.7	6.7											23.1	7.7	746.90	1.242222
Remove	Remove	Coast Live Oak	8.7	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.7	7.7	6.7											23.1	7.7	746.90	1.242222
Remove	Remove	Coast Live Oak	9.0	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.0	8	7											24.0	8.0	819.80	1.363467
Remove	Remove	Coast Live Oak	9.4	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.4	8.4	7.4											25.2	8.4	923.20	1.535439
Remove	Remove	Coast Live Oak	10.0	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.0	9	8											27.0	9.0	1087.10	1.808033
Remove	Remove	Coast Live Oak	10.2	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.2	9.2	8.2											27.6	9.2	1147.70	1.908821
Remove	Remove	Coast Live Oak	10.4	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.4	9.4	8.4											28.2	9.4	1210.30	2.012935
Remove	Remove	Coast Live Oak	10.5	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.5	9.5	8.5											28.5	9.5	1242.40	2.066323
Remove	Remove	Coast Live Oak	11.0	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.0	10	9											30.0	10.0	1410.40	2.345736
Remove	Remove	Coast Live Oak	11.2	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.2	10.2	9.2											30.6	10.2	1481.20	2.463488
Remove	Remove	Coast Live Oak	12.0	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	12.0	11	10											33.0	11.0	1785.30	2.969259
Remove	Remove	Coast Live Oak	12.0	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	12.0	11	10											33.0	11.0	1785.30	2.969259
Remove	Remove	Coast Live Oak	13.6	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	13.6	12.6	11.6											37.8	12.6	2501.10	4.159756
Remove	Remove	Coast Live Oak	14.6	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	14.6	13.6	12.6											40.8	13.6	3024.30	5.029927
Remove	Remove	Coast Live Oak	15.0	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	15.0	14	13											42.0	14.0	3250.80	5.406635
Remove	Remove	Coast Live Oak	15.3	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	15.3	14.3	13.3											42.9	14.3	3427.00	5.699686
Remove	Remove	Coast Live Oak	15.8	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	15.8	14.8	13.8											44.4	14.8	3733.30	6.209115
Remove	Remove	Coast Live Oak	16.0	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	16.0	15	14											45.0	15.0	3859.40	6.418841
Remove	Remove	Coast Live Oak	17.0	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	17.0	16	15											48.0	16.0	4533.40	7.539818
Remove	Remove	Coast Live Oak	17.5	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	17.5	16.5	15.5											49.5	16.5	4895.10	8.141387
Remove	Remove	Coast Live Oak	19.7	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	19.7	18.7	17.7											56.1	18.7	6689.80	11.12628
Remove	Remove	Coast Live Oak	20.3	Yes	3	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	20.3	19.3	18.3											57.9	19.3	7238.90	12.03953
Remove	Remove	Coast Live Oak	4.5	Yes	4	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.5	3.5	2.5	1.5										12.0	3.0	120.80	0.200911
Remove	Remove	Coast Live Oak	5.9	Yes	4	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	5.9	4.9	3.9	2.9										17.6	4.4	285.50	0.474835
Remove	Remove	Coast Live Oak	6.0	Yes	4	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.0	5	4	3										18.0	4.5	300.70	0.500115
Remove	Remove	Coast Live Oak	6.8	Yes	4	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.8	5.8	4.8	3.8										21.2	5.3	441.40	0.734124
Remove	Remove	Coast Live Oak	7.0	Yes	4	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.0	6	5	4										22.0	5.5	481.80	0.801316
Remove	Remove	Coast Live Oak	7.3	Yes	4	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.3	6.3	5.3	4.3										23.2	5.8	546.50	0.908923

Appendix A
Individual Existing Tree Carbon Storage Estimates

Maintenance Task Proposed Alternative	Maintenance Task ESA	Common Name	Field DBH Measurement	MultBranch	# of Branches	Proposed Alternative	Environmentally Sensitive Alternative	Branch 1	Branch 2	Branch 3	Branch 4	Branch 5	Branch 6	Branch 7	Branch 8	Branch 9	Branch 10	Branch 11	Branch 12	Branch 13	TOTAL	AverageDBH	Carbon Storage(lb)	MTCO2
Remove	Remove	Coast Live Oak	8.0	Yes	4	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0	7	6	5										26.0	6.5	716.90	1.192327
Remove	Remove	Coast Live Oak	8.0	Yes	4	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0	7	6	5										26.0	6.5	716.90	1.192327
Remove	Remove	Coast Live Oak	8.0	Yes	4	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0	7	6	5										26.0	6.5	716.90	1.192327
Remove	Remove	Coast Live Oak	8.0	Yes	4	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0	7	6	5										26.0	6.5	716.90	1.192327
Remove	Remove	Coast Live Oak	8.5	Yes	4	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.5	7.5	6.5	5.5										28.0	7.0	856.20	1.424007
Remove	Remove	Coast Live Oak	11.0	Yes	4	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.0	10	9	8										38.0	9.5	1791.30	2.979238
Remove	Remove	Coast Live Oak	13.7	Yes	4	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	13.7	12.7	11.7	10.7										48.8	12.2	3322.10	5.525219
Remove	Remove	Coast Live Oak	15.1	Yes	4	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	15.1	14.1	13.1	12.1										54.4	13.6	4348.70	7.23263
Remove	Remove	Coast Live Oak	15.2	Yes	4	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	15.2	14.2	13.2	12.2										54.8	13.7	4428.80	7.36585
Remove	Remove	Coast Live Oak	16.3	No	4	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	16.3	15.28	14.28	13.28										59.1	14.8	5366.10	8.92474
Remove	Remove	Coast Live Oak	7.0	Yes	5	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.0	6	5	4	3									25.0	5.0	524.60	0.872499
Remove	Remove	Coast Live Oak	8.6	Yes	5	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.6	7.6	6.6	5.6	4.6									33.0	6.6	993.00	1.651528
Remove	Remove	Coast Live Oak	9.3	Yes	5	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.3	8.3	7.3	6.3	5.3									36.5	7.3	1263.30	2.101084
Remove	Remove	Coast Live Oak	11.5	Yes	5	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.5	10.5	9.5	8.5	7.5									47.5	9.5	2390.50	3.975809
Remove	Remove	Coast Live Oak	12.1	Yes	5	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	12.1	11.1	10.1	9.1	8.1									50.5	10.1	2776.80	4.618292
Remove	Remove	Coast Live Oak	14.0	Yes	5	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	14.0	13	12	11	10									60.0	12.0	4240.70	7.053008
Remove	Remove	Coast Live Oak	16.1	Yes	5	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	16.1	15.1	14.1	13.1	12.1									70.5	14.1	6318.30	10.50841
Remove	Remove	Coast Live Oak	6.1	Yes	6	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.1	5.1	4.1	3.1	2.1	1.1								21.6	3.6	341.20	0.567474
Remove	Remove	Coast Live Oak	11.0	Yes	6	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.0	10	9	8	7	6								51.0	8.5	2324.40	3.865874
Remove	Remove	Coast Live Oak	11.0	Yes	6	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.0	10	9	8	7	6								51.0	8.5	2324.40	3.865874
Remove	Remove	Coast Live Oak	8.0	Yes	7	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.0	7	6	5	4	3	2							35.0	5.0	845.80	1.40671
Remove	Remove	Coast Live Oak	23.6	Yes	7	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	23.6	22.6	21.6	20.6	19.6	18.6	17.6							144.2	20.6	13347.50	22.19917
Remove	Remove	Coast Live Oak	18.0	Yes	8	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	18.0	17	16	15	14	13	12	11						116.0	14.5	10086.70	16.7759
Remove	Remove	Coast Live Oak	7.4	Yes	10	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.4	6.4	5.4	4.4	3.4	2.4	1.4	1	1	1				33.8	3.4	654.50	1.088545
Remove		Coast Live Oak	5.0	No	1	Proposed Project - Parking and Circulation		5.0													5.0	5.0	66.00	0.109769
Remove		Coast Live Oak	5.0	No	1	Proposed Project - Parking and Circulation		5.0													5.0	5.0	66.00	0.109769
Remove		Coast Live Oak	5.2	No	1	Proposed Project - Parking and Circulation		5.2													5.2	5.2	72.70	0.120913
Remove		Coast Live Oak	6.0	No	1	Proposed Project - Parking and Circulation		6.0													6.0	6.0	103.00	0.171307
Remove		Coast Live Oak	5.5	No	1	Proposed Project - Parking and Circulation		5.5													5.5	5.5	83.30	0.138542
Remove		Coast Live Oak	5.5	No	1	Proposed Project - Parking and Circulation		5.5													5.5	5.5	83.30	0.138542
Remove		Coast Live Oak	6.1	No	1	Proposed Project - Parking and Circulation		6.1													6.1	6.1	107.30	0.178458
Remove		Coast Live Oak	5.6	No	1	Proposed Project - Parking and Circulation		5.6													5.6	5.6	87.00	0.144696
Remove		Coast Live Oak	5.8	No	1	Proposed Project - Parking and Circulation		5.8													5.8	5.8	94.80	0.157669
Remove		Coast Live Oak	5.8	No	1	Proposed Project - Parking and Circulation		5.8													5.8	5.8	94.80	0.157669
Remove		Coast Live Oak	6.2	No	1	Proposed Project - Parking and Circulation		6.2													6.2	6.2	111.60	0.18561
Remove		Coast Live Oak	6.5	No	1	Proposed Project - Parking and Circulation		6.5													6.5	6.5	125.40	0.208562
Remove		Coast Live Oak	7.1	No	1	Proposed Project - Parking and Circulation		7.1													7.1	7.1	155.70	0.258956
Remove		Coast Live Oak	7.5	No	1	Proposed Project - Parking and Circulation		7.5													7.5	7.5	178.20	0.296377
Remove		Coast Live Oak	7.6	No	1	Proposed Project - Parking and Circulation		7.6													7.6	7.6	184.00	0.306023
Remove		Coast Live Oak	7.6	No	1	Proposed Project - Parking and Circulation		7.6													7.6	7.6	184.00	0.306023
Remove	Remove	Coast Live Oak	6.0	No	2	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	6.0	5												11.0	5.5	197.00	0.327645
Remove		Coast Live Oak	6.1	Yes	2	Proposed Project - Parking and Circulation		6.1	5.1												11.2	5.6	205.70	0.342114
Remove	Remove	Coast Live Oak	9.4	Yes	2	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	9.4	8.4												17.8	8.9	641.30	1.066591
Remove		Coast Live Oak	8.0	No	1	Proposed Project - Parking and Circulation		8.0													8.0	8.0	208.90	0.347436
Remove		Coast Live Oak	8.1	No	1	Proposed Project - Parking and Circulation		8.1													8.1	8.1	215.40	0.358247
Remove		Coast Live Oak	8.2	No	1	Proposed Project - Parking and Circulation		8.2													8.2	8.2	222.10	0.36939
Remove		Coast Live Oak	8.4	No	1	Proposed Project - Parking and Circulation		8.4													8.4	8.4	235.60	0.391843
Remove		Coast Live Oak	8.4	No	1	Proposed Project - Parking and Circulation		8.4													8.4	8.4	235.60	0.391843
Remove		Coast Live Oak	8.6	No	1	Proposed Project - Parking and Circulation		8.6													8.6	8.6	249.70	0.415294
Remove		Coast Live Oak	9.0	No	1	Proposed Project - Parking and Circulation		9.0													9.0	9.0	279.40	0.46469
Remove		Coast Live Oak	9.0	No	1	Proposed Project - Parking and Circulation		9.0													9.0	9.0	279.40	0.46469
Remove		Coast Live Oak	9.3	No	1	Proposed Project - Parking and Circulation		9.3													9.3	9.3	302.90	0.503774
Remove		Coast Live Oak	9.3	No	1	Proposed Project - Parking and Circulation		9.3													9.3	9.3	302.90	0.503774
Remove	Remove	Coast Live Oak	9.8	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	9.8													9.8	9.8	344.70	0.573295
Remove	Remove	Coast Live Oak	10.6	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	10.6													10.6	10.6	418.30	0.695704
Remove		Coast Live Oak	10.6	No	1	Proposed Project - Parking and Circulation		10.6													10.6	10.6	418.30	0.695704
Remove		Coast Live Oak	10.6	No	1	Proposed Project - Parking and Circulation		10.6													10.6	10.6	418.30	0.695704
Remove		Coast Live Oak	11.3	No	1	Proposed Project - Parking and Circulation		11.3													11.3	11.3	489.80	0.814621
Remove		Coast Live Oak	11.7	No	1	Proposed Project - Parking and Circulation		11.7													11.7	11.7	533.60	0.887468
Remove		Coast Live Oak	11.9	No	1	Proposed Project - Parking and Circulation		11.9													11.9	11.9	556.40	0.925388
Remove		Coast Live Oak	12.8	No	1	Proposed Project - Parking and Circulation		12.8													12.8	12.8	665.80	1.107339
Remove	Remove	Coast Live Oak	20.6	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	20.6													20.6	20.6	2154.40	3.583135
Remove	Remove	Coast Live Oak	28.3	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	28.3													28.3	28.3	4762.00	7.920019
Remove	Remove	Coast Live Oak	4.5	Yes	2	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	4.5	3.5												8.0	4.0	90.90	0.151182
Remove	Remove	Coast Live Oak	4.9	Yes	2	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	4.9	3.9												8.8	4.4	114.40	0.190267
Remove		Coast Live Oak	11.8	Yes	2	Proposed Project - Parking and Circulation		11.8	10.8												22.6	11.3	1147.40	1.908322
Remove	Remove	Coast Live Oak	5.0	Yes	2	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	5.0	4												9.0	4.5	120.80	0.200911
Remove	Remove	Coast Live Oak	5.2	Yes	2	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	5.2	4.2												9.4	4.7	134.30	0.223364
Remove	Remove	Coast Live Oak	5.2	Yes	2	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	5.2	4.2												9.4	4.7	134.30	0.223364
Remove	Remove	Coast Live Oak	5.6	No	2	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	5.6	4.6												10.2	5.1	163.70	0.272261
Remove		Coast Live Oak	13.5	Yes	2	Proposed Project - Parking and Circulation		13.5	12.5												26.0	13.0	1625.10	2.702819
Remove	Remove	Coast Live Oak	16.2	Yes	2	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	16.2	15.2												31.4	15.7	2600.70	4.325408
Remove	Remove	Coast Live Oak	18.7	No	2	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	18.7	17.7												36.4	18.2	3760.70	6.254686
Remove	Remove	Coast Live Oak	4.6	No	3	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	4.6	3.6	2.6											10.8	3.6	120.40	0.200246
Remove	Remove	Coast Live Oak	4.8	No	3	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	4.8	3.8	2.8											11.4	3.8	136.60	0.227189
Remove	Remove	Coast Live Oak	6.7	Yes	3	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	6.7	5.7	4.7											17.1	5.7	360.00	0.598741
Remove		Coast Live Oak	7.2	Yes	3	Proposed Project - Parking and Circulation		7.2	6.2	5.2											18.6	6.2	441.30	0.733957
Remove		Coast Live Oak	8.0	Yes	3	Proposed Project - Parking and Circulation		8.0	7	6											21.0	7.0	592.40	0.985262
Remove	Remove	Coast Live Oak	11.0	Yes	3	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	11.0	10	9											30.0	10.0	1410.40	2.345736
Remove	Remove	Coast Live Oak	14.1	Yes	3	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	14.1	13.1	12.1											39.3	13.1	2755.30	4.582534
Remove	Remove	Coast Live Oak	14.1	Yes	3	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	14.1	13.1	12.1											39.3	13.1	2755.30	4.582534
Remove	Remove	Coast Live Oak	14.2	Yes	3	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	14.2	13.2	12.2											39.6	13.2	2807.90	4.670017
Remove	Remove	Coast Live Oak	16.9	Yes	3	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	16.9	15.9	14.9											47.7	15.9	4463.10	7.422897
Remove	Remove	Coast Live Oak	23.2	Yes	3	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	23.2	22.2	21.2											66.6	22.2	10271.90	17.08392
Remove	Remove	Coast Live Oak	26.9	Yes	3	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	26.9	25.9	24.9											77.7	25.9	13340.60	22.18769
Remove	Remove	Coast Live Oak	4.5	No	4	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	4.5	3.5	2.5	1.5										12.0	3.0	120.80	0.200911
Remove	Remove	Coast Live Oak	10.1	Yes	4	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	10.1	9.1	8.1	7.1										34.4	8.6	1403.50	2.33426
Remove	Remove	Coast Live Oak	16.2	Yes	4	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	16.2	15.2	14.2	13.2										58.8	14.7	5276.40	8.775554
Remove	Remove	Coast Live Oak	16.2	Yes	4	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	16.2	15.2	14.2	13.2										58.8	14.7	5276.40	8.775554
Remove	Remove	Coast Live Oak	6.8	Yes	5	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	6.8	5.8	4.8	3.8	2.8									24.0	4.8	478.10	0.795162

Maintenance Task Proposed Alternative	Maintenance Task ESA	Common Name	Field DBH Measurement	MultBranch	# of Branches	Proposed Alternative	Environmentally Sensitive Alternative	Branch 1	Branch 2	Branch 3	Branch 4	Branch 5	Branch 6	Branch 7	Branch 8	Branch 9	Branch 10	Branch 11	Branch 12	Branch 13	TOTAL	AverageDBH	Carbon Storage(lb)	MTCO2
		Coast Live Oak	8.2	No	1			8.2													8.2	8.2	222.10	0.36939
		Coast Live Oak	8.5	No	1			8.5													8.5	8.5	242.60	0.403485
		Coast Live Oak	8.5	No	1			8.5													8.5	8.5	242.60	0.403485
		Coast Live Oak	8.8	No	1			8.8													8.8	8.8	264.30	0.439576
		Coast Live Oak	5.0	No	1			5.0													5.0	5.0	66.00	0.109769
		Coast Live Oak	5.0	No	1			5.0													5.0	5.0	66.00	0.109769
		Coast Live Oak	5.3	No	1			5.3													5.3	5.3	76.20	0.126734
		Coast Live Oak	5.3	No	1			5.3													5.3	5.3	76.20	0.126734
		Coast Live Oak	9.2	No	1			9.2													9.2	9.2	294.90	0.490469
		Coast Live Oak	9.3	No	1			9.3													9.3	9.3	302.90	0.503774
		Coast Live Oak	5.8	No	1			5.8													5.8	5.8	94.80	0.157669
		Coast Live Oak	6.0	No	1			6.0													6.0	6.0	103.00	0.171307
		Coast Live Oak	6.0	No	1			6.0													6.0	6.0	103.00	0.171307
		Coast Live Oak	6.1	No	1			6.1													6.1	6.1	107.30	0.178458
		Coast Live Oak	6.3	No	1			6.3													6.3	6.3	116.10	0.193094
		Coast Live Oak	6.5	No	1			6.5													6.5	6.5	125.40	0.208562
		Coast Live Oak	7.2	No	1			7.2													7.2	7.2	161.20	0.268103
		Coast Live Oak	7.5	No	1			7.5													7.5	7.5	178.20	0.296377
		Coast Live Oak	9.9	No	1			9.9													9.9	9.9	353.50	0.587931
		Coast Live Oak	10.1	No	1			10.1													10.1	10.1	371.30	0.617535
		Coast Live Oak	10.2	No	1			10.2													10.2	10.2	380.40	0.63267
		Coast Live Oak	10.3	No	1			10.3													10.3	10.3	389.70	0.648138
		Coast Live Oak	10.8	No	1			10.8													10.8	10.8	438.00	0.728469
		Coast Live Oak	11.0	No	1			11.0													11.0	11.0	458.30	0.762231
		Coast Live Oak	11.1	No	1			11.1													11.1	11.1	468.70	0.779528
		Coast Live Oak	11.9	No	1			11.9													11.9	11.9	556.40	0.925388
		Coast Live Oak	14.5	No	1			14.5													14.5	14.5	904.90	1.505003
		Coast Live Oak	14.6	No	1			14.6													14.6	14.6	920.40	1.530782
		Coast Live Oak	14.7	No	1			14.7													14.7	14.7	936.00	1.556728
		Coast Live Oak	16.1	No	1			16.1													16.1	16.1	1166.10	1.939423
		Coast Live Oak	24.0	No	1			24.0													24.0	24.0	3154.60	5.246638
		Coast Live Oak	4.2	No	1			4.2													4.2	4.2	43.40	0.072182
		Coast Live Oak	4.3	No	1			4.3													4.3	4.3	45.90	0.07634
		Coast Live Oak	4.5	No	1			4.5													4.5	4.5	51.20	0.085154
		Coast Live Oak	4.5	No	1			4.5													4.5	4.5	51.20	0.085154
		Coast Live Oak	4.6	No	1			4.6													4.6	4.6	54.00	0.089811
		Coast Live Oak	4.8	No	1			4.8													4.8	4.8	59.90	0.099624
		Coast Live Oak	4.8	No	1			4.8													4.8	4.8	59.90	0.099624
		Coast Live Oak	4.8	No	1			4.8													4.8	4.8	59.90	0.099624
		Coast Live Oak	4.9	No	1			4.9													4.9	4.9	63.00	0.10478
		Coast Live Oak	4.9	No	1			4.9													4.9	4.9	63.00	0.10478
		Coast Live Oak	4.9	No	1			4.9													4.9	4.9	63.00	0.10478
		Coast Live Oak	5.0	No	1			5.0													5.0	5.0	66.00	0.109769
		Coast Live Oak	5.1	No	1			5.1													5.1	5.1	69.30	0.115258
		Coast Live Oak	4.9	No	1			4.9													4.9	4.9	63.00	0.10478
		Coast Live Oak	5.0	No	1			5.0													5.0	5.0	66.00	0.109769
		Coast Live Oak	5.1	No	1			5.1													5.1	5.1	69.30	0.115258
		Coast Live Oak	5.2	No	1			5.2													5.2	5.2	72.70	0.120913
		Coast Live Oak	5.2	No	1			5.2													5.2	5.2	72.70	0.120913
		Coast Live Oak	5.2	No	1			5.2													5.2	5.2	72.70	0.120913
		Coast Live Oak	5.9	No	1			5.9													5.9	5.9	98.90	0.164488
		Coast Live Oak	5.9	No	1			5.9													5.9	5.9	98.90	0.164488
		Coast Live Oak	6.0	No	1			6.0													6.0	6.0	103.00	0.171307
		Coast Live Oak	5.2	No	1			5.2													5.2	5.2	72.70	0.120913
		Coast Live Oak	6.0	No	1			6.0													6.0	6.0	103.00	0.171307
		Coast Live Oak	6.0	No	1			6.0													6.0	6.0	103.00	0.171307
		Coast Live Oak	6.0	No	1			6.0													6.0	6.0	103.00	0.171307
		Coast Live Oak	6.0	No	1			6.0													6.0	6.0	103.00	0.171307
		Coast Live Oak	5.4	No	1			5.4													5.4	5.4	79.60	0.132388
		Coast Live Oak	5.4	No	1			5.4													5.4	5.4	79.60	0.132388
		Coast Live Oak	5.4	No	1			5.4													5.4	5.4	79.60	0.132388
		Coast Live Oak	5.5	No	1			5.5													5.5	5.5	83.30	0.138542
		Coast Live Oak	5.5	No	1			5.5													5.5	5.5	83.30	0.138542
		Coast Live Oak	5.5	No	1			5.5													5.5	5.5	83.30	0.138542
		Coast Live Oak	6.1	No	1			6.1													6.1	6.1	107.30	0.178458
		Coast Live Oak	6.1	No	1			6.1													6.1	6.1	107.30	0.178458
		Coast Live Oak	6.1	No	1			6.1													6.1	6.1	107.30	0.178458
		Coast Live Oak	6.1	No	1			6.1													6.1	6.1	107.30	0.178458
		Coast Live Oak	6.2	No	1			6.2													6.2	6.2	111.60	0.18561
		Coast Live Oak	6.2	No	1			6.2													6.2	6.2	111.60	0.18561
		Coast Live Oak	6.2	No	1			6.2													6.2	6.2	111.60	0.18561
		Coast Live Oak	5.7	No	1			5.7													5.7	5.7	90.90	0.151182
		Coast Live Oak	5.7	No	1			5.7													5.7	5.7	90.90	0.151182
		Coast Live Oak	5.7	No	1			5.7													5.7	5.7	90.90	0.151182
		Coast Live Oak	5.8	No	1			5.8													5.8	5.8	94.80	0.157669
		Coast Live Oak	5.8	No	1			5.8													5.8	5.8	94.80	0.157669
		Coast Live Oak	5.8	No	1			5.8													5.8	5.8	94.80	0.157669
		Coast Live Oak	5.8	No	1			5.8													5.8	5.8	94.80	0.157669
		Coast Live Oak	6.2	No	1			6.2													6.2	6.2	111.60	0.18561
		Coast Live Oak	6.2	No	1			6.2													6.2	6.2	111.60	0.18561
		Coast Live Oak	6.3	No	1			6.3													6.3	6.3	116.10	0.193094
		Coast Live Oak	6.3	No	1			6.3													6.3	6.3	116.10	0.193094
		Coast Live Oak	6.3	No	1			6.3													6.3	6.3	116.10	0.193094
		Coast Live Oak	6.3	No	1			6.3													6.3	6.3	116.10	0.193094
		Coast Live Oak	6.3	No	1			6.3													6.3	6.3	116.10	0.193094
		Coast Live Oak	6.3	No	1			6.3													6.3	6.3	116.10	0.193094
		Coast Live Oak	6.3	No	1			6.3													6.3	6.3	116.10	0.193094
		Coast Live Oak	6.4	No	1			6.4													6.4	6.4	120.70	0.200745
		Coast Live Oak	6.7	No	1			6.7													6.7	6.7	135.00	0.224528
		Coast Live Oak	6.7	No	1			6.7													6.7	6.7	135.00	0.224528
		Coast Live Oak	6.8	No	1			6.8													6.8	6.8	140.10	0.23301
		Coast Live Oak	6.8	No	1			6.8													6.8	6.8	140.10	0.23301
		Coast Live Oak	6.8	No	1			6.8													6.8	6.8	140.10	0.23301

Maintenance Task Proposed Alternative	Maintenance Task ESA	Common Name	Field DBH Measurement	MultBranch	# of Branches	Proposed Alternative	Environmentally Sensitive Alternative	Branch 1	Branch 2	Branch 3	Branch 4	Branch 5	Branch 6	Branch 7	Branch 8	Branch 9	Branch 10	Branch 11	Branch 12	Branch 13	TOTAL	AverageDBH	Carbon Storage(lb)	MTCO2
		Coast Live Oak	6.8	No	1			6.8													6.8	6.8	140.10	0.23301
		Coast Live Oak	6.8	No	1			6.8													6.8	6.8	140.10	0.23301
		Coast Live Oak	6.8	No	1			6.8													6.8	6.8	140.10	0.23301
		Coast Live Oak	6.9	No	1			6.9													6.9	6.9	145.10	0.241326
		Coast Live Oak	6.9	No	1			6.9													6.9	6.9	145.10	0.241326
		Coast Live Oak	6.9	No	1			6.9													6.9	6.9	145.10	0.241326
		Coast Live Oak	6.9	No	1			6.9													6.9	6.9	145.10	0.241326
		Coast Live Oak	6.9	No	1			6.9													6.9	6.9	145.10	0.241326
		Coast Live Oak	6.9	No	1			6.9													6.9	6.9	145.10	0.241326
		Coast Live Oak	6.9	No	1			6.9													6.9	6.9	145.10	0.241326
		Coast Live Oak	7.0	No	1			7.0													7.0	7.0	150.40	0.250141
		Coast Live Oak	7.1	No	1			7.1													7.1	7.1	155.70	0.258956
		Coast Live Oak	7.1	No	1			7.1													7.1	7.1	155.70	0.258956
		Coast Live Oak	7.2	No	1			7.2													7.2	7.2	161.20	0.268103
		Coast Live Oak	7.2	No	1			7.2													7.2	7.2	161.20	0.268103
		Coast Live Oak	7.3	No	1			7.3													7.3	7.3	166.70	0.277251
		Coast Live Oak	7.5	No	1			7.5													7.5	7.5	178.20	0.296377
		Coast Live Oak	7.6	No	1			7.6													7.6	7.6	184.00	0.306023
		Coast Live Oak	7.6	No	1			7.6													7.6	7.6	184.00	0.306023
		Coast Live Oak	7.6	No	1			7.6													7.6	7.6	184.00	0.306023
		Coast Live Oak	6.0	Yes	2			6.0	5												11.0	5.5	197.00	0.327645
		Coast Live Oak	6.0	Yes	2			6.0	5												11.0	5.5	197.00	0.327645
		Coast Live Oak	6.1	Yes	2			6.1	5.1												11.2	5.6	205.70	0.342114
		Coast Live Oak	6.1	Yes	2			6.1	5.1												11.2	5.6	205.70	0.342114
		Coast Live Oak	6.2	Yes	2			6.2	5.2												11.4	5.7	214.90	0.357415
		Coast Live Oak	6.3	Yes	2			6.3	5.3												11.6	5.8	224.20	0.372883
		Coast Live Oak	6.3	Yes	2			6.3	5.3												11.6	5.8	224.20	0.372883
		Coast Live Oak	6.9	Yes	2			6.9	5.9												12.8	6.4	285.40	0.474669
		Coast Live Oak	7.0	Yes	2			7.0	6												13.0	6.5	296.40	0.492964
		Coast Live Oak	7.0	Yes	2			7.0	6												13.0	6.5	296.40	0.492964
		Coast Live Oak	7.0	Yes	2			7.0	6												13.0	6.5	296.40	0.492964
		Coast Live Oak	7.1	Yes	2			7.1	6.1												13.2	6.6	307.80	0.511924
		Coast Live Oak	7.1	Yes	2			7.1	6.1												13.2	6.6	307.80	0.511924
		Coast Live Oak	7.2	Yes	2			7.2	6.2												13.4	6.7	319.40	0.531217
		Coast Live Oak	7.3	Yes	2			7.3	6.3												13.6	6.8	331.10	0.550676
		Coast Live Oak	7.3	Yes	2			7.3	6.3												13.6	6.8	331.10	0.550676
		Coast Live Oak	7.4	Yes	2			7.4	6.4												13.8	6.9	343.30	0.570966
		Coast Live Oak	7.5	Yes	2			7.5	6.5												14.0	7.0	355.60	0.591423
		Coast Live Oak	7.7	Yes	2			7.7	6.7												14.4	7.2	381.10	0.633834
		Coast Live Oak	7.8	No	1			7.8													7.8	7.8	196.30	0.32648
		Coast Live Oak	8.0	Yes	2			8.0	7												15.0	7.5	421.20	0.700527
		Coast Live Oak	7.8	No	1			7.8													7.8	7.8	196.30	0.32648
		Coast Live Oak	7.8	No	1			7.8													7.8	7.8	196.30	0.32648
		Coast Live Oak	8.1	Yes	2			8.1	7.1												15.2	7.6	435.30	0.723978
		Coast Live Oak	8.6	Yes	2			8.6	7.6												16.2	8.1	509.00	0.846554
		Coast Live Oak	8.6	Yes	2			8.6	7.6												16.2	8.1	509.00	0.846554
		Coast Live Oak	8.8	Yes	2			8.8	7.8												16.6	8.3	540.30	0.898611
		Coast Live Oak	9.0	Yes	2			9.0	8												17.0	8.5	572.90	0.95283
		Coast Live Oak	9.1	Yes	2			9.1	8.1												17.2	8.6	589.50	0.980439
		Coast Live Oak	9.1	Yes	2			9.1	8.1												17.2	8.6	589.50	0.980439
		Coast Live Oak	7.8	No	1			7.8													7.8	7.8	196.30	0.32648
		Coast Live Oak	9.2	Yes	2			9.2	8.2												17.4	8.7	606.50	1.008713
		Coast Live Oak	9.3	Yes	2			9.3	8.3												17.6	8.8	623.80	1.037486
		Coast Live Oak	9.4	Yes	2			9.4	8.4												17.8	8.9	641.30	1.066591
		Coast Live Oak	8.1	No	1			8.1													8.1	8.1	215.40	0.358247
		Coast Live Oak	9.4	Yes	2			9.4	8.4												17.8	8.9	641.30	1.066591
		Coast Live Oak	9.5	Yes	2			9.5	8.5												18.0	9.0	659.20	1.096362
		Coast Live Oak	9.5	Yes	2			9.5	8.5												18.0	9.0	659.20	1.096362
	Remove	Coast Live Oak	8.2	No	1		Environmentally Superior Alternative - Frontage Road	8.2													8.2	8.2	222.10	0.36939
		Coast Live Oak	8.2	No	1			8.2													8.2	8.2	222.10	0.36939
		Coast Live Oak	8.3	No	1			8.3													8.3	8.3	228.70	0.380367
		Coast Live Oak	8.3	No	1			8.3													8.3	8.3	228.70	0.380367
		Coast Live Oak	8.3	No	1			8.3													8.3	8.3	228.70	0.380367
		Coast Live Oak	8.3	No	1			8.3													8.3	8.3	228.70	0.380367
		Coast Live Oak	8.4	No	1			8.4													8.4	8.4	235.60	0.391843
		Coast Live Oak	8.4	No	1			8.4													8.4	8.4	235.60	0.391843
		Coast Live Oak	8.6	No	1			8.6													8.6	8.6	249.70	0.415294
		Coast Live Oak	8.6	No	1			8.6													8.6	8.6	249.70	0.415294
		Coast Live Oak	8.8	No	1			8.8													8.8	8.8	264.30	0.439576
		Coast Live Oak	8.8	No	1			8.8													8.8	8.8	264.30	0.439576
		Coast Live Oak	8.9	No	1			8.9													8.9	8.9	271.80	0.45205
		Coast Live Oak	9.0	No	1			9.0													9.0	9.0	279.40	0.46469
		Coast Live Oak	9.3	No	1			9.3													9.3	9.3	302.90	0.503774
		Coast Live Oak	9.3	No	1			9.3													9.3	9.3	302.90	0.503774
		Coast Live Oak	10.1	Yes	2			10.1	9.1												19.2	9.6	772.30	1.284467
		Coast Live Oak	10.4	Yes	2			10.4	9.4												19.8	9.9	832.80	1.385089
		Coast Live Oak	9.5	No	1			9.5													9.5	9.5	319.20	0.530884
		Coast Live Oak	9.5	No	1			9.5													9.5	9.5	319.20	0.530884
		Coast Live Oak	9.6	No	1			9.6													9.6	9.6	327.60	0.544855
		Coast Live Oak	9.6	No	1			9.6													9.6	9.6	327.60	0.544855
		Coast Live Oak	9.7	No	1			9.7													9.7	9.7	336.00	0.558825
		Coast Live Oak	9.8	No	1			9.8													9.8	9.8	344.70	0.573295
		Coast Live Oak	9.9	No	1			9.9													9.9	9.9	353.50	0.587931
		Coast Live Oak	9.9	No	1			9.9													9.9	9.9	353.50	0.587931
		Coast Live Oak	10.2	No	1			10.2													10.2	10.2	380.40	0.63267
		Coast Live Oak	10.2	No	1			10.2													10.2	10.2	380.40	0.63267
		Coast Live Oak	10.2	No	1			10.2													10.2	10.2	380.40	0.63267
		Coast Live Oak	10.3	No	1			10.3													10.3	10.3	389.70	0.648138
		Coast Live Oak	10.4	No	1			10.4													10.4	10.4	399.10	0.663771

Maintenance Task Proposed Alternative	Maintenance Task ESA	Common Name	Field DBH Measurement	MultBranch	# of Branches	Proposed Alternative	Environmentally Sensitive Alternative	Branch 1	Branch 2	Branch 3	Branch 4	Branch 5	Branch 6	Branch 7	Branch 8	Branch 9	Branch 10	Branch 11	Branch 12	Branch 13	TOTAL	AverageDBH	Carbon Storage(lb)	MTCO2
		Coast Live Oak	10.4	No	1			10.4													10.4	10.4	399.10	0.663771
		Coast Live Oak	10.6	No	1			10.6													10.6	10.6	418.30	0.695704
		Coast Live Oak	10.8	No	1			10.8													10.8	10.8	438.00	0.728469
		Coast Live Oak	10.8	No	1			10.8													10.8	10.8	438.00	0.728469
		Coast Live Oak	10.8	No	1			10.8													10.8	10.8	438.00	0.728469
		Coast Live Oak	11.0	No	1			11.0													11.0	11.0	458.30	0.762231
		Coast Live Oak	11.0	No	1			11.0													11.0	11.0	458.30	0.762231
		Coast Live Oak	11.1	No	1			11.1													11.1	11.1	468.70	0.779528
		Coast Live Oak	11.4	No	1			11.4													11.4	11.4	500.60	0.832583
		Coast Live Oak	11.5	No	1			11.5													11.5	11.5	511.50	0.850712
		Coast Live Oak	11.6	No	1			11.6													11.6	11.6	522.60	0.869173
		Coast Live Oak	11.7	No	1			11.7													11.7	11.7	533.60	0.887468
		Coast Live Oak	11.7	No	1			11.7													11.7	11.7	533.60	0.887468
		Coast Live Oak	12.2	No	1			12.2													12.2	12.2	591.60	0.983932
	Remove	Coast Live Oak	12.3	No	1		Environmentally Superior Alternative - Frontage Road	12.3													12.3	12.3	603.60	1.00389
		Coast Live Oak	12.3	No	1			12.3													12.3	12.3	603.60	1.00389
		Coast Live Oak	12.4	No	1			12.4													12.4	12.4	615.70	1.024014
		Coast Live Oak	12.5	No	1			12.5													12.5	12.5	628.10	1.044637
		Coast Live Oak	12.6	No	1			12.6													12.6	12.6	640.60	1.065427
		Coast Live Oak	13.0	No	1			13.0													13.0	13.0	691.80	1.150581
		Coast Live Oak	13.1	No	1			13.1													13.1	13.1	704.90	1.172369
		Coast Live Oak	13.6	No	1			13.6													13.6	13.6	773.00	1.285631
		Coast Live Oak	14.0	No	1			14.0													14.0	14.0	830.20	1.380764
		Coast Live Oak	15.8	No	1			15.8													15.8	15.8	1112.70	1.85061
	Remove	Coast Live Oak	16.3	No	1		Environmentally Superior Alternative - Frontage Road	16.3													16.3	16.3	1202.50	1.999963
		Coast Live Oak	16.9	No	1			16.9													16.9	16.9	1315.60	2.188067
		Coast Live Oak	17.4	No	1			17.4													17.4	17.4	1414.70	2.352888
		Coast Live Oak	17.4	No	1			17.4													17.4	17.4	1414.70	2.352888
	Remove	Coast Live Oak	17.6	No	1		Environmentally Superior Alternative - Frontage Road	17.6													17.6	17.6	1455.60	2.420911
		Coast Live Oak	18.0	No	1			18.0													18.0	18.0	1538.90	2.559453
		Coast Live Oak	18.1	No	1			18.1													18.1	18.1	1560.80	2.595877
		Coast Live Oak	22.4	No	1			22.4													22.4	22.4	2655.40	4.416383
		Coast Live Oak	22.5	No	1			22.5													22.5	22.5	2685.10	4.46578
		Coast Live Oak	10.4	Yes	2			10.4	9.4												19.8	9.9	832.80	1.385089
		Coast Live Oak	4.5	Yes	2			4.5	3.5												8.0	4.0	90.90	0.151182
		Coast Live Oak	4.5	Yes	2			4.5	3.5												8.0	4.0	90.90	0.151182
		Coast Live Oak	4.5	No	2			4.5	3.5												8.0	4.0	90.90	0.151182
		Coast Live Oak	4.5	Yes	2			4.5	3.5												8.0	4.0	90.90	0.151182
		Coast Live Oak	4.5	Yes	2			4.5	3.5												8.0	4.0	90.90	0.151182
		Coast Live Oak	10.4	Yes	2			10.4	9.4												19.8	9.9	832.80	1.385089
		Coast Live Oak	4.6	Yes	2			4.6	3.6												8.2	4.1	96.50	0.160496
		Coast Live Oak	4.6	Yes	2			4.6	3.6												8.2	4.1	96.50	0.160496
		Coast Live Oak	4.9	Yes	2			4.9	3.9												8.8	4.4	114.40	0.190267
		Coast Live Oak	4.9	Yes	2			4.9	3.9												8.8	4.4	114.40	0.190267
		Coast Live Oak	10.5	Yes	2			10.5	9.5												20.0	10.0	853.60	1.419682
		Coast Live Oak	10.9	Yes	2			10.9	9.9												20.8	10.4	939.90	1.563214
		Coast Live Oak	11.1	Yes	2			11.1	10.1												21.2	10.6	979.10	1.62841
		Coast Live Oak	12.0	Yes	2			12.0	11												23.0	11.5	1198.50	1.99331
		Coast Live Oak	12.1	Yes	2			12.1	11.1												23.2	11.6	1224.60	2.036719
		Coast Live Oak	5.0	Yes	2			5.0	4												9.0	4.5	120.80	0.200911
		Coast Live Oak	5.0	Yes	2			5.0	4												9.0	4.5	120.80	0.200911
		Coast Live Oak	5.0	Yes	2			5.0	4												9.0	4.5	120.80	0.200911
		Coast Live Oak	5.0	Yes	2			5.0	4												9.0	4.5	120.80	0.200911
		Coast Live Oak	5.1	Yes	2			5.1	4.1												9.2	4.6	127.40	0.211888
		Coast Live Oak	5.1	Yes	2			5.1	4.1												9.2	4.6	127.40	0.211888
		Coast Live Oak	5.2	Yes	2			5.2	4.2												9.4	4.7	134.30	0.223364
		Coast Live Oak	5.3	Yes	2			5.3	4.3												9.6	4.8	141.30	0.235006
		Coast Live Oak	5.4	Yes	2			5.4	4.4												9.8	4.9	148.60	0.247147
		Coast Live Oak	5.4	Yes	2			5.4	4.4												9.8	4.9	148.60	0.247147
		Coast Live Oak	5.5	Yes	2			5.5	4.5												10.0	5.0	156.00	0.259455
		Coast Live Oak	5.5	Yes	2			5.5	4.5												10.0	5.0	156.00	0.259455
		Coast Live Oak	5.5	Yes	2			5.5	4.5												10.0	5.0	156.00	0.259455
		Coast Live Oak	5.6	Yes	2			5.6	4.6												10.2	5.1	163.70	0.272261
		Coast Live Oak	5.6	Yes	2			5.6	4.6												10.2	5.1	163.70	0.272261
		Coast Live Oak	12.6	Yes	2			12.6	11.6												24.2	12.1	1360.00	2.261912
		Coast Live Oak	12.6	Yes	2			12.6	11.6												24.2	12.1	1360.00	2.261912
		Coast Live Oak	12.6	Yes	2			12.6	11.6												24.2	12.1	1360.00	2.261912
		Coast Live Oak	12.8	Yes	2			12.8	11.8												24.6	12.3	1416.50	2.355881
		Coast Live Oak	5.8	No	2			5.8	4.8												10.6	5.3	179.90	0.299204
		Coast Live Oak	5.8	Yes	2			5.8	4.8												10.6	5.3	179.90	0.299204
		Coast Live Oak	12.8	Yes	2			12.8	11.8												24.6	12.3	1416.50	2.355881
		Coast Live Oak	5.9	Yes	2			5.9	4.9												10.8	5.4	188.30	0.313175
		Coast Live Oak	6.0	Yes	2			6.0	5												11.0	5.5	197.00	0.327645
	Remove	Coast Live Oak	13.0	No	2		Environmentally Superior Alternative - Frontage Road	13.0	12												25.0	12.5	1474.50	2.452345
		Coast Live Oak	13.0	Yes	2			13.0	12												25.0	12.5	1474.50	2.452345
		Coast Live Oak	13.4	Yes	2			13.4	12.4												25.8	12.9	1594.20	2.651427
		Coast Live Oak	14.4	Yes	2			14.4	13.4												27.8	13.9	1919.80	3.192955
		Coast Live Oak	14.7	Yes	2			14.7	13.7												28.4	14.2	2024.80	3.367588
		Coast Live Oak	16.2	Yes	2			16.2	15.2												31.4	15.7	2600.70	4.325408
	Remove	Coast Live Oak	16.4	Yes	2		Environmentally Superior Alternative - Frontage Road	16.4	15.4												31.8	15.9	2684.20	4.464283
		Coast Live Oak	19.6	Yes	2			19.6	18.6												38.2	19.1	4241.50	7.054338
		Coast Live Oak	20.5	Yes	2			20.5	19.5												40.0	20.0	4758.80	7.914697
	Remove	Coast Live Oak	21.7	No	2		Environmentally Superior Alternative - Frontage Road	21.7	20.7												42.4	21.2	5505.20	9.156087
		Coast Live Oak	22.5	Yes	2			22.5	21.5												44.0	22.0	6039.80	10.04522
		Coast Live Oak	4.5	Yes	3			4.5	3.5	2.5											10.5	3.5	112.70	0.187439
		Coast Live Oak	4.7	Yes	3			4.7	3.7	2.7											11.1	3.7	128.40	0.213551
		Coast Live Oak	5.0	Yes	3			5.0	4	3											12.0	4.0	154.10	0.256295
		Coast Live Oak	5.0	Yes	3			5.0	4	3											12.0	4.0	154.10	0.256295
		Coast Live Oak	5.0	Yes	3			5.0	4	3											12.0	4.0	154.10	0.256295
		Coast Live Oak	5.1	Yes	3			5.1	4.1	3.1											12.3	4.1	163.40	0.271762

Maintenance Task Proposed Alternative	Maintenance Task ESA	Common Name	Field DBH Measurement	MultBranch	# of Branches	Proposed Alternative	Environmentally Sensitive Alternative	Branch 1	Branch 2	Branch 3	Branch 4	Branch 5	Branch 6	Branch 7	Branch 8	Branch 9	Branch 10	Branch 11	Branch 12	Branch 13	TOTAL	AverageDBH	Carbon Storage(lb)	MTCO2
		Coast Live Oak	5.2	Yes	3			5.2	4.2	3.2											12.6	4.2	173.00	0.287729
		Coast Live Oak	5.8	Yes	3			5.8	4.8	3.8											14.4	4.8	237.90	0.395668
		Coast Live Oak	5.9	Yes	3			5.9	4.9	3.9											14.7	4.9	250.00	0.415793
		Coast Live Oak	6.0	Yes	3			6.0	5	4											15.0	5.0	262.40	0.436416
		Coast Live Oak	6.0	Yes	3			6.0	5	4											15.0	5.0	262.40	0.436416
		Coast Live Oak	6.3	Yes	3			6.3	5.3	4.3											15.9	5.3	302.00	0.502278
		Coast Live Oak	6.4	Yes	3			6.4	5.4	4.4											16.2	5.4	315.80	0.525229
		Coast Live Oak	6.4	Yes	3			6.4	5.4	4.4											16.2	5.4	315.80	0.525229
		Coast Live Oak	6.6	Yes	3			6.6	5.6	4.6											16.8	5.6	344.90	0.573628
		Coast Live Oak	7.0	Yes	3			7.0	6	5											18.0	6.0	407.50	0.677742
		Coast Live Oak	8.0	Yes	3			8.0	7	6											21.0	7.0	592.40	0.985262
		Coast Live Oak	9.6	Yes	3			9.6	8.6	7.6											25.8	8.6	971.80	1.616269
		Coast Live Oak	9.8	Yes	3			9.8	8.8	7.8											26.4	8.8	1028.50	1.710571
		Coast Live Oak	10.0	Yes	3			10.0	9	8											27.0	9.0	1087.10	1.808033
		Coast Live Oak	10.0	Yes	3			10.0	9	8											27.0	9.0	1087.10	1.808033
		Coast Live Oak	10.1	Yes	3			10.1	9.1	8.1											27.3	9.1	1117.20	1.858094
		Coast Live Oak	10.2	Yes	3			10.2	9.2	8.2											27.6	9.2	1147.70	1.908821
		Coast Live Oak	10.2	Yes	3			10.2	9.2	8.2											27.6	9.2	1147.70	1.908821
		Coast Live Oak	10.8	Yes	3			10.8	9.8	8.8											29.4	9.8	1341.60	2.23131
		Coast Live Oak	11.1	No	3			11.1	10.1	9.1											30.3	10.1	1445.40	2.403947
		Coast Live Oak	11.2	Yes	3			11.2	10.2	9.2											30.6	10.2	1481.20	2.463488
		Coast Live Oak	11.4	Yes	3			11.4	10.4	9.4											31.2	10.4	1554.00	2.584567
		Coast Live Oak	12.6	Yes	3			12.6	11.6	10.6											34.8	11.6	2036.80	3.387546
		Coast Live Oak	13.0	Yes	3			13.0	12	11											36.0	12.0	2215.60	3.684921
		Coast Live Oak	14.1	Yes	3			14.1	13.1	12.1											39.3	13.1	2755.30	4.582534
		Coast Live Oak	14.5	Yes	3			14.5	13.5	12.5											40.5	13.5	2969.30	4.938453
		Coast Live Oak	18.1	Yes	3			18.1	17.1	16.1											51.3	17.1	5351.50	8.900458
		Coast Live Oak	19.6	Yes	3			19.6	18.6	17.6											55.8	18.6	6600.70	10.97809
		Coast Live Oak	22.5	Yes	3			22.5	21.5	20.5											64.5	21.5	9482.30	15.77068
		Coast Live Oak	32.6	Yes	3			32.6	31.6	30.6											94.8	31.6	13351.20	22.20532
		Coast Live Oak	5.4	Yes	4			5.4	4.4	3.4	2.4										15.6	3.9	216.30	0.359744
		Coast Live Oak	7.1	Yes	4			7.1	6.1	5.1	4.1										22.4	5.6	502.90	0.836409
		Coast Live Oak	7.6	Yes	4			7.6	6.6	5.6	4.6										24.4	6.1	616.10	1.024679
		Coast Live Oak	8.6	Yes	4			8.6	7.6	6.6	5.6										28.4	7.1	885.80	1.473237
	Remove	Coast Live Oak	9.6	Yes	4		Environmentally Superior Alternative - Frontage Road	9.6	8.6	7.6	6.6										32.4	8.1	1212.30	2.016262
		Coast Live Oak	10.5	Yes	4			10.5	9.5	8.5	7.5										36.0	9.0	1569.00	2.609515
		Coast Live Oak	10.8	Yes	4			10.8	9.8	8.8	7.8										37.2	9.3	1700.10	2.827556
		Coast Live Oak	11.2	Yes	4			11.2	10.2	9.2	8.2										38.8	9.7	1885.40	3.135742
	Remove	Coast Live Oak	13.5	Yes	4		Environmentally Superior Alternative - Frontage Road	13.5	12.5	11.5	10.5										48.0	12.0	3189.00	5.303851
		Coast Live Oak	15.5	Yes	4			15.5	14.5	13.5	12.5										56.0	14.0	4673.60	7.772994
		Coast Live Oak	18.8	Yes	4			18.8	17.8	16.8	15.8										69.2	17.3	7914.50	13.16316
		Coast Live Oak	4.5	Yes	5			4.5	3.5	2.5	1.5	0.5									12.5	2.5	121.60	0.202242
		Coast Live Oak	6.0	Yes	5			6.0	5	4	3	2									20.0	4.0	318.20	0.529221
		Coast Live Oak	9.5	Yes	5			9.5	8.5	7.5	6.5	5.5									37.5	7.5	1348.00	2.241954
		Coast Live Oak	11.1	Yes	5			11.1	10.1	9.1	8.1	7.1									45.5	9.1	2152.20	3.579476
		Coast Live Oak	14.4	Yes	5			14.4	13.4	12.4	11.4	10.4									62.0	12.4	4598.10	7.647425
		Coast Live Oak	29.2	Yes	5			29.2	28.2	27.2	26.2	25.2									136.0	27.2	13356.10	22.21347
		Coast Live Oak	9.2	Yes	6			9.2	8.2	7.2	6.2	5.2	4.2								40.2	6.7	1322.80	2.200042
		Coast Live Oak	11.0	Yes	6			11.0	10	9	8	7	6								51.0	8.5	2324.40	3.865874
		Coast Live Oak	14.1	Yes	6			14.1	13.1	12.1	11.1	10.1	9.1								69.6	11.6	4940.80	8.217394
		Coast Live Oak	17.2	Yes	6			17.2	16.2	15.2	14.2	13.2	12.2								88.2	14.7	8847.60	14.71507
		Coast Live Oak	12.5	Yes	7			12.5	11.5	10.5	9.5	8.5	7.5	6.5							66.5	9.5	3441.00	5.72297
		Coast Live Oak	5.3	Yes	8			5.3	4.3	3.3	2.3	1.3	1	1	1						19.5	2.4	214.80	0.357249
		Coast Live Oak	12.4	Yes	8			12.4	11.4	10.4	9.4	8.4	7.4	6.4	5.4						71.2	8.9	3358.30	5.585426
		Coast Live Oak	10.1	Yes	12			10.1	9.1	8.1	7.1	6.1	5.1	4.1	3.1	2.1	1.1	1	1		58.0	4.8	1779.40	2.959446
		Coast Live Oak	11.5	Yes	13			11.5	10.5	9.5	8.5	7.5	6.5	5.5	4.5	3.5	2.5	1.5	1	1	73.5	5.7	2666.80	4.435344
Remove	Remove	Eucalyptus	28.5	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	28.5													28.5	28.5	3657.80	6.083546
Remove	Remove	Eucalyptus	33.5	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	33.5													33.5	33.5	5415.30	9.006568
Remove	Remove	Eucalyptus	38.2	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	38.2													38.2	38.2	7445.90	12.3838
Remove	Remove	Eucalyptus	39.9	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	39.9													39.9	39.9	8274.20	13.76141
Remove	Remove	Eucalyptus	22.1	Yes	3	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	22.1	21.1	20.1											63.3	21.1	6697.90	11.13975
		Eucalyptus	28.1	Yes	2			28.1	27.1												55.2	27.6	7846.20	13.04957
		Eucalyptus	31.2	Yes	4			31.2	30.2	29.2	28.2										118.8	29.7	13676.90	22.74702
Remove	Remove	Eucalyptus sp.	21.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	21.6													21.6	21.6	1869.50	3.109298
Remove	Remove	Italian Stone Pine	12.0	No	1	Proposed Project - GA Relocation	Environmentally Superior Alternative - NorthAccess_and_GA	12.0													12.0	12.0	255.80	0.425439
Remove	Remove	Italian Stone Pine	11.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.0													11.0	11.0	208.30	0.346438
Remove		Monterey Cypress	26.3	No	1	Proposed Project - Highway68FrontLoop		26.3													26.3	26.3	1292.60	2.149814
Remove	Remove	Monterey Cypress	29.0	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	29.0													29.0	29.0	1614.20	2.68469
Remove	Remove	Monterey Cypress	32.1	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	32.1													32.1	32.1	2034.80	3.38422
Remove	Remove	Monterey Cypress	32.3	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	32.3													32.3	32.3	2063.30	3.43162
Remove	Remove	Monterey Cypress	36.4	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	36.4													36.4	36.4	2709.70	4.506694
Remove		Monterey Cypress	18.8	No	2	Proposed Project - Highway68FrontLoop		18.8	17.8												36.6	18.3	1247.10	2.07414
Remove	Remove	Monterey Cypress	11.6	No	2	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	11.6	10.6												22.2	11.1	403.10	0.670424
Remove	Remove	Monterey Cypress	24.5	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	24.5													24.5	24.5	1100.10	1.829654
		Monterey Cypress	26.2	No	1			26.2													26.2	26.2	1281.30	2.131021
	Remove	Monterey Cypress	29.0	No	1		Environmentally Superior Alternative - Frontage Road	29.0													29.0	29.0	1614.20	2.68469
	Remove	Monterey Cypress	7.2	No	1		Environmentally Superior Alternative - Frontage Road	7.2													7.2	7.2	70.70	0.117586
	Remove	Monterey Cypress	8.2	No	1		Environmentally Superior Alternative - Frontage Road	8.2													8.2	8.2	94.30	0.156837
	Remove	Monterey Cypress	9.6	No	1		Environmentally Superior Alternative - Frontage Road	9.6													9.6	9.6	133.90	0.222699
	Remove	Monterey Cypress	11.4	No	1		Environmentally Superior Alternative - Frontage Road	11.4													11.4	11.4	196.40	0.326647
	Remove	Monterey Cypress	12.0	No	1		Environmentally Superior Alternative - Frontage Road	12.0													12.0	12.0	220.20	0.36623
	Remove	Monterey Cypress	13.0	No	1		Environmentally Superior Alternative - Frontage Road	13.0													13.0	13.0	263.30	0.437913
	Remove	Monterey Cypress	13.4	No	1		Environmentally Superior Alternative - Frontage Road	13.4													13.4	13.4	281.80	0.468681
	Remove	Monterey Cypress	13.8	No	1		Environmentally Superior Alternative - Frontage Road	13.8													13.8	13.8	301.00	0.500614
		Monterey Cypress	13.8	No	1			13.8													13.8	13.8	301.00	0.500614
	Remove	Monterey Cypress	16.3	No	1		Environmentally Superior Alternative - Frontage Road	16.3													16.3	16.3	437.60	0.727803
		Monterey Cypress	16.4	No	1			16.4													16.4	16.4	443.60	0.737783
	Remove	Monterey Cypress	17.6	No	1		Environmentally Superior Alternative - Frontage Road	17.6													17.6	17.6	520.40	0.865514
	Remove	Monterey Cypress	18.2	No	1		Environmentally Superior Alternative - Frontage Road	18.2													18.2	18.2	561.30	0.933538
		Monterey Cypress	18.4	No	1			18.4													18.4	18.4	575.10	0.956489

Maintenance Task Proposed Alternative	Maintenance Task ESA	Common Name	Field DBH Measurement	MultBranch	# of Branches	Proposed Alternative	Environmentally Sensitive Alternative	Branch 1	Branch 2	Branch 3	Branch 4	Branch 5	Branch 6	Branch 7	Branch 8	Branch 9	Branch 10	Branch 11	Branch 12	Branch 13	TOTAL	AverageDBH	Carbon Storage(lb)	MTCO2
		Monterey Cypress	21.0	No	1			21.0													21.0	21.0	775.90	1.290454
	Remove	Monterey Cypress	21.2	No	1		Environmentally Superior Alternative - Frontage Road	21.2													21.2	21.2	792.60	1.318229
		Monterey Cypress	32.6	No	1			32.6													32.6	32.6	2107.50	3.505132
	Remove	Monterey Cypress	49.2	No	1		Environmentally Superior Alternative - Frontage Road	49.2													49.2	49.2	5389.80	8.964157
	Remove	Monterey Cypress	14.7	Yes	2		Environmentally Superior Alternative - Frontage Road	14.7	13.7												28.4	14.2	702.20	1.167878
		Monterey Cypress	28.5	No	2			28.5	27.5												56.0	28.0	3284.10	5.462019
	Remove	Monterey Cypress	19.1	Yes	4		Environmentally Superior Alternative - Frontage Road	19.1	18.1	17.1	16.1										70.4	17.6	2521.40	4.193519
	Remove	Monterey Cypress	18.2	No	1		Environmentally Superior Alternative - Frontage Road	18.2													18.2	18.2	561.30	0.933538
	Remove	Monterey Cypress	21.3	No	1		Environmentally Superior Alternative - Frontage Road	21.3													21.3	21.3	801.10	1.332366
		Monterey Cypress	22.1	No	1			22.1													22.1	22.1	870.60	1.447956
Remove	Remove	Monterey Pine	7.4	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Terminal Area	7.4													7.4	7.4	68.40	0.113761
Remove	Remove	Monterey Pine	7.5	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	7.5													7.5	7.5	70.40	0.117087
Remove	Remove	Monterey Pine	7.5	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	7.5													7.5	7.5	70.40	0.117087
Remove	Remove	Monterey Pine	8.0	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	8.0													8.0	8.0	81.60	0.135715
Remove		Monterey Pine	8.4	No	1	Proposed Project - Highway68FrontLoop		8.4													8.4	8.4	91.00	0.151349
Remove	Remove	Monterey Pine	8.8	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	8.8													8.8	8.8	101.10	0.168147
Remove	Remove	Monterey Pine	8.8	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	8.8													8.8	8.8	101.10	0.168147
Remove	Remove	Monterey Pine	9.6	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	9.6													9.6	9.6	123.20	0.204903
Remove	Remove	Monterey Pine	9.7	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	9.7													9.7	9.7	126.20	0.209892
Remove	Remove	Monterey Pine	9.7	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	9.7													9.7	9.7	126.20	0.209892
Remove	Remove	Monterey Pine	9.7	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	9.7													9.7	9.7	126.20	0.209892
Remove		Monterey Pine	10.0	No	1	Proposed Project - Highway68FrontLoop		10.0													10.0	10.0	135.10	0.224694
Remove	Remove	Monterey Pine	10.0	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	10.0													10.0	10.0	135.10	0.224694
Remove	Remove	Monterey Pine	10.4	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	10.4													10.4	10.4	147.80	0.245817
Remove	Remove	Monterey Pine	10.5	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Terminal Area	10.5													10.5	10.5	151.10	0.251305
Remove	Remove	Monterey Pine	10.6	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	10.6													10.6	10.6	154.50	0.25696
Remove	Remove	Monterey Pine	10.9	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	10.9													10.9	10.9	164.50	0.273592
Remove	Remove	Monterey Pine	11.2	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	11.2													11.2	11.2	175.10	0.291221
Remove		Monterey Pine	11.5	No	1	Proposed Project - Highway68FrontLoop		11.5													11.5	11.5	185.90	0.309183
Remove	Remove	Monterey Pine	11.7	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	11.7													11.7	11.7	193.50	0.321824
Remove	Remove	Monterey Pine	12.1	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	12.1													12.1	12.1	209.00	0.347603
Remove	Remove	Monterey Pine	12.3	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	12.3													12.3	12.3	217.00	0.360908
Remove		Monterey Pine	12.3	No	1	Proposed Project - Highway68FrontLoop		12.3													12.3	12.3	217.00	0.360908
Remove	Remove	Monterey Pine	13.0	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	13.0													13.0	13.0	246.40	0.409805
Remove	Remove	Monterey Pine	13.0	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	13.0													13.0	13.0	246.40	0.409805
Remove	Remove	Monterey Pine	13.0	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	13.0													13.0	13.0	246.40	0.409805
Remove		Monterey Pine	13.1	No	1	Proposed Project - Highway68FrontLoop		13.1													13.1	13.1	250.50	0.416624
Remove	Remove	Monterey Pine	13.3	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	13.3													13.3	13.3	259.50	0.431593
Remove	Remove	Monterey Pine	14.5	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	14.5													14.5	14.5	316.50	0.526394
Remove	Remove	Monterey Pine	16.5	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	16.5													16.5	16.5	426.30	0.70901
Remove	Remove	Monterey Pine	17.4	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Terminal Area	17.4													17.4	17.4	481.90	0.801482
Remove		Monterey Pine	19.2	No	1	Proposed Project - Highway68FrontLoop		19.2													19.2	19.2	605.00	1.006218
Remove	Remove	Monterey Pine	19.6	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Terminal Area	19.6													19.6	19.6	634.00	1.05445
Remove	Remove	Monterey Pine	20.6	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	20.6													20.6	20.6	711.90	1.184011
Remove	Remove	Monterey Pine	20.6	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	20.6													20.6	20.6	711.90	1.184011
Remove	Remove	Monterey Pine	24.7	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	24.7													24.7	24.7	1084.00	1.802877
Remove	Remove	Monterey Pine	26.7	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	26.7													26.7	26.7	1299.10	2.160625
Remove	Remove	Monterey Pine	28.3	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	28.3													28.3	28.3	1487.10	2.473301
Remove	Remove	Monterey Pine	29.4	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	29.4													29.4	29.4	1625.60	2.70365
Remove		Monterey Pine	34.4	No	1	Proposed Project - Highway68FrontLoop		34.4													34.4	34.4	2341.90	3.894979
Remove		Monterey Pine	36.8	No	1	Proposed Project - Highway68FrontLoop		36.8													36.8	36.8	2745.20	4.565736
Remove	Remove	Monterey Pine	5.8	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	5.8													5.8	5.8	39.70	0.066028
Remove	Remove	Monterey Pine	6.1	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	6.1													6.1	6.1	44.30	0.073678
Remove	Remove	Monterey Pine	6.1	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	6.1													6.1	6.1	44.30	0.073678
Remove	Remove	Monterey Pine	6.2	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	6.2													6.2	6.2	45.90	0.07634
Remove	Remove	Monterey Pine	6.3	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	6.3													6.3	6.3	47.60	0.079167
Remove	Remove	Monterey Pine	6.5	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	6.5													6.5	6.5	51.10	0.084988
Remove		Monterey Pine	6.6	No	1	Proposed Project - Highway68FrontLoop		6.6													6.6	6.6	52.90	0.087982
Remove		Monterey Pine	6.9	No	1	Proposed Project - Highway68FrontLoop		6.9													6.9	6.9	58.50	0.097295
Remove	Remove	Monterey Pine	7.0	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	7.0													7.0	7.0	60.30	0.100289
Remove		Monterey Pine	7.4	No	1	Proposed Project - Highway68FrontLoop		7.4													7.4	7.4	68.40	0.113761
Remove	Remove	Monterey Pine	8.1	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	8.1													8.1	8.1	83.90	0.13954
Remove	Remove	Monterey Pine	8.2	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	8.2													8.2	8.2	86.20	0.143365
Remove	Remove	Monterey Pine	8.9	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	8.9													8.9	8.9	103.70	0.172471
Remove		Monterey Pine	9.7	No	1	Proposed Project - Highway68FrontLoop		9.7													9.7	9.7	126.20	0.209892
Remove	Remove	Monterey Pine	10.2	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	10.2													10.2	10.2	141.40	0.235172
Remove	Remove	Monterey Pine	10.3	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	10.3													10.3	10.3	144.60	0.240494
Remove	Remove	Monterey Pine	10.6	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	10.6													10.6	10.6	154.50	0.25696
Remove	Remove	Monterey Pine	10.6	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	10.6													10.6	10.6	154.50	0.25696
Remove	Remove	Monterey Pine	15.4	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	15.4													15.4	15.4	363.40	0.604396
Remove	Remove	Monterey Pine	15.4	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	15.4													15.4	15.4	363.40	0.604396
Remove	Remove	Monterey Pine	10.8	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	10.8													10.8	10.8	161.30	0.268269
Remove	Remove	Monterey Pine	15.6	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	15.6													15.6	15.6	374.60	0.623024
Remove	Remove	Monterey Pine	15.8	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	15.8													15.8	15.8	385.70	0.641485
Remove	Remove	Monterey Pine	16.3	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	16.3													16.3	16.3	414.50	0.689384
Remove	Remove	Monterey Pine	16.4	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	16.4													16.4	16.4	420.10	0.698698
Remove	Remove	Monterey Pine	16.6	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	16.6													16.6	16.6	432.00	0.71849
Remove	Remove	Monterey Pine	16.8	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	16.8													16.8	16.8	444.50	0.739279
Remove		Monterey Pine	17.0	No	1	Proposed Project - Highway68FrontLoop		17.0													17.0	17.0	456.80	0.759736
Remove	Remove	Monterey Pine	17.1	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	17.1													17.1	17.1	462.70	0.769549
Remove		Monterey Pine	17.2	No	1	Proposed Project - Highway68FrontLoop		17.2													17.2	17.2	469.20	0.78036
Remove		Monterey Pine	17.6	No	1	Proposed Project - Highway68FrontLoop		17.6													17.6	17.6	494.70	0.822771
Remove	Remove	Monterey Pine	17.7	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	17.7													17.7	17.7	501.00	0.833249
Remove	Remove	Monterey Pine	17.7	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	17.7													17.7	17.7	501.00	0.833249
Remove	Remove	Monterey Pine	18.0	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	18.0													18.0	18.0	521.00	0.866512
Remove	Remove	Monterey Pine	18.1	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	18.1													18.1	18.1	527.50	0.877323
Remove	Remove	Monterey Pine	18.2	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	18.2													18.2	18.2	534.50	0.888965
Remove	Remove	Monterey Pine	18.2	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	18.2													18.2	18.2	534.50	0.888965
Remove	Remove	Monterey Pine	18.2	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	18.2													18.2	18.2	534.50	0.888965
Remove	Remove	Monterey Pine	18.3	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	18.3													18.3	18.3	541.10	0.899942

Maintenance Task Proposed Alternative	Maintenance Task ESA	Common Name	Field DBH Measurement	MultBranch	# of Branches	Proposed Alternative	Environmentally Sensitive Alternative	Branch 1	Branch 2	Branch 3	Branch 4	Branch 5	Branch 6	Branch 7	Branch 8	Branch 9	Branch 10	Branch 11	Branch 12	Branch 13	TOTAL	AverageDBH	Carbon Storage(lb)	MTCO2
Remove	Remove	Monterey Pine	18.4	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	18.4													18.4	18.4	548.20	0.91175
Remove	Remove	Monterey Pine	18.8	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	18.8													18.8	18.8	576.20	0.958319
Remove		Monterey Pine	18.9	No	1	Proposed Project - Highway68FrontLoop		18.9													18.9	18.9	583.00	0.969628
Remove	Remove	Monterey Pine	19.0	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	19.0													19.0	19.0	590.50	0.982102
Remove	Remove	Monterey Pine	19.1	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	19.1													19.1	19.1	597.50	0.993744
Remove		Monterey Pine	19.2	No	1	Proposed Project - Highway68FrontLoop		19.2													19.2	19.2	605.00	1.006218
Remove	Remove	Monterey Pine	19.3	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	19.3													19.3	19.3	612.00	1.01786
Remove	Remove	Monterey Pine	19.6	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	19.6													19.6	19.6	634.00	1.05445
Remove	Remove	Monterey Pine	20.0	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	20.0													20.0	20.0	664.40	1.105011
Remove	Remove	Monterey Pine	20.7	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	20.7													20.7	20.7	719.60	1.196818
Remove	Remove	Monterey Pine	21.1	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	21.1													21.1	21.1	752.30	1.251203
Remove	Remove	Monterey Pine	21.2	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	21.2													21.2	21.2	760.40	1.264675
Remove	Remove	Monterey Pine	21.2	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	21.2													21.2	21.2	760.40	1.264675
Remove		Monterey Pine	21.2	No	1	Proposed Project - Highway68FrontLoop		21.2													21.2	21.2	760.40	1.264675
Remove		Monterey Pine	21.2	No	1	Proposed Project - Highway68FrontLoop		21.2													21.2	21.2	760.40	1.264675
Remove	Remove	Monterey Pine	21.5	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	21.5													21.5	21.5	786.10	1.307418
Remove	Remove	Monterey Pine	11.6	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	11.6													11.6	11.6	189.70	0.315503
Remove	Remove	Monterey Pine	21.8	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	21.8													21.8	21.8	811.60	1.349829
Remove	Remove	Monterey Pine	21.9	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	21.9													21.9	21.9	820.00	1.3638
Remove	Remove	Monterey Pine	22.0	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	22.0													22.0	22.0	828.50	1.377937
Remove	Remove	Monterey Pine	22.2	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	22.2													22.2	22.2	846.20	1.407375
Remove	Remove	Monterey Pine	22.2	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	22.2													22.2	22.2	846.20	1.407375
Remove	Remove	Monterey Pine	22.6	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	22.6													22.6	22.6	882.30	1.467415
Remove	Remove	Monterey Pine	11.9	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	11.9													11.9	11.9	201.00	0.334297
Remove	Remove	Monterey Pine	12.1	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	12.1													12.1	12.1	209.00	0.347603
Remove	Remove	Monterey Pine	23.0	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	23.0													23.0	23.0	918.60	1.527789
Remove	Remove	Monterey Pine	12.1	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	12.1													12.1	12.1	209.00	0.347603
Remove	Remove	Monterey Pine	12.2	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	12.2													12.2	12.2	212.90	0.354089
Remove	Remove	Monterey Pine	23.6	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	23.6													23.6	23.6	975.10	1.621758
Remove	Remove	Monterey Pine	23.7	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	23.7													23.7	23.7	985.20	1.638556
Remove	Remove	Monterey Pine	24.5	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	24.5													24.5	24.5	1063.50	1.768782
Remove	Remove	Monterey Pine	25.1	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	25.1													25.1	25.1	1125.10	1.871233
Remove	Remove	Monterey Pine	25.1	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	25.1													25.1	25.1	1125.10	1.871233
Remove	Remove	Monterey Pine	12.3	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	12.3													12.3	12.3	217.00	0.360908
Remove		Monterey Pine	12.5	No	1	Proposed Project - Highway68FrontLoop		12.5													12.5	12.5	225.10	0.37438
Remove	Remove	Monterey Pine	12.8	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	12.8													12.8	12.8	237.60	0.395169
Remove	Remove	Monterey Pine	13.1	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	13.1													13.1	13.1	250.50	0.416624
Remove	Remove	Monterey Pine	13.2	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	13.2													13.2	13.2	255.00	0.424109
Remove	Remove	Monterey Pine	13.2	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	13.2													13.2	13.2	255.00	0.424109
Remove	Remove	Monterey Pine	27.8	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	27.8													27.8	27.8	1427.00	2.373345
Remove	Remove	Monterey Pine	28.9	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	28.9													28.9	28.9	1562.20	2.598205
Remove		Monterey Pine	30.0	No	1	Proposed Project - Highway68FrontLoop		30.0													30.0	30.0	1703.50	2.833211
Remove	Remove	Monterey Pine	30.5	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	30.5													30.5	30.5	1770.30	2.944311
Remove	Remove	Monterey Pine	36.9	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	36.9													36.9	36.9	2762.60	4.594675
Remove		Monterey Pine	5.2	No	2	Proposed Project - Highway68FrontLoop		5.2	4.2												9.4	4.7	54.40	0.090476
Remove	Remove	Monterey Pine	6.2	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	6.2	5.2												11.4	5.7	83.60	0.139041
Remove	Remove	Monterey Pine	6.8	Yes	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	6.8	5.8												12.6	6.3	104.70	0.174134
Remove	Remove	Monterey Pine	7.5	Yes	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	7.5	6.5												14.0	7.0	132.80	0.220869
Remove		Monterey Pine	8.9	No	2	Proposed Project - Highway68FrontLoop		8.9	7.9												16.8	8.4	201.00	0.334297
Remove	Remove	Monterey Pine	11.8	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	11.8	10.8												22.6	11.3	396.80	0.659946
Remove	Remove	Monterey Pine	12.6	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	12.6	11.6												24.2	12.1	464.70	0.772875
Remove	Remove	Monterey Pine	14.3	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	14.3	13.3												27.6	13.8	628.80	1.045802
Remove	Remove	Monterey Pine	14.6	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	14.6	13.6												28.2	14.1	661.30	1.099855
Remove	Remove	Monterey Pine	15.5	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	15.5	14.5												30.0	15.0	762.90	1.268833
Remove	Remove	Monterey Pine	15.9	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	15.9	14.9												30.8	15.4	810.90	1.348665
Remove	Remove	Monterey Pine	16.9	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	16.9	15.9												32.8	16.4	937.80	1.559721
Remove	Remove	Monterey Pine	17.0	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	17.0	16												33.0	16.5	951.10	1.581842
Remove	Remove	Monterey Pine	17.0	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	17.0	16												33.0	16.5	951.10	1.581842
Remove	Remove	Monterey Pine	18.0	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	18.0	17												35.0	17.5	1090.30	1.813355
Remove	Remove	Monterey Pine	18.0	Yes	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	18.0	17												35.0	17.5	1090.30	1.813355
Remove	Remove	Monterey Pine	19.0	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	19.0	18												37.0	18.5	1239.90	2.062165
Remove	Remove	Monterey Pine	20.0	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	20.0	19												39.0	19.5	1401.20	2.330435
Remove	Remove	Monterey Pine	20.3	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	20.3	19.3												39.6	19.8	1452.60	2.415922
Remove	Remove	Monterey Pine	21.7	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	21.7	20.7												42.4	21.2	1702.30	2.831215
Remove	Remove	Monterey Pine	21.8	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	21.8	20.8												42.6	21.3	1721.50	2.863148
Remove	Remove	Monterey Pine	21.8	Yes	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	21.8	20.8												42.6	21.3	1721.50	2.863148
Remove	Remove	Monterey Pine	25.0	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	25.0	24												49.0	24.5	2383.10	3.963502
Remove		Monterey Pine	25.2	Yes	2	Proposed Project - Highway68FrontLoop		25.2	24.2												49.4	24.7	2430.30	4.042004
Remove	Remove	Monterey Pine	25.3	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	25.3	24.3												49.6	24.8	2452.30	4.078593
Remove	Remove	Monterey Pine	28.9	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	28.9	27.9												56.8	28.4	3372.40	5.608877
Remove	Remove	Monterey Pine	30.3	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	30.3	29.3												59.6	29.8	3776.60	6.28113
Remove	Remove	Monterey Pine	31.1	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	31.1	30.1												61.2	30.6	4019.90	6.68578
Remove	Remove	Monterey Pine	33.0	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	33.0	32												65.0	32.5	4634.10	7.707299
Remove	Remove	Monterey Pine	33.0	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	33.0	32												65.0	32.5	4634.10	7.707299
Remove	Remove	Monterey Pine	34.7	No	2	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	34.7	33.7												68.4	34.2	5225.50	8.690898
Remove	Remove	Monterey Pine	18.0	No	3	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	18.0	17	16											51.0	17.0	1635.90	2.720781
Remove	Remove	Monterey Pine	21.6	Yes	3	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	21.6	20.6	19.6											61.8	20.6	2556.60	4.252062
Remove	Remove	Monterey Pine	22.8	No	3	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	22.8	21.8	20.8											65.4	21.8	2921.20	4.858454
Remove	Remove	Monterey Pine	13.3	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	13.3													13.3	13.3	259.50	0.431593
Remove	Remove	Monterey Pine	13.5	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	13.5													13.5	13.5	268.50	0.446561
Remove		Monterey Pine	14.0	No	1	Proposed Project - Highway68FrontLoop		14.0													14.0	14.0	292.10	0.485812
Remove		Monterey Pine	14.2	No	1	Proposed Project - Highway68FrontLoop		14.2													14.2	14.2	301.70	0.501779
Remove	Remove	Monterey Pine	14.5	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	14.5													14.5	14.5	316.50	0.526394
Remove	Remove	Monterey Pine	14.5	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Frontage Road	14.5													14.5	14.5	316.50	0.526394
Remove	Remove	Monterey Pine	14.8	No	1	Proposed Project - Highway68FrontLoop	Environmentally Superior Alternative - Parking And Circulation	14.8													14.8	14.8	331.80	0.55184
Remove	Remove	Monterey Pine	19.5	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	19.5													19.5	19.5	626.90	1.042642
Remove	Remove	Monterey Pine	19.1	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	19.1													19.1	19.1	597.50	0.993744
Remove	Remove	Monterey Pine	20.5	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	20.5													20.5	20.5	703.50	1.170041
Remove	Remove	Monterey Pine	20.0	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	20.0													20.0	20.0	664.40	1.105011
Remove	Remove	Monterey Pine	21.3	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	21.3													21.3	21.3	769.20	1.279311

Maintenance Task Proposed Alternative	Maintenance Task ESA	Common Name	Field DBH Measurement	MultBranch	# of Branches	Proposed Alternative	Environmentally Sensitive Alternative	Branch 1	Branch 2	Branch 3	Branch 4	Branch 5	Branch 6	Branch 7	Branch 8	Branch 9	Branch 10	Branch 11	Branch 12	Branch 13	TOTAL	AverageDBH	Carbon Storage(lb)	MTCO2
Remove	Remove	Monterey Pine	22.2	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	22.2													22.2	22.2	846.20	1.407375
Remove	Remove	Monterey Pine	22.0	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	22.0													22.0	22.0	828.50	1.377937
Remove	Remove	Monterey Pine	21.8	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	21.8													21.8	21.8	811.60	1.349829
Remove	Remove	Monterey Pine	22.7	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	22.7													22.7	22.7	891.10	1.482051
Remove	Remove	Monterey Pine	24.0	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	24.0													24.0	24.0	1014.40	1.68712
Remove	Remove	Monterey Pine	23.5	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	23.5													23.5	23.5	965.80	1.60629
Remove	Remove	Monterey Pine	24.9	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	24.9													24.9	24.9	1104.90	1.837637
Remove	Remove	Monterey Pine	24.5	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	24.5													24.5	24.5	1063.50	1.768782
Remove	Remove	Monterey Pine	10.4	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	10.4													10.4	10.4	147.80	0.245817
Remove	Remove	Monterey Pine	10.8	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	10.8													10.8	10.8	161.30	0.268269
Remove	Remove	Monterey Pine	13.6	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	13.6													13.6	13.6	273.20	0.454378
Remove	Remove	Monterey Pine	14.0	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	14.0													14.0	14.0	292.10	0.485812
Remove	Remove	Monterey Pine	14.2	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	14.2													14.2	14.2	301.70	0.501779
Remove	Remove	Monterey Pine	15.7	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	15.7													15.7	15.7	379.90	0.631839
Remove	Remove	Monterey Pine	20.6	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	20.6													20.6	20.6	711.90	1.184011
Remove	Remove	Monterey Pine	24.0	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	24.0													24.0	24.0	1014.40	1.68712
Remove	Remove	Monterey Pine	33.5	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	33.5													33.5	33.5	2201.30	3.661138
Remove	Remove	Monterey Pine	15.0	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	15.0													15.0	15.0	342.20	0.569137
Remove	Remove	Monterey Pine	18.2	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	18.2													18.2	18.2	534.50	0.888965
Remove	Remove	Monterey Pine	21.2	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	21.2													21.2	21.2	760.40	1.264675
Remove	Remove	Monterey Pine	24.6	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	24.6													24.6	24.6	1074.20	1.786578
Remove	Remove	Monterey Pine	24.6	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	24.6													24.6	24.6	1074.20	1.786578
Remove	Remove	Monterey Pine	30.6	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	30.6													30.6	30.6	1784.90	2.968593
Remove	Remove	Monterey Pine	31.0	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	31.0													31.0	31.0	1838.70	3.058072
Remove	Remove	Monterey Pine	37.8	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	37.8													37.8	37.8	2923.60	4.862446
Remove	Remove	Monterey Pine	38.5	No	1	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	38.5													38.5	38.5	3053.00	5.07766
Remove	Remove	Monterey Pine	19.6	Yes	2	Proposed Project - North Access Road	Environmentally Superior Alternative - NorthAccess_and_GA	19.6	18.6												38.2	19.1	1335.60	2.221331
Remove	Remove	Monterey Pine	11.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.0													11.0	11.0	167.90	0.279246
Remove	Remove	Monterey Pine	13.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	13.5													13.5	13.5	268.50	0.446561
Remove	Remove	Monterey Pine	15.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	15.0													15.0	15.0	342.20	0.569137
Remove	Remove	Monterey Pine	15.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	15.0													15.0	15.0	342.20	0.569137
Remove	Remove	Monterey Pine	16.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	16.0													16.0	16.0	397.00	0.660279
Remove	Remove	Monterey Pine	18.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	18.0													18.0	18.0	521.00	0.866512
Remove	Remove	Monterey Pine	19.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	19.0													19.0	19.0	590.50	0.982102
Remove	Remove	Monterey Pine	24.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	24.0													24.0	24.0	1014.40	1.68712
Remove	Remove	Monterey Pine	25.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	25.0													25.0	25.0	1114.90	1.854269
Remove	Remove	Monterey Pine	25.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	25.0													25.0	25.0	1114.90	1.854269
Remove	Remove	Monterey Pine	32.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	32.5													32.5	32.5	2053.10	3.414656
Remove	Remove	Monterey Pine	34.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	34.0													34.0	34.0	2279.50	3.791198
Remove	Remove	Monterey Pine	4.7	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	4.7													4.7	4.7	24.90	0.041413
Remove	Remove	Monterey Pine	6.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.3													6.3	6.3	47.60	0.079167
Remove	Remove	Monterey Pine	6.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	6.5													6.5	6.5	51.10	0.084988
Remove	Remove	Monterey Pine	7.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.2													7.2	7.2	64.20	0.106776
Remove	Remove	Monterey Pine	7.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.3													7.3	7.3	66.30	0.110268
Remove	Remove	Monterey Pine	7.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.6													7.6	7.6	72.60	0.120746
Remove	Remove	Monterey Pine	7.8	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.8													7.8	7.8	76.90	0.127898
Remove	Remove	Monterey Pine	7.9	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	7.9													7.9	7.9	79.20	0.131723
Remove	Remove	Monterey Pine	8.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.2													8.2	8.2	86.20	0.143365
Remove	Remove	Monterey Pine	8.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	8.3													8.3	8.3	88.60	0.147357
Remove	Remove	Monterey Pine	9.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.0													9.0	9.0	106.40	0.176961
Remove	Remove	Monterey Pine	9.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.5													9.5	9.5	120.30	0.200079
Remove	Remove	Monterey Pine	9.9	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	9.9													9.9	9.9	132.20	0.219871
Remove	Remove	Monterey Pine	10.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.4													10.4	10.4	147.80	0.245817
Remove	Remove	Monterey Pine	10.8	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.8													10.8	10.8	161.30	0.268269
Remove	Remove	Monterey Pine	10.8	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	10.8													10.8	10.8	161.30	0.268269
Remove	Remove	Monterey Pine	11.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.1													11.1	11.1	171.50	0.285234
Remove	Remove	Monterey Pine	11.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.2													11.2	11.2	175.10	0.291221
Remove	Remove	Monterey Pine	20.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	20.4													20.4	20.4	695.80	1.157234
Remove	Remove	Monterey Pine	11.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.3													11.3	11.3	178.70	0.297209
Remove	Remove	Monterey Pine	21.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	21.4													21.4	21.4	777.30	1.292783
Remove	Remove	Monterey Pine	21.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	21.5													21.5	21.5	786.10	1.307418
Remove	Remove	Monterey Pine	11.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.4													11.4	11.4	182.40	0.303362
Remove	Remove	Monterey Pine	11.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.4													11.4	11.4	182.40	0.303362
Remove	Remove	Monterey Pine	11.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.5													11.5	11.5	185.90	0.309183
Remove	Remove	Monterey Pine	11.7	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.7													11.7	11.7	193.50	0.321824
Remove	Remove	Monterey Pine	22.2	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	22.2													22.2	22.2	846.20	1.407375
Remove	Remove	Monterey Pine	22.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	22.5													22.5	22.5	872.80	1.451615
Remove	Remove	Monterey Pine	11.9	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	11.9													11.9	11.9	201.00	0.334297
Remove	Remove	Monterey Pine	12.3	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	12.3													12.3	12.3	217.00	0.360908
Remove	Remove	Monterey Pine	24.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	24.0													24.0	24.0	1014.40	1.68712
Remove	Remove	Monterey Pine	26.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	26.1													26.1	26.1	1232.00	2.049026
Remove	Remove	Monterey Pine	26.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	26.1													26.1	26.1	1232.00	2.049026
Remove	Remove	Monterey Pine	26.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	26.6													26.6	26.6	1288.10	2.14233
Remove	Remove	Monterey Pine	12.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	12.5													12.5	12.5	225.10	0.37438
Remove	Remove	Monterey Pine	12.5	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	12.5													12.5	12.5	225.10	0.37438
Remove	Remove	Monterey Pine	12.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	12.6													12.6	12.6	229.30	0.381365
Remove	Remove	Monterey Pine	27.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	27.6													27.6	27.6	1402.80	2.333096
Remove	Remove	Monterey Pine	13.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	13.1													13.1	13.1	250.50	0.416624
Remove	Remove	Monterey Pine	31.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	31.1													31.1	31.1	1853.60	3.082853
Remove	Remove	Monterey Pine	32.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	32.6													32.6	32.6	2067.60	3.438772
Remove	Remove	Monterey Pine	33.1	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	33.1													33.1	33.1	2142.50	3.563343
Remove	Remove	Monterey Pine	19.2	Yes	2	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	19.2	18.2												37.4	18.7	1271.70	2.115054
Remove	Remove	Monterey Pine	13.4	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	13.4													13.4	13.4	264.10	0.439243
Remove	Remove	Monterey Pine	13.6	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	13.6													13.6	13.6	273.20	0.454378
Remove	Remove	Monterey Pine	14.0	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	14.0													14.0	14.0	292.10	0.485812
Remove	Remove	Monterey Pine	14.8	No	1	Proposed Project - Option 2	Environmentally Superior Alternative - Option 2	14.8													14.8	14.8	331.80	0.55184
Remove		Monterey Pine	5.0	No	1	Proposed Project - Parking and Circulation		5.0													5.0	5.0	28.50	0.0474
Remove	Remove	Monterey Pine	5.2	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	5.2													5.2	5.2	31.10	0.051725
Remove		Monterey Pine	5.2	No	1	Proposed Project - Parking and Circulation		5.2													5.2	5.2	31.10	0.051725
Remove		Monterey Pine	5.7	No	1	Proposed Project - Parking and Circulation		5.7													5.7	5.7	38.10	0.063367

Maintenance Task Proposed Alternative	Maintenance Task ESA	Common Name	Field DBH Measurement	MultBranch	# of Branches	Proposed Alternative	Environmentally Sensitive Alternative	Branch 1	Branch 2	Branch 3	Branch 4	Branch 5	Branch 6	Branch 7	Branch 8	Branch 9	Branch 10	Branch 11	Branch 12	Branch 13	TOTAL	AverageDBH	Carbon Storage(lb)	MTCO2
Remove	Remove	Monterey Pine	5.8	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	5.8													5.8	5.8	39.70	0.066028
Remove		Monterey Pine	6.3	No	1	Proposed Project - Parking and Circulation		6.3													6.3	6.3	47.60	0.079167
Remove		Monterey Pine	6.3	No	1	Proposed Project - Parking and Circulation		6.3													6.3	6.3	47.60	0.079167
Remove		Monterey Pine	7.7	No	1	Proposed Project - Parking and Circulation		7.7													7.7	7.7	74.70	0.124239
Remove		Monterey Pine	7.7	No	1	Proposed Project - Parking and Circulation		7.7													7.7	7.7	74.70	0.124239
Remove	Remove	Monterey Pine	9.2	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	9.2													9.2	9.2	111.90	0.186109
Remove		Monterey Pine	9.4	No	1	Proposed Project - Parking and Circulation		9.4													9.4	9.4	117.50	0.195423
Remove		Monterey Pine	10.7	No	1	Proposed Project - Parking and Circulation		10.7													10.7	10.7	157.80	0.262448
Remove		Monterey Pine	11.0	No	1	Proposed Project - Parking and Circulation		11.0													11.0	11.0	167.90	0.279246
Remove		Monterey Pine	16.0	No	1	Proposed Project - Parking and Circulation		16.0													16.0	16.0	397.00	0.660279
Remove		Monterey Pine	16.1	No	1	Proposed Project - Parking and Circulation		16.1													16.1	16.1	403.00	0.670258
Remove		Monterey Pine	16.7	No	1	Proposed Project - Parking and Circulation		16.7													16.7	16.7	438.20	0.728801
Remove		Monterey Pine	16.9	No	1	Proposed Project - Parking and Circulation		16.9													16.9	16.9	450.40	0.749092
Remove		Monterey Pine	19.1	No	1	Proposed Project - Parking and Circulation		19.1													19.1	19.1	597.50	0.993744
Remove	Remove	Monterey Pine	21.8	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	21.8													21.8	21.8	811.60	1.349829
Remove	Remove	Monterey Pine	21.9	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	21.9													21.9	21.9	820.00	1.3638
Remove		Monterey Pine	22.7	No	1	Proposed Project - Parking and Circulation		22.7													22.7	22.7	891.10	1.482051
Remove		Monterey Pine	12.0	No	1	Proposed Project - Parking and Circulation		12.0													12.0	12.0	205.00	0.34095
Remove		Monterey Pine	23.9	No	1	Proposed Project - Parking and Circulation		23.9													23.9	23.9	1004.00	1.669823
Remove	Remove	Monterey Pine	24.0	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	24.0													24.0	24.0	1014.40	1.68712
Remove		Monterey Pine	24.2	No	1	Proposed Project - Parking and Circulation		24.2													24.2	24.2	1033.50	1.718887
Remove	Remove	Monterey Pine	24.5	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	24.5													24.5	24.5	1063.50	1.768782
Remove	Remove	Monterey Pine	25.6	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	25.6													25.6	25.6	1178.20	1.959548
Remove	Remove	Monterey Pine	31.2	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	31.2													31.2	31.2	1867.20	3.105472
Remove	Remove	Monterey Pine	31.9	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	31.9													31.9	31.9	1965.80	3.269461
Remove	Remove	Monterey Pine	30.8	Yes	2	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	30.8	29.8												60.6	30.3	3928.80	6.534265
Remove		Monterey Pine	25.4	Yes	3	Proposed Project - Parking and Circulation		25.4	24.4	23.4											73.2	24.4	3806.70	6.331192
Remove	Remove	Monterey Pine	30.3	No	3	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	30.3	29.3	28.3											87.9	29.3	5858.70	9.744018
Remove		Monterey Pine	13.6	No	1	Proposed Project - Parking and Circulation		13.6													13.6	13.6	273.20	0.454378
Remove		Monterey Pine	14.2	No	1	Proposed Project - Parking and Circulation		14.2													14.2	14.2	301.70	0.501779
Remove		Monterey Pine	14.2	No	1	Proposed Project - Parking and Circulation		14.2													14.2	14.2	301.70	0.501779
Remove		Monterey Pine	14.5	No	1	Proposed Project - Parking and Circulation		14.5													14.5	14.5	316.50	0.526394
Remove		Monterey Pine	14.8	No	1	Proposed Project - Parking and Circulation		14.8													14.8	14.8	331.80	0.55184
Remove	Remove	Monterey Pine	5.2	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	5.2													5.2	5.2	31.10	0.051725
Remove	Remove	Monterey Pine	5.4	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	5.4													5.4	5.4	33.80	0.056215
Remove	Remove	Monterey Pine	5.9	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	5.9													5.9	5.9	41.20	0.068523
Remove	Remove	Monterey Pine	6.2	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	6.2													6.2	6.2	45.90	0.07634
Remove	Remove	Monterey Pine	6.3	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	6.3													6.3	6.3	47.60	0.079167
Remove	Remove	Monterey Pine	6.9	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	6.9													6.9	6.9	58.50	0.097295
Remove	Remove	Monterey Pine	9.3	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	9.3													9.3	9.3	114.60	0.190599
Remove	Remove	Monterey Pine	9.3	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Frontage Road	9.3													9.3	9.3	114.60	0.190599
Remove	Remove	Monterey Pine	9.8	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	9.8													9.8	9.8	129.20	0.214882
Remove	Remove	Monterey Pine	9.8	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	9.8													9.8	9.8	129.20	0.214882
Remove	Remove	Monterey Pine	10.4	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	10.4													10.4	10.4	147.80	0.245817
Remove	Remove	Monterey Pine	11.4	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	11.4													11.4	11.4	182.40	0.303362
Remove	Remove	Monterey Pine	11.6	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	11.6													11.6	11.6	189.70	0.315503
Remove	Remove	Monterey Pine	11.8	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	11.8													11.8	11.8	197.30	0.328144
Remove	Remove	Monterey Pine	12.5	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	12.5													12.5	12.5	225.10	0.37438
Remove	Remove	Monterey Pine	14.0	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	14.0													14.0	14.0	292.10	0.485812
Remove	Remove	Monterey Pine	14.2	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	14.2													14.2	14.2	301.70	0.501779
Remove	Remove	Monterey Pine	14.3	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	14.3													14.3	14.3	306.70	0.510094
Remove	Remove	Monterey Pine	15.2	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	15.2													15.2	15.2	352.60	0.586434
Remove	Remove	Monterey Pine	15.8	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	15.8													15.8	15.8	385.70	0.641485
Remove	Remove	Monterey Pine	16.1	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	16.1													16.1	16.1	403.00	0.670258
Remove	Remove	Monterey Pine	16.8	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	16.8													16.8	16.8	444.50	0.739279
Remove	Remove	Monterey Pine	17.5	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	17.5													17.5	17.5	488.10	0.811794
Remove	Remove	Monterey Pine	17.6	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	17.6													17.6	17.6	494.70	0.822771
Remove	Remove	Monterey Pine	17.6	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	17.6													17.6	17.6	494.70	0.822771
Remove	Remove	Monterey Pine	18.3	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	18.3													18.3	18.3	541.10	0.899942
Remove	Remove	Monterey Pine	21.2	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	21.2													21.2	21.2	760.40	1.264675
Remove	Remove	Monterey Pine	25.3	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Frontage Road	25.3													25.3	25.3	1146.40	1.906659
Remove	Remove	Monterey Pine	33.9	No	1	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	33.9													33.9	33.9	2263.90	3.765252
Remove	Remove	Monterey Pine	14.6	Yes	2	Proposed Project - Terminal Area	Environmentally Superior Alternative - Terminal Area	14.6	13.6												28.2	14.1	661.30	1.099855
		Monterey Pine	5.1	No	1			5.1													5.1	5.1	29.80	0.049562
		Monterey Pine	5.3	No	1			5.3													5.3	5.3	32.40	0.053887
		Monterey Pine	5.9	No	1			5.9													5.9	5.9	41.20	0.068523
		Monterey Pine	5.9	No	1			5.9													5.9	5.9	41.20	0.068523
		Monterey Pine	6.3	No	1			6.3													6.3	6.3	47.60	0.079167
		Monterey Pine	6.9	No	1			6.9													6.9	6.9	58.50	0.097295
		Monterey Pine	7.9	No	1			7.9													7.9	7.9	79.20	0.131723
		Monterey Pine	8.0	No	1			8.0													8.0	8.0	81.60	0.135715
		Monterey Pine	8.2	No	1			8.2													8.2	8.2	86.20	0.143365
		Monterey Pine	8.3	No	1			8.3													8.3	8.3	88.60	0.147357
		Monterey Pine	8.6	No	1			8.6													8.6	8.6	96.00	0.159664
		Monterey Pine	9.1	No	1			9.1													9.1	9.1	109.10	0.181452
		Monterey Pine	9.4	No	1			9.4													9.4	9.4	117.50	0.195423
		Monterey Pine	9.6	No	1			9.6													9.6	9.6	123.20	0.204903
		Monterey Pine	10.1	No	1			10.1													10.1	10.1	138.20	0.22985
		Monterey Pine	10.2	No	1			10.2													10.2	10.2	141.40	0.235172
		Monterey Pine	10.3	No	1			10.3													10.3	10.3	144.60	0.240494
		Monterey Pine	10.5	No	1			10.5													10.5	10.5	151.10	0.251305
		Monterey Pine	10.7	No	1			10.7													10.7	10.7	157.80	0.262448
		Monterey Pine	10.8	No	1			10.8													10.8	10.8	161.30	0.268269
		Monterey Pine	10.9	No	1			10.9													10.9	10.9	164.50	0.273592
		Monterey Pine	10.9	No	1			10.9													10.9	10.9	164.50	0.273592
		Monterey Pine	11.0	No	1			11.0													11.0	11.0	167.90	0.279246
		Monterey Pine	11.1	No	1			11.1													11.1	11.1	171.50	0.285234
		Monterey Pine	11.4	No	1			11.4													11.4	11.4	182.40	0.303362
		Monterey Pine	11.4	No	1			11.4													11.4	11.4	182.40	0.303362
		Monterey Pine	12.4	No	1			12.4													12.4	12.4	220.90	0.367394

Maintenance Task Proposed Alternative	Maintenance Task ESA	Common Name	Field DBH Measurement	MultBranch	# of Branches	Proposed Alternative	Environmentally Sensitive Alternative	Branch 1	Branch 2	Branch 3	Branch 4	Branch 5	Branch 6	Branch 7	Branch 8	Branch 9	Branch 10	Branch 11	Branch 12	Branch 13	TOTAL	AverageDBH	Carbon Storage(lb)	MTCO2
		Monterey Pine	12.4	No	1			12.4													12.4	12.4	220.90	0.367394
		Monterey Pine	12.4	No	1			12.4													12.4	12.4	220.90	0.367394
		Monterey Pine	12.7	No	1			12.7													12.7	12.7	233.60	0.388517
		Monterey Pine	13.6	No	1			13.6													13.6	13.6	273.20	0.454378
		Monterey Pine	13.9	No	1			13.9													13.9	13.9	287.20	0.477663
		Monterey Pine	14.3	No	1			14.3													14.3	14.3	306.70	0.510094
		Monterey Pine	14.6	No	1			14.6													14.6	14.6	321.70	0.535042
		Monterey Pine	14.6	No	1			14.6													14.6	14.6	321.70	0.535042
		Monterey Pine	14.7	No	1			14.7													14.7	14.7	326.60	0.543192
		Monterey Pine	15.0	No	1			15.0													15.0	15.0	342.20	0.569137
		Monterey Pine	15.5	No	1			15.5													15.5	15.5	369.00	0.61371
		Monterey Pine	16.6	No	1			16.6													16.6	16.6	432.00	0.71849
		Monterey Pine	17.0	No	1			17.0													17.0	17.0	456.80	0.759736
		Monterey Pine	17.1	No	1			17.1													17.1	17.1	462.70	0.769549
		Monterey Pine	17.4	No	1			17.4													17.4	17.4	481.90	0.801482
		Monterey Pine	17.7	No	1			17.7													17.7	17.7	501.00	0.833249
		Monterey Pine	18.8	No	1			18.8													18.8	18.8	576.20	0.958319
		Monterey Pine	18.8	No	1			18.8													18.8	18.8	576.20	0.958319
		Monterey Pine	20.0	No	1			20.0													20.0	20.0	664.40	1.105011
		Monterey Pine	20.0	No	1			20.0													20.0	20.0	664.40	1.105011
		Monterey Pine	20.5	No	1			20.5													20.5	20.5	703.50	1.170041
	Remove	Monterey Pine	22.0	No	1		Environmentally Superior Alternative - Frontage Road	22.0													22.0	22.0	828.50	1.377937
		Monterey Pine	29.7	No	1			29.7													29.7	29.7	1664.90	2.769013
		Monterey Pine	31.0	No	1			31.0													31.0	31.0	1838.70	3.058072
		Monterey Pine	4.2	No	1			4.2													4.2	4.2	19.50	0.032432
		Monterey Pine	4.5	No	1			4.5													4.5	4.5	22.60	0.037588
		Monterey Pine	5.0	No	1			5.0													5.0	5.0	28.50	0.0474
		Monterey Pine	5.1	No	1			5.1													5.1	5.1	29.80	0.049562
		Monterey Pine	5.2	No	1			5.2													5.2	5.2	31.10	0.051725
		Monterey Pine	5.2	No	1			5.2													5.2	5.2	31.10	0.051725
		Monterey Pine	5.2	No	1			5.2													5.2	5.2	31.10	0.051725
		Monterey Pine	5.5	No	1			5.5													5.5	5.5	35.20	0.058544
		Monterey Pine	5.5	No	1			5.5													5.5	5.5	35.20	0.058544
		Monterey Pine	5.6	No	1			5.6													5.6	5.6	36.70	0.061038
		Monterey Pine	5.8	No	1			5.8													5.8	5.8	39.70	0.066028
	Remove	Monterey Pine	6.1	No	1		Environmentally Superior Alternative - Frontage Road	6.1													6.1	6.1	44.30	0.073678
		Monterey Pine	6.1	No	1			6.1													6.1	6.1	44.30	0.073678
		Monterey Pine	6.4	No	1			6.4													6.4	6.4	49.40	0.082161
		Monterey Pine	6.5	No	1			6.5													6.5	6.5	51.10	0.084988
		Monterey Pine	6.5	No	1			6.5													6.5	6.5	51.10	0.084988
	Remove	Monterey Pine	6.6	No	1		Environmentally Superior Alternative - Frontage Road	6.6													6.6	6.6	52.90	0.087982
		Monterey Pine	6.6	No	1			6.6													6.6	6.6	52.90	0.087982
		Monterey Pine	6.7	No	1			6.7													6.7	6.7	54.60	0.090809
	Remove	Monterey Pine	6.8	No	1		Environmentally Superior Alternative - Frontage Road	6.8													6.8	6.8	56.50	0.093969
		Monterey Pine	6.9	No	1			6.9													6.9	6.9	58.50	0.097295
		Monterey Pine	7.0	No	1			7.0													7.0	7.0	60.30	0.100289
		Monterey Pine	7.1	No	1			7.1													7.1	7.1	62.30	0.103616
		Monterey Pine	7.2	No	1			7.2													7.2	7.2	64.20	0.106776
		Monterey Pine	7.2	No	1			7.2													7.2	7.2	64.20	0.106776
		Monterey Pine	7.0	No	1			7.0													7.0	7.0	60.30	0.100289
		Monterey Pine	7.1	No	1			7.1													7.1	7.1	62.30	0.103616
		Monterey Pine	7.2	No	1			7.2													7.2	7.2	64.20	0.106776
		Monterey Pine	7.2	No	1			7.2													7.2	7.2	64.20	0.106776
		Monterey Pine	7.3	No	1			7.3													7.3	7.3	66.30	0.110268
		Monterey Pine	7.3	No	1			7.3													7.3	7.3	66.30	0.110268
		Monterey Pine	7.3	No	1			7.3													7.3	7.3	66.30	0.110268
		Monterey Pine	7.4	No	1			7.4													7.4	7.4	68.40	0.113761
		Monterey Pine	7.4	No	1			7.4													7.4	7.4	68.40	0.113761
		Monterey Pine	7.5	No	1			7.5													7.5	7.5	70.40	0.117087
		Monterey Pine	7.6	No	1			7.6													7.6	7.6	72.60	0.120746
		Monterey Pine	7.6	No	1			7.6													7.6	7.6	72.60	0.120746
		Monterey Pine	7.7	No	1			7.7													7.7	7.7	74.70	0.124239
		Monterey Pine	7.8	No	1			7.8													7.8	7.8	76.90	0.127898
		Monterey Pine	7.8	No	1			7.8													7.8	7.8	76.90	0.127898
		Monterey Pine	7.8	No	1			7.8													7.8	7.8	76.90	0.127898
		Monterey Pine	7.9	No	1			7.9													7.9	7.9	79.20	0.131723
		Monterey Pine	7.9	No	1			7.9													7.9	7.9	79.20	0.131723
		Monterey Pine	8.0	No	1			8.0													8.0	8.0	81.60	0.135715
		Monterey Pine	8.0	No	1			8.0													8.0	8.0	81.60	0.135715
		Monterey Pine	8.1	No	1			8.1													8.1	8.1	83.90	0.13954
		Monterey Pine	8.1	No	1			8.1													8.1	8.1	83.90	0.13954
		Monterey Pine	8.2	No	1			8.2													8.2	8.2	86.20	0.143365
		Monterey Pine	8.2	No	1			8.2													8.2	8.2	86.20	0.143365
		Monterey Pine	8.5	No	1			8.5													8.5	8.5	93.50	0.155506
		Monterey Pine	8.5	No	1			8.5													8.5	8.5	93.50	0.155506
		Monterey Pine	8.6	No	1			8.6													8.6	8.6	96.00	0.159664
		Monterey Pine	8.6	No	1			8.6													8.6	8.6	96.00	0.159664
		Monterey Pine	8.6	No	1			8.6													8.6	8.6	96.00	0.159664
		Monterey Pine	8.7	No	1			8.7													8.7	8.7	98.50	0.163822
		Monterey Pine	8.8	No	1			8.8													8.8	8.8	101.10	0.168147
		Monterey Pine	8.8	No	1			8.8													8.8	8.8	101.10	0.168147
		Monterey Pine	8.9	No	1			8.9													8.9	8.9	103.70	0.172471
		Monterey Pine	9.0	No	1			9.0													9.0	9.0	106.40	0.176961
		Monterey Pine	9.0	No	1			9.0													9.0	9.0	106.40	0.176961
		Monterey Pine	9.2	No	1			9.2													9.2	9.2	111.90	0.186109
		Monterey Pine	9.3	No	1			9.3													9.3	9.3	114.60	0.190599
		Monterey Pine	9.3	No	1			9.3													9.3	9.3	114.60	0.190599
		Monterey Pine	9.3	No	1			9.3													9.3	9.3	114.60	0.190599
		Monterey Pine	9.5	No	1			9.5													9.5	9.5	120.30	0.200079
	Remove	Monterey Pine	9.6	No	1		Environmentally Superior Alternative - Frontage Road	9.6													9.6	9.6	123.20	0.204903
		Monterey Pine	9.7	No	1			9.7													9.7	9.7	126.20	0.209892
		Monterey Pine	9.8	No	1			9.8													9.8	9.8	129.20	0.214882
		Monterey Pine	9.8	No	1			9.8													9.8	9.8	129.20	0.214882
		Monterey Pine	9.8	No	1			9.8													9.8	9.8	129.20	0.214882

Maintenance Task Proposed Alternative	Maintenance Task ESA	Common Name	Field DBH Measurement	MultBranch	# of Branches	Proposed Alternative	Environmentally Sensitive Alternative	Branch 1	Branch 2	Branch 3	Branch 4	Branch 5	Branch 6	Branch 7	Branch 8	Branch 9	Branch 10	Branch 11	Branch 12	Branch 13	TOTAL	AverageDBH	Carbon Storage(lb)	MTCO2
		Monterey Pine	10.0	No	1			10.0													10.0	10.0	135.10	0.224694
		Monterey Pine	10.0	No	1			10.0													10.0	10.0	135.10	0.224694
		Monterey Pine	10.0	No	1			10.0													10.0	10.0	135.10	0.224694
		Monterey Pine	10.1	No	1			10.1													10.1	10.1	138.20	0.22985
		Monterey Pine	10.1	No	1			10.1													10.1	10.1	138.20	0.22985
		Monterey Pine	10.1	No	1			10.1													10.1	10.1	138.20	0.22985
		Monterey Pine	10.1	No	1			10.1													10.1	10.1	138.20	0.22985
		Monterey Pine	10.1	No	1			10.1													10.1	10.1	138.20	0.22985
		Monterey Pine	10.2	No	1			10.2													10.2	10.2	141.40	0.235172
		Monterey Pine	10.2	No	1			10.2													10.2	10.2	141.40	0.235172
		Monterey Pine	10.2	No	1			10.2													10.2	10.2	141.40	0.235172
		Monterey Pine	10.3	No	1			10.3													10.3	10.3	144.60	0.240494
		Monterey Pine	10.4	No	1			10.4													10.4	10.4	147.80	0.245817
		Monterey Pine	10.4	No	1			10.4													10.4	10.4	147.80	0.245817
		Monterey Pine	10.4	No	1			10.4													10.4	10.4	147.80	0.245817
		Monterey Pine	10.5	No	1			10.5													10.5	10.5	151.10	0.251305
		Monterey Pine	10.6	No	1			10.6													10.6	10.6	154.50	0.25696
		Monterey Pine	10.6	No	1			10.6													10.6	10.6	154.50	0.25696
		Monterey Pine	10.7	No	1			10.7													10.7	10.7	157.80	0.262448
		Monterey Pine	10.7	No	1			10.7													10.7	10.7	157.80	0.262448
		Monterey Pine	10.7	No	1			10.7													10.7	10.7	157.80	0.262448
		Monterey Pine	15.0	No	1			15.0													15.0	15.0	342.20	0.569137
		Monterey Pine	15.1	No	1			15.1													15.1	15.1	347.50	0.577952
		Monterey Pine	15.3	No	1			15.3													15.3	15.3	358.10	0.595581
		Monterey Pine	15.4	No	1			15.4													15.4	15.4	363.40	0.604396
		Monterey Pine	15.5	No	1			15.5													15.5	15.5	369.00	0.61371
		Monterey Pine	10.8	No	1			10.8													10.8	10.8	161.30	0.268269
		Monterey Pine	10.9	No	1			10.9													10.9	10.9	164.50	0.273592
		Monterey Pine	15.6	No	1			15.6													15.6	15.6	374.60	0.623024
		Monterey Pine	15.8	No	1			15.8													15.8	15.8	385.70	0.641485
	Remove	Monterey Pine	15.9	No	1		Environmentally Superior Alternative - Frontage Road	15.9													15.9	15.9	391.10	0.650466
		Monterey Pine	16.0	No	1			16.0													16.0	16.0	397.00	0.660279
		Monterey Pine	16.0	No	1			16.0													16.0	16.0	397.00	0.660279
	Remove	Monterey Pine	16.0	No	1		Environmentally Superior Alternative - Frontage Road	16.0													16.0	16.0	397.00	0.660279
		Monterey Pine	10.9	No	1			10.9													10.9	10.9	164.50	0.273592
		Monterey Pine	10.9	No	1			10.9													10.9	10.9	164.50	0.273592
		Monterey Pine	11.0	No	1			11.0													11.0	11.0	167.90	0.279246
		Monterey Pine	11.0	No	1			11.0													11.0	11.0	167.90	0.279246
		Monterey Pine	11.1	No	1			11.1													11.1	11.1	171.50	0.285234
		Monterey Pine	16.2	No	1			16.2													16.2	16.2	408.40	0.679239
		Monterey Pine	16.3	No	1			16.3													16.3	16.3	414.50	0.689384
		Monterey Pine	16.3	No	1			16.3													16.3	16.3	414.50	0.689384
		Monterey Pine	16.3	No	1			16.3													16.3	16.3	414.50	0.689384
		Monterey Pine	16.3	No	1			16.3													16.3	16.3	414.50	0.689384
		Monterey Pine	16.4	No	1			16.4													16.4	16.4	420.10	0.698698
		Monterey Pine	16.4	No	1			16.4													16.4	16.4	420.10	0.698698
		Monterey Pine	16.4	No	1			16.4													16.4	16.4	420.10	0.698698
		Monterey Pine	16.8	No	1			16.8													16.8	16.8	444.50	0.739279
		Monterey Pine	16.9	No	1			16.9													16.9	16.9	450.40	0.749092
		Monterey Pine	16.4	No	1			16.4													16.4	16.4	420.10	0.698698
		Monterey Pine	16.4	No	1			16.4													16.4	16.4	420.10	0.698698
		Monterey Pine	16.8	No	1			16.8													16.8	16.8	444.50	0.739279
		Monterey Pine	16.9	No	1			16.9													16.9	16.9	450.40	0.749092
		Monterey Pine	11.1	No	1			11.1													11.1	11.1	171.50	0.285234
		Monterey Pine	11.2	No	1			11.2													11.2	11.2	175.10	0.291221
		Monterey Pine	17.0	No	1			17.0													17.0	17.0	456.80	0.759736
		Monterey Pine	17.1	No	1			17.1													17.1	17.1	462.70	0.769549
		Monterey Pine	17.1	No	1			17.1													17.1	17.1	462.70	0.769549
		Monterey Pine	17.2	No	1			17.2													17.2	17.2	469.20	0.78036
		Monterey Pine	17.3	No	1			17.3													17.3	17.3	475.30	0.790505
		Monterey Pine	17.3	No	1			17.3													17.3	17.3	475.30	0.790505
		Monterey Pine	17.3	No	1			17.3													17.3	17.3	475.30	0.790505
		Monterey Pine	17.4	No	1			17.4													17.4	17.4	481.90	0.801482
		Monterey Pine	17.4	No	1			17.4													17.4	17.4	481.90	0.801482
		Monterey Pine	17.4	No	1			17.4													17.4	17.4	481.90	0.801482
		Monterey Pine	17.5	No	1			17.5													17.5	17.5	488.10	0.811794
	Remove	Monterey Pine	17.5	No	1		Environmentally Superior Alternative - Frontage Road	17.5													17.5	17.5	488.10	0.811794
		Monterey Pine	17.6	No	1			17.6													17.6	17.6	494.70	0.822771
		Monterey Pine	17.6	No	1			17.6													17.6	17.6	494.70	0.822771
		Monterey Pine	17.6	No	1			17.6													17.6	17.6	494.70	0.822771
		Monterey Pine	17.6	No	1			17.6													17.6	17.6	494.70	0.822771
		Monterey Pine	17.7	No	1			17.7													17.7	17.7	501.00	0.833249
		Monterey Pine	17.7	No	1			17.7													17.7	17.7	501.00	0.833249
		Monterey Pine	17.8	No	1			17.8													17.8	17.8	507.80	0.844558
		Monterey Pine	17.9	No	1			17.9													17.9	17.9	514.20	0.855202
		Monterey Pine	17.9	No	1			17.9													17.9	17.9	514.20	0.855202
		Monterey Pine	18.0	No	1			18.0													18.0	18.0	521.00	0.866512
		Monterey Pine	18.2	No	1			18.2													18.2	18.2	534.50	0.888965
		Monterey Pine	18.3	No	1			18.3													18.3	18.3	541.10	0.899942
	Remove	Monterey Pine	18.3	No	1		Environmentally Superior Alternative - Frontage Road	18.3													18.3	18.3	541.10	0.899942
		Monterey Pine	18.4	No	1			18.4													18.4	18.4	548.20	0.91175
	Remove	Monterey Pine	18.4	No	1		Environmentally Superior Alternative - Frontage Road	18.4													18.4	18.4	548.20	0.91175
		Monterey Pine	18.6	No	1			18.6													18.6	18.6	562.10	0.934868
		Monterey Pine	18.6	No	1			18.6													18.6	18.6	562.10	0.934868
		Monterey Pine	18.6	No	1			18.6													18.6	18.6	562.10	0.934868
		Monterey Pine	18.7	No	1			18.7													18.7	18.7	568.90	0.946178
		Monterey Pine	18.7	No	1			18.7													18.7	18.7	568.90	0.946178
		Monterey Pine	18.8	No	1			18.8													18.8	18.8	576.20	0.958319
		Monterey Pine	19.0	No	1			19.0													19.0	19.0	590.50	0.982102
		Monterey Pine	19.0	No	1			19.0													19.0	19.0	590.50	0.982102
		Monterey Pine	19.0	No	1			19.0													19.0	19.0	590.50	0.982102
		Monterey Pine	19.0	No	1			19.0													19.0	19.0	590.50	0.982102
		Monterey Pine	19.1	No	1			19.1													19.1	19.1	597.50	0.993744
		Monterey Pine	19.2	No	1			19.2													19.2	19.2	605.00	1.006218

Maintenance Task Proposed Alternative	Maintenance Task ESA	Common Name	Field DBH Measurement	MultBranch	# of Branches	Proposed Alternative	Environmentally Sensitive Alternative	Branch 1	Branch 2	Branch 3	Branch 4	Branch 5	Branch 6	Branch 7	Branch 8	Branch 9	Branch 10	Branch 11	Branch 12	Branch 13	TOTAL	AverageDBH	Carbon Storage(lb)	MTCO2
		Monterey Pine	19.2	No	1			19.2													19.2	19.2	605.00	1.006218
		Monterey Pine	19.3	No	1			19.3													19.3	19.3	612.00	1.01786
		Monterey Pine	19.3	No	1			19.3													19.3	19.3	612.00	1.01786
		Monterey Pine	19.4	No	1			19.4													19.4	19.4	619.70	1.030667
	Remove	Monterey Pine	19.5	No	1		Environmentally Superior Alternative - Frontage Road	19.5													19.5	19.5	626.90	1.042642
	Remove	Monterey Pine	19.5	No	1		Environmentally Superior Alternative - Frontage Road	19.5													19.5	19.5	626.90	1.042642
		Monterey Pine	19.7	No	1			19.7													19.7	19.7	641.80	1.067423
		Monterey Pine	19.8	No	1			19.8													19.8	19.8	649.20	1.07973
		Monterey Pine	19.8	No	1			19.8													19.8	19.8	649.20	1.07973
		Monterey Pine	20.0	No	1			20.0													20.0	20.0	664.40	1.105011
		Monterey Pine	20.3	No	1			20.3													20.3	20.3	688.30	1.14476
		Monterey Pine	20.3	No	1			20.3													20.3	20.3	688.30	1.14476
		Monterey Pine	20.6	No	1			20.6													20.6	20.6	711.90	1.184011
		Monterey Pine	21.1	No	1			21.1													21.1	21.1	752.30	1.251203
		Monterey Pine	11.3	No	1			11.3													11.3	11.3	178.70	0.297209
		Monterey Pine	11.3	No	1			11.3													11.3	11.3	178.70	0.297209
		Monterey Pine	11.3	No	1			11.3													11.3	11.3	178.70	0.297209
		Monterey Pine	21.3	No	1			21.3													21.3	21.3	769.20	1.279311
		Monterey Pine	21.3	No	1			21.3													21.3	21.3	769.20	1.279311
		Monterey Pine	21.4	No	1			21.4													21.4	21.4	777.30	1.292783
		Monterey Pine	21.4	No	1			21.4													21.4	21.4	777.30	1.292783
	Remove	Monterey Pine	21.4	No	1		Environmentally Superior Alternative - Frontage Road	21.4													21.4	21.4	777.30	1.292783
	Remove	Monterey Pine	21.5	No	1		Environmentally Superior Alternative - Frontage Road	21.5													21.5	21.5	786.10	1.307418
		Monterey Pine	21.6	No	1			21.6													21.6	21.6	794.40	1.321223
		Monterey Pine	11.4	No	1			11.4													11.4	11.4	182.40	0.303362
		Monterey Pine	11.4	No	1			11.4													11.4	11.4	182.40	0.303362
		Monterey Pine	21.6	No	1			21.6													21.6	21.6	794.40	1.321223
		Monterey Pine	21.6	No	1			21.6													21.6	21.6	794.40	1.321223
		Monterey Pine	21.6	No	1			21.6													21.6	21.6	794.40	1.321223
	Remove	Monterey Pine	11.5	No	1		Environmentally Superior Alternative - Frontage Road	11.5													11.5	11.5	185.90	0.309183
		Monterey Pine	11.6	No	1			11.6													11.6	11.6	189.70	0.315503
		Monterey Pine	11.6	No	1			11.6													11.6	11.6	189.70	0.315503
		Monterey Pine	11.7	No	1			11.7													11.7	11.7	193.50	0.321824
		Monterey Pine	11.8	No	1			11.8													11.8	11.8	197.30	0.328144
		Monterey Pine	11.8	No	1			11.8													11.8	11.8	197.30	0.328144
		Monterey Pine	21.8	No	1			21.8													21.8	21.8	811.60	1.349829
		Monterey Pine	21.8	No	1			21.8													21.8	21.8	811.60	1.349829
		Monterey Pine	21.9	No	1			21.9													21.9	21.9	820.00	1.3638
		Monterey Pine	22.0	No	1			22.0													22.0	22.0	828.50	1.377937
		Monterey Pine	22.0	No	1			22.0													22.0	22.0	828.50	1.377937
		Monterey Pine	22.0	No	1			22.0													22.0	22.0	828.50	1.377937
		Monterey Pine	22.1	No	1			22.1													22.1	22.1	837.70	1.393238
		Monterey Pine	22.3	No	1			22.3													22.3	22.3	855.50	1.422843
		Monterey Pine	22.4	No	1			22.4													22.4	22.4	864.20	1.437312
		Monterey Pine	22.6	No	1			22.6													22.6	22.6	882.30	1.467415
		Monterey Pine	12.0	No	1			12.0													12.0	12.0	205.00	0.34095
		Monterey Pine	12.0	No	1			12.0													12.0	12.0	205.00	0.34095
		Monterey Pine	22.8	No	1			22.8													22.8	22.8	899.90	1.496687
		Monterey Pine	22.9	No	1			22.9													22.9	22.9	909.60	1.51282
		Monterey Pine	23.1	No	1			23.1													23.1	23.1	928.40	1.544088
		Monterey Pine	12.2	No	1			12.2													12.2	12.2	212.90	0.354089
		Monterey Pine	12.2	No	1			12.2													12.2	12.2	212.90	0.354089
		Monterey Pine	23.5	No	1			23.5													23.5	23.5	965.80	1.60629
		Monterey Pine	23.6	No	1			23.6													23.6	23.6	975.10	1.621758
		Monterey Pine	23.8	No	1			23.8													23.8	23.8	994.60	1.65419
		Monterey Pine	24.2	No	1			24.2													24.2	24.2	1033.50	1.718887
		Monterey Pine	24.3	No	1			24.3													24.3	24.3	1044.10	1.736516
		Monterey Pine	24.3	No	1			24.3													24.3	24.3	1044.10	1.736516
		Monterey Pine	24.5	No	1			24.5													24.5	24.5	1063.50	1.768782
		Monterey Pine	25.8	No	1			25.8													25.8	25.8	1199.20	1.994474
		Monterey Pine	26.2	No	1			26.2													26.2	26.2	1243.60	2.068319
	Remove	Monterey Pine	26.4	No	1		Environmentally Superior Alternative - Frontage Road	26.4													26.4	26.4	1265.30	2.10441
	Remove	Monterey Pine	26.5	No	1		Environmentally Superior Alternative - Frontage Road	26.5													26.5	26.5	1276.10	2.122372
		Monterey Pine	12.3	No	1			12.3													12.3	12.3	217.00	0.360908
		Monterey Pine	12.3	No	1			12.3													12.3	12.3	217.00	0.360908
		Monterey Pine	26.6	No	1			26.6													26.6	26.6	1288.10	2.14233
	Remove	Monterey Pine	12.3	No	1		Environmentally Superior Alternative - Frontage Road	12.3													12.3	12.3	217.00	0.360908
		Monterey Pine	12.3	No	1			12.3													12.3	12.3	217.00	0.360908
		Monterey Pine	27.0	No	1			27.0													27.0	27.0	1333.50	2.217838
		Monterey Pine	12.4	No	1			12.4													12.4	12.4	220.90	0.367394
		Monterey Pine	12.4	No	1			12.4													12.4	12.4	220.90	0.367394
	Remove	Monterey Pine	27.4	No	1		Environmentally Superior Alternative - Frontage Road	27.4													27.4	27.4	1379.70	2.294677
		Monterey Pine	12.4	No	1			12.4													12.4	12.4	220.90	0.367394
		Monterey Pine	12.4	No	1			12.4													12.4	12.4	220.90	0.367394
		Monterey Pine	12.5	No	1			12.5													12.5	12.5	225.10	0.37438
		Monterey Pine	12.5	No	1			12.5													12.5	12.5	225.10	0.37438
		Monterey Pine	12.5	No	1			12.5													12.5	12.5	225.10	0.37438
		Monterey Pine	12.6	No	1			12.6													12.6	12.6	229.30	0.381365
	Remove	Monterey Pine	12.6	No	1		Environmentally Superior Alternative - Frontage Road	12.6													12.6	12.6	229.30	0.381365
		Monterey Pine	12.6	No	1			12.6													12.6	12.6	229.30	0.381365
		Monterey Pine	12.7	No	1			12.7													12.7	12.7	233.60	0.388517
		Monterey Pine	12.7	No	1			12.7													12.7	12.7	233.60	0.388517
		Monterey Pine	12.7	No	1			12.7													12.7	12.7	233.60	0.388517
		Monterey Pine	12.7	No	1			12.7													12.7	12.7	233.60	0.388517
		Monterey Pine	12.7	No	1			12.7													12.7	12.7	233.60	0.388517
		Monterey Pine	12.7	No	1			12.7													12.7	12.7	233.60	0.388517
		Monterey Pine	12.8	No	1			12.8													12.8	12.8	237.60	0.395169
		Monterey Pine	12.8	No	1			12.8													12.8	12.8	237.60	0.395169
		Monterey Pine	12.8	No	1			12.8													12.8	12.8	237.60	0.395169
		Monterey Pine	12.9	No	1			12.9													12.9	12.9	242.00	0.402487

Maintenance Task Proposed Alternative	Maintenance Task ESA	Common Name	Field DBH Measurement	MultBranch	# of Branches	Proposed Alternative	Environmentally Sensitive Alternative	Branch 1	Branch 2	Branch 3	Branch 4	Branch 5	Branch 6	Branch 7	Branch 8	Branch 9	Branch 10	Branch 11	Branch 12	Branch 13	TOTAL	AverageDBH	Carbon Storage(lb)	MTCO2
		Monterey Pine	13.0	No	1			13.0													13.0	13.0	246.40	0.409805
		Monterey Pine	13.1	No	1			13.1													13.1	13.1	250.50	0.416624
		Monterey Pine	13.1	No	1			13.1													13.1	13.1	250.50	0.416624
		Monterey Pine	13.2	No	1			13.2													13.2	13.2	255.00	0.424109
		Monterey Pine	13.2	No	1			13.2													13.2	13.2	255.00	0.424109
		Monterey Pine	28.3	No	1			28.3													28.3	28.3	1487.10	2.473301
		Monterey Pine	28.3	No	1			28.3													28.3	28.3	1487.10	2.473301
		Monterey Pine	29.7	No	1			29.7													29.7	29.7	1664.90	2.769013
		Monterey Pine	29.9	No	1			29.9													29.9	29.9	1690.60	2.811756
		Monterey Pine	30.0	No	1			30.0													30.0	30.0	1703.50	2.833211
		Monterey Pine	30.3	No	1			30.3													30.3	30.3	1743.90	2.900403
		Monterey Pine	30.6	No	1			30.6													30.6	30.6	1784.90	2.968593
	Remove	Monterey Pine	31.1	No	1		Environmentally Superior Alternative - Frontage Road	31.1													31.1	31.1	1853.60	3.082853
		Monterey Pine	31.6	No	1			31.6													31.6	31.6	1923.80	3.199608
		Monterey Pine	31.7	No	1			31.7													31.7	31.7	1937.80	3.222892
		Monterey Pine	32.9	No	1			32.9													32.9	32.9	2113.00	3.51428
	Remove	Monterey Pine	33.6	No	1		Environmentally Superior Alternative - Frontage Road	33.6													33.6	33.6	2216.60	3.686584
	Remove	Monterey Pine	36.3	No	1		Environmentally Superior Alternative - Frontage Road	36.3													36.3	36.3	2657.90	4.420541
	Remove	Monterey Pine	36.4	No	1		Environmentally Superior Alternative - Frontage Road	36.4													36.4	36.4	2674.80	4.448649
		Monterey Pine	40.1	No	1			40.1													40.1	40.1	3358.20	5.58526
		Monterey Pine	41.0	No	1			41.0													41.0	41.0	3539.00	5.885961
	Remove	Monterey Pine	43.0	No	1		Environmentally Superior Alternative - Frontage Road	43.0													43.0	43.0	3958.70	6.583994
		Monterey Pine	49.0	No	1			49.0													49.0	49.0	5389.40	8.963492
	Remove	Monterey Pine	4.5	No	2		Environmentally Superior Alternative - Frontage Road	4.5	3.5												8.0	4.0	38.10	0.063367
	Remove	Monterey Pine	6.6	Yes	2		Environmentally Superior Alternative - Frontage Road	6.6	5.6												12.2	6.1	97.40	0.161993
		Monterey Pine	8.0	Yes	2			8.0	7												15.0	7.5	155.30	0.25829
	Remove	Monterey Pine	8.9	No	2		Environmentally Superior Alternative - Frontage Road	8.9	7.9												16.8	8.4	201.00	0.334297
		Monterey Pine	9.0	Yes	2			9.0	8												17.0	8.5	206.60	0.343611
		Monterey Pine	9.8	Yes	2			9.8	8.8												18.6	9.3	253.90	0.422279
		Monterey Pine	11.2	Yes	2			11.2	10.2												21.4	10.7	349.90	0.581943
		Monterey Pine	12.2	Yes	2			12.2	11.2												23.4	11.7	429.90	0.714997
	Remove	Monterey Pine	16.4	Yes	2		Environmentally Superior Alternative - Frontage Road	16.4	15.4												31.8	15.9	872.60	1.451283
		Monterey Pine	18.6	Yes	2			18.6	17.6												36.2	18.1	1179.00	1.960878
		Monterey Pine	20.5	Yes	2			20.5	19.5												40.0	20.0	1486.40	2.472137
		Monterey Pine	20.6	Yes	2			20.6	19.6												40.2	20.1	1504.00	2.501409
	Remove	Monterey Pine	20.8	Yes	2		Environmentally Superior Alternative - Frontage Road	20.8	19.8												40.6	20.3	1538.50	2.558788
	Remove	Monterey Pine	22.0	Yes	2		Environmentally Superior Alternative - Frontage Road	22.0	21												43.0	21.5	1758.70	2.925018
		Monterey Pine	22.0	Yes	2			22.0	21												43.0	21.5	1758.70	2.925018
		Monterey Pine	35.5	No	2			35.5	34.5												70.0	35.0	5520.90	9.182199
		Monterey Pine	10.5	Yes	3			10.5	9.5	8.5											28.5	9.5	427.10	0.71034
		Monterey Pine	11.0	Yes	3			11.0	10	9											30.0	10.0	480.20	0.798655
		Monterey Pine	11.3	Yes	3			11.3	10.3	9.3											30.9	10.3	514.00	0.85487
		Monterey Pine	13.2	No	1			13.2													13.2	13.2	255.00	0.424109
		Monterey Pine	13.2	No	1			13.2													13.2	13.2	255.00	0.424109
		Monterey Pine	22.5	Yes	3			22.5	21.5	20.5											64.5	21.5	2827.30	4.702282
		Monterey Pine	12.3	Yes	4			12.3	11.3	10.3	9.3										43.2	10.8	804.50	1.338021
		Monterey Pine	23.4	Yes	4			23.4	22.4	21.4	20.4										87.6	21.9	4147.20	6.897501
		Monterey Pine	13.2	No	1			13.2													13.2	13.2	255.00	0.424109
		Monterey Pine	13.2	No	1			13.2													13.2	13.2	255.00	0.424109
		Monterey Pine	13.2	No	1			13.2													13.2	13.2	255.00	0.424109
		Monterey Pine	13.4	No	1			13.4													13.4	13.4	264.10	0.439243
		Monterey Pine	13.4	No	1			13.4													13.4	13.4	264.10	0.439243
		Monterey Pine	13.6	No	1			13.6													13.6	13.6	273.20	0.454378
		Monterey Pine	13.7	No	1			13.7													13.7	13.7	278.00	0.462361
		Monterey Pine	13.8	No	1			13.8													13.8	13.8	282.40	0.469679
		Monterey Pine	13.8	No	1			13.8													13.8	13.8	282.40	0.469679
	Remove	Monterey Pine	13.8	No	1		Environmentally Superior Alternative - Frontage Road	13.8													13.8	13.8	282.40	0.469679
		Monterey Pine	14.0	No	1			14.0													14.0	14.0	292.10	0.485812
		Monterey Pine	14.0	No	1			14.0													14.0	14.0	292.10	0.485812
		Monterey Pine	14.0	No	1			14.0													14.0	14.0	292.10	0.485812
		Monterey Pine	14.0	No	1			14.0													14.0	14.0	292.10	0.485812
		Monterey Pine	14.1	No	1			14.1													14.1	14.1	296.70	0.493463
		Monterey Pine	14.2	No	1			14.2													14.2	14.2	301.70	0.501779
		Monterey Pine	14.2	No	1			14.2													14.2	14.2	301.70	0.501779
		Monterey Pine	14.3	No	1			14.3													14.3	14.3	306.70	0.510094
		Monterey Pine	14.3	No	1			14.3													14.3	14.3	306.70	0.510094
		Monterey Pine	14.5	No	1			14.5													14.5	14.5	316.50	0.526394
		Monterey Pine	14.6	No	1			14.6													14.6	14.6	321.70	0.535042
		Monterey Pine	14.6	No	1			14.6													14.6	14.6	321.70	0.535042
		Monterey Pine	14.6	No	1			14.6													14.6	14.6	321.70	0.535042
		Monterey Pine	14.7	No	1			14.7													14.7	14.7	326.60	0.543192
		Monterey Pine	14.8	No	1			14.8													14.8	14.8	331.80	0.55184
		Monterey Pine	14.9	No	1			14.9													14.9	14.9	336.80	0.560156
		Monterey Pine	14.9	No	1			14.9													14.9	14.9	336.80	0.560156
	Remove	Monterey Pine	15.0	No	1		Environmentally Superior Alternative - Frontage Road	15.0													15.0	15.0	342.20	0.569137
Remove	Remove	Pepper	5.2	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	5.2													5.2	5.2	57.20	0.095133
Remove	Remove	Pepper	5.6	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	5.6													5.6	5.6	68.20	0.113428
Remove	Remove	Pepper	7.0	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	7.0													7.0	7.0	116.10	0.193094
Remove	Remove	Pepper	11.4	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	11.4													11.4	11.4	371.60	0.618034
Remove	Remove	Pepper	13.1	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	13.1													13.1	13.1	517.10	0.860026
Remove	Remove	Pepper	16.3	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	16.3													16.3	16.3	871.40	1.449287
Remove	Remove	Pepper	16.8	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	16.8													16.8	16.8	936.80	1.558058
Remove	Remove	Pepper	17.1	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	17.1													17.1	17.1	977.30	1.625417
Remove	Remove	Pepper	19.3	No	1	Proposed Project - Parking and Circulation	Environmentally Superior Alternative - Parking And Circulation	19.3													19.3	19.3	1306.50	2.172932

APPENDIX B

i-Tree Planting Calculator Output Table

Project Report - i-Tree Planting Calculator v1.1.3

Location: Monterey, California 93940
Electricity Emissions Factor: 252.40 kilograms CO2 equivalent/MWh
Fuel Emissions Factor: 52.00 kilograms CO2 equivalent/MMBtu
Lifetime: 20 years
Tree Mortality: 10%

All amounts in the tables are for the full lifetime of the project.

Location		CO_2 (Carbon Dioxide) Benefits			
Group Identifier	Tree Group Characteristics	CO_2 (Carbon Dioxide) Avoided (pounds)	CO_2 Avoided ($)	CO_2 Sequestered (pounds)	CO_2 Sequestered ($)
1	• (200) Oak, Coastal live oak; California live (Quercus agrifolia) at 1 inch DBH (Diameter at Breast Height). • Planted >60 feet and north (0°) of buildings that were built post-1980 with heat and A/C. • Trees are in excellent condition and planted in full sun.	0.0	$0.00	507,447.9	$8,976.81

Location		Energy Benefits			
Group Identifier	Tree Group Characteristics	Electricity Saved (kWh) (Kilowatt-Hours)	Electricity Saved ($)	Fuel Saved (MMBtu) (Millions of British Thermal Units)	Fuel Saved ($)
1	• (200) Oak, Coastal live oak; California live (Quercus agrifolia) at 1 inch DBH (Diameter at Breast Height). • Planted >60 feet and north (0°) of buildings that were built post-1980 with heat and A/C. • Trees are in excellent condition and planted in full sun.	0.0	$0.00	0.0	$0.00

Location		Ecosystem Services			
Group Identifier	**Tree Group Characteristics**	**Tree Biomass (short ton)**	**Rainfall Interception (gallons)**	**Stormwater Managed (gallons)**	**Stormwater Managed ($)**
1	• (200) Oak, Coastal live oak; California live (Quercus agrifolia) at 1 inch DBH (Diameter at Breast Height). • Planted >60 feet and north (0°) of buildings that were built post-1980 with heat and A/C. • Trees are in excellent condition and planted in full sun.	108.5	1,631,422.6	358,557.3	$3,204.07

Location		Air Benefits							
Group Identifier	Tree Group Characteristics	O_3 (Ozone) Removed (pounds)	NO_2 (Nitrogen Dioxide) Avoided (pounds)	NO_2 (Nitrogen Dioxide) Removed (pounds)	SO_2 (Sulfur Dioxide) Avoided (pounds)	SO_2 (Sulfur Dioxide) Removed (pounds)	VOC (Volatile Organic Compound) Avoided (pounds)	$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Avoided (pounds)	$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Removed (pounds)
1	• (200) Oak, Coastal live oak; California live (Quercus agrifolia) at 1 inch DBH (Diameter at Breast Height). • Planted >60 feet and north (0°) of buildings that were built post-1980 with heat and A/C. • Trees are in excellent condition and planted in full sun.	1,497.9	0.0	162.7	0.0	42.7	0.0	0.0	58.7

www.fs.fed.us

www.davey.com
www.arborday.org
www.urban-forestry.com
www.isa-arbor.com
www.caseytrees.org
www.esf.edu
www.northeasternforests.org

Use of this tool indicates acceptance of the End-User License Agreement (EULA), which can be found at: https://www.itreetools.org/resources/content/iTree_End_Users_License_Agreement.pdf

APPENDIX C

Loss of Sequestered Carbon from Vegetation

Vegetation

Land Use Change - Loss of Sequestered Carbon

A development which changes land use type results in changes in CO_2 sequestration from the atmosphere which would not have been captured had there been no land-type change.

Equation:

Sequestered CO_2 (MT CO_2) = Σ_f ($SeqCO_2$)$_f$ x (area)$_f$ - Σ_i (SeqCO2)$_i$ x (area)$_i$

Where:

$SeqCO_2$ = mass of sequestered CO_2 per unit area (MT CO_2/acre)

area = area of land for specific land use type (acre)

f = index for final land use type

I = index for initial land use type

Default CalEEMod Factors

The mass of sequestered CO_2 per unit area (MT CO_2/acre) is dependent on the specific land use type. The program uses default CO_2 sequestration values from the California Climate Action Registry for each land use that will be preserved or created:

Vegetation Land Use Type	Vegetation Land Use Subtype	Biogenic CO_2 Emissions (MT CO_2/Acre)
Cropland	Cropland	6.2
Forest Land	Scrub	14.3
Forest Land	Trees	111
Grassland	Grassland	4.31
Wetlands	Wetlands	0
Others	Others	0

Notes:

Based on values indicated in IPCC Guidelines for National Greenhouse Gas Inventories (IPCC Guidelines). Available online at http://www.ipcc-nggip.iges.or.jp/public/2006gl/

Reference:

CalEEMod Users Guide, Appendix A Calculation Details (Section 11 Vegetation)

Calculations:

Proposed Project

Project Vegetation Land Use	Vegetation Land Use Category	Vegetation Land Use Category Subtype	Initial Acres (acres)	Final Acres (acres)	Net Loss (acres)	Biogenic CO_2 Emissions ($MT\ CO_2$/Acre)	Sequestered CO_2 ($MT\ CO_2$)
Grassland/Ruderal	Grassland	Grassland	25.60	0.00	25.60	4.31	110.34
Shrubland	Forest Land	Scrub	18.90	0.00	18.90	14.3	270.27
Total			**44.50**	**0.00**	**44.50**		**380.61**

Alternative 1

Project Vegetation Land Use	Vegetation Land Use Category	Vegetation Land Use Category Subtype	Initial Acres (acres)	Final Acres (acres)	Net Loss (acres)	Biogenic CO_2 Emissions ($MT\ CO_2$/Acre)	Sequestered CO_2 ($MT\ CO_2$)
Grassland/Ruderal	Grassland	Grassland	25.20	0.00	25.20	4.31	108.61
Shrubland	Forest Land	Scrub	18.20	0.00	18.20	14.3	260.26
Total			**43.40**	**0.00**	**43.40**		**368.87**

Notes:

The default annual CO2 is calculated by multiplying total biomass (MT dry matter/acre) from IPCC data by the carbon fraction in plant material (0.47), then using the ratio of molecular weights (44/12) to convert from MT of carbon (C) to MT of carbon dioxide (CO2).

Vegetation Type

Vegetation types are defined by IPCC as follows:

Forest Land

This category includes all land with woody vegetation consistent with thresholds used to define Forest Land in the national greenhouse gas inventory. It also includes systems with a vegetation structure that currently fall below, but *in situ* could potentially reach the threshold values used by a country to define the Forest Land category.

Grassland

This category includes rangelands and pasture land that are not considered Cropland. It also includes systems with woody vegetation and other non-grass vegetation such as herbs and brushes that fall below the threshold values used in the Forest Land category. The category also includes all grassland from wild lands to recreational areas as well as agricultural and silvi-pastural systems, consistent with national definitions.

Area

The user must specify area of land in acres for specific final and initial land use types. These area changes include not only the area of land that will be converted to buildings, but also areas disrupted by the construction of utility corridors, water tank sites, and associated borrow and grading areas. Areas temporarily disturbed that will eventually recover to become vegetated will not be counted as vegetation removed as there is no net change in vegetation or land use.

This assumption facilitates the calculation as a yearly growth rate and CO2 removal rate does not have to be calculated. As long as the disturbed land will indeed return to its original state, this assumption is valid for time periods over 20 years.

Monterey Regional Airport's Proposed Master Plan and Associated Development Projects

Proposed Project

Area of Impact	Subarea	Vegetation Type: Grassland/Ruderal (acres)	Vegetation Type: Shrubland (acres)	Total Acres to Be Removed
Southside Terminal Area	Parking/Circulation	0.4	0.0	0.4
Southside Terminal Area	Terminal	0.8	2.9	3.7
Route 68 Frontage Loop Road Area	N/A	1.8	2.7	4.5
North Access Road and General Aviation Relocation Area	N/A	10.3	5.9	16.2
Northside Construction Staging Area	N/A	1.1	0.0	1.1
Soil Deposition Area (Option 2)	N/A	11.2	7.4	18.6
Total		**25.6**	**18.9**	**44.5**

Alternative 1 (Environmentally Superior Alternative)

Area of Impact	Subarea	Vegetation Type: Grassland/Ruderal (acres)	Vegetation Type: Shrubland (acres)	Total Acres to Be Removed
Southside Terminal Area	Parking/Circulation	0.8	0.0	0.8
Southside Terminal Area	Terminal	0.0	2.9	2.9
State Route 68 Frontage Road	N/A	1.8	2.0	3.8
North Access Road and General Aviation Relocation Area	N/A	10.3	5.9	16.2
Northside Construction Staging Area	N/A	1.1	0.0	1.1
Soil Deposition Area (Option 2)	N/A	11.2	7.4	18.6
Total		**25.2**	**18.2**	**43.4**

MONTEREY
REGIONAL AIRPORT

Appendix K

AIRCRAFT NOISE MODELING ASSUMPTIONS

APPENDIX K
AIRCRAFT NOISE MODELING ASSUMPTIONS

Introduction

This appendix includes documentation of the noise modeling assumptions for the 2015, 2025, and 2035 Community Noise Equivalent Level (CNEL) noise contours prepared for the *Monterey Regional Airport Master Plan* Environmental Impact Report using the Federal Aviation Administration's (FAA) Aviation Environmental Design Tool (AEDT) for aircraft noise environmental documentation. This analysis reflects recent changes in operating procedures at the airport.

The AEDT works by defining a network of grid points at ground level around the Airport. It then selects the shortest distance from each grid point to each flight track and computes the noise exposure for each aircraft operation by aircraft type and engine thrust level, along each flight track. Corrections are applied for air-to-ground acoustical attenuation, acoustical shielding of the aircraft engines by the aircraft itself, and aircraft speed variations. The noise exposure levels for each aircraft are summed at each grid location. For this EIR, the CNEL at all grid points was used to develop noise exposure contours for selected values (e.g., 65, 70, and 75 CNEL). Noise contours were then plotted on a base map of the airport environs using the CNEL metrics.

In addition to the mathematical procedures defined in the model, the AEDT also includes a database with tables correlating noise, thrust settings, and flight profiles for most of the civilian aircraft and many common military aircraft operating in the United States. This database, often referred to as the noise curve data, has been developed under FAA guidance based on rigorous noise monitoring in controlled settings. In fact, the AEDT database was developed through more than a decade of research, including extensive field measurements of more than 10,000 aircraft operations. The database also includes performance data for each aircraft to allow for the computation of airport-specific flight profiles (rates of climb and descent). AEDT Version 2c was used for modeling the noise condition, which was the current version at the start of this analysis.

The following sections outline the aircraft fleet mix, operations, time-of-day, runway use, flight tracks, flight profiles, and description of the noise exposure contours.

Activity Data

Airport activity is defined as the take-offs and landings by aircraft operating at the facility; this is also referred to as aircraft operations. Activity is further described as either local, indicating aircraft practicing take-offs and landings (i.e., performing touch-and-go's), or itinerant, refer-ring to the initial departure from or final arrival at the airport.

Table K1 provides a summary of operations for the existing condition (2015) and two forecast years (2025 and 2035). Existing airport activity (i.e., take-offs and landings, or operations by aircraft) for 2015 was estimated using data collected from the FAA Enhanced Traffic Management System Counts (ETMSC) and the forecast operations were collected from the Draft Airport Master Plan.

Fleet Mix

The selection of individual aircraft types is important to the modeling process because different aircraft types generate different noise levels. The aircraft fleet mix was derived from an inventory of existing operations at the airport. **Table K1** summarizes the generalized fleet mix data input into the noise analysis.

Database Selection

In order to select the proper aircraft from the AEDT database, a review of the current fleet mix for Monterey Regional Airport was conducted. Different aircraft types generate different noise levels; therefore, selection of individual aircraft plays an important role in the noise modeling process. The following paragraphs outline the database selections used for input into the AEDT.

Table K1 lists the annual operations by aircraft type. The included aircraft were selected to provide a realistic representation of airport operations. Flight plans, airline flight schedules, airfield observations, and based aircraft lists were used to determine the types of aircraft which frequently use the airport. To accurately represent the noise conditions at the airport, the AEDT aircraft fleet database includes approximately 3,000 airframe and engine combinations. No user-defined aircraft or profiles requiring FAA approval were used in the AEDT modeling. For those aircraft not specifically identified in the AEDT, the FAA provides a list of appropriate substitute aircraft.

The FAA aircraft substitution list indicates that the general aviation single engine variable-pitch propeller model, the GASEPV, represents a number of single engine general aviation aircraft. Among others, these include the Beech Bonanza, Cessna 177 and 180, Piper Cherokee Arrow, and Cessna Caravan. The general aviation single engine fixed-pitch propeller model, the GASEPF, also represents several single engine general aviation aircraft. These include the Cessna 150 and 172, Piper Archer, and the Piper Tomahawk.

The FAA's substitution list included with the AEDT documentation identifies the BEC58P, the Beech Baron, as a substitute for light twin-engine aircraft such as Beech 50, Beech 55, Piper PA-23, PA-30, PA-34, Cessna 304, Cessna 310, and Cessna 401 among others. Additionally, the Cessna 182, 206, 208, and 441 are modeled with their respective AEDT designators (CNA182, CNA206, CNA208, and CNA441). The Short 330 turboprop is modeled with its respective designator the SD330. General aviation helicopter operations are represented by the SA350D.

A wide variety of business jets operate at Monterey Regional Airport. The AEDT provides data for all but the Falcon 50. The AEDT approved designator for the Falcon 50 is the COMJET. The remaining business jets were modeled with respective AEDT designators as listed in **Table K1**.

TABLE K1
Operational Fleet Mix
Aircraft Fleet Mix and Operations
Monterey Regional Airport

Aircraft	AEDT Designator	2015 Baseline	2025	2035
Commercial/Air Cargo				
B-737-700	737700	0	876	869
Airbus 319	A319-131	0	254	252
CRJ 200	CL601	5,518	2,494	2,474
CRJ 900	GV	992	2,536	2,516
ERJ 145	EMB145	28	0	0
MD83	MD83	228	0	0
Cessna 208	CNA208	1,174	1,091	1,082
DHC8	DHC8	804	739	733
EMB 120	EMB120	458	2,536	2,516
Air Taxi/GA Itinerant				
Cessna 182	CNA182	1,100	2,145	2,839
Cessna 206	CNA206	500	1,033	1,367
SEP (fixed)	GASEPF	5,784	6,477	8,541
SEP (variable)	GASEPV	5,663	6,380	8,444
MEP	BEC58P	1,680	2,016	2,667
Cessna 208	CNA208	1,956	1,336	1,768
Cessna 441	CNA441	2,082	3,380	4,474
Shorts 330	SD330	255	302	100
Cessna Citation III	CIT3	530	632	836
Challenger 600	CL600	1,271	1,283	1,698
Challenger 601	CL601	864	949	1,256
Cessna 500	CNA500	926	933	1,235
Eclipse 500	ECLIPSE500	1,480	1,792	2,372
Cessna 550	CNA55B	1,612	1,920	2,541
Cessna 560	CNA560U	590	705	933
Cessna 680	CNA680	485	520	689
Cessna 750	CNA750	1,130	1,355	1,794
Falcon 50	COMJET	433	518	686
Falcon 20	FAL20	59	0	0
GIV	GIV	647	763	1,009
GV	GV	700	3,457	3,861
IA1125	IA1125	270	325	430
LEAR35	LEAR35	2,100	2,603	3,445
MU3001	MU3001	560	673	891
Helicopter	SA365N	529	953	1,262
Military				
Twin Turboprop	CVR580	450	471	471
C-130	C130E	237	194	194
Fighter Jet	F-18	58	55	55
Helicopter	S70	90	83	83
Local				
SEP (fixed)	GASEPF	10,983	6,339	7,734
SEP (variable)	GASEPV	9,340	6,093	7,434
ME	BEC58P	2,083	1,342	1,653
Twin Turboprop	CVR580	1,643	300	300
Total operations		**67,292**	**67,800**	**83,800**

Source: Coffman Associates analysis

To account for commercial and air cargo operations, the following aircraft and corresponding designators were modeled: Canadair CRJ-200 (CL601), Canadair CRR-900 (GV), Embraer 145 (EMB145), Embraer 120 (EMB120), Dash 9 (DHC8), Cessna 208 (CNA208), and McDonnell Douglas MD-83 (MD83). Commercial aircraft forecast for Monterey Regional Airport include the Boeing 737-700 and Airbus 319. These aircraft are represented in the AEDT by the 737700 and A319-131 designators.

Military operations at Monterey Regional Airport include a twin turboprop aircraft, which was modeled as the CVR580, the C-130 aircraft modeled by the C130E, and the F-18 fighter jet, which is modeled by the F-18. Military helicopters were modeled with the S70 AEDT designator.

Time-of-Day

The time-of-day which aircraft operations occur is an important component of the AEDT model and depends on the noise metric used to represent noise conditions. As previously discussed, CNEL adds additional weight to operations that occur during evening and nighttime hours. During the evening (7:00 p.m.-10:00 p.m. an additional 4.77 dB is added to all aircraft operations and 10 dB is added to all aircraft operations between 10:00 p.m. to 7:00 a.m. to represent the increased sensitivity that residents might have during evening and nighttime hours. When calculating aircraft noise exposure, one nighttime operation is equal to ten daytime operations resulting from the penalty.

While Monterey Regional Airport does have an airport traffic control tower (ATCT), it is closed between 9:00 p.m. and 6:00 a.m. Specific counts for nighttime activity were estimated based on an interview with the ATCT manager and commercial flight schedules. This percentage of operations was also applied to both future forecast scenarios.

Runway Use

Runway usage data is also an essential component for developing noise exposure contours in the AEDT. Local wind data can be used as a general guideline for determining runway use percentages. However, local wind data provides only the directional availability of a runway and does not consider pilot selection, primary runway operations, or local operating conventions. Continuous runway use records are not maintained by the airport. The runway use distribution at Monterey Regional Airport was established through discussions with the ATCT manager. **Table K2** summarizes the runway use percentages for the existing and future conditions.

TABLE K2
Runway Use Percentages by Aircraft Type
Monterey Regional Airport

	Arrivals and Departures			Touch-and-Go
Runway	Business/ Regional Jet	Turboprop/ Multi-Engine	Single Engine Piston	Single/Multi-Engine Piston
10R	25%	25%	24%	5%
28L	75%	75%	71%	15%
10L	0%	0%	1%	20%
28R	0%	0%	4%	60%

Source: Interview with Monterey Peninsula Airport Traffic Control Tower Manager (2013).

Flight Tracks

A review of local and regional air traffic control procedures and radar flight tracks, conducted during the 2008 14 CFR Part 150 Noise Exposure Maps updated for the airport, was used to develop consolidated flight tracks for use in the AEDT. The resulting analysis is a series of flight tracks describing the typical flight corridors used for aircraft arriving and departing Monterey Peninsula Airport.

As illustrated on **Exhibit K1**, arrivals occur primarily on Runway 10R-28L and begin a straight-in approach well beyond the end of the runway. A smaller number of arrivals occur over Monterey Bay and align with the runway at a shorter distance.

A majority of the departure tracks lead to the northwest and northeast. Runway 28L departure tracks turn to the northwest, following the airport's departure procedure. Runway 10L disperses primarily to the north and northeast.

Touch-and-go, or training operations, occur on the north side of the airport in accordance with the air-port's standard training pattern. These tracks are indicated in green and create an oval circling pattern.

Exhibit K2 depicts the consolidated departure flight tracks, based on the radar flight track in-formation and discussions with the Airport Traffic Control Tower Manager developed for input into the AEDT. The consolidated flight tracks are developed by plotting the centerline of a concentrated group of tracks and then dispersing tracks into multiple sub-tracks that conform to the radar flight track data. The thin, light blue lines on **Exhibit K2** represent the radar data for departures acquired from the Marina radar facility. The widest dark blue lines represent the AEDT track centerline, or spine, of each group of radar track data. The medium lines represent the dispersed AEDT flight tracks for each group of departure tracks.

Touch-and-go operations, depicted on **Exhibit K3**, were also modeled as part of the noise analysis. Touch-and-go operations occur primarily on the north side of the airport. The series of concentric oval-shaped tracks represent the radar flight tracks and the observed variances of the training pattern at Monterey Regional Airport.

Helicopter arrival and departure flight tracks are illustrated on **Exhibit K4**. The primary locations for helicopter arrivals and departures are west of the terminal building at two of the fixed base operators. Much of the helicopter arrival activity occurs from the northeast, northwest, and west. Departures occur in all directions according to radar flight track data.

Flight Profiles

The standard arrival profile used in the AEDT program is a three-degree approach. No indication was given by airport staff that there was any variation on this standard procedure; there-fore, the standard approach was included in the model as representative of local operating conditions.

AEDT Version 2b computes the take-off profiles based on the user-supplied airport elevation and average annual temperature entries in the input batch. At Monterey Regional Airport, the elevation is 254 feet mean sea level (MSL) and the average annual temperature is 56 degrees Fahrenheit (F), based on infor-mation from the National Oceanic and Atmospheric Administration (NOAA). If other than standard

conditions (temperature of 59 degrees F and elevations of zero feet MSL) are specified by the user, the profile generator automatically computes the take-off profiles using the airplane performance coefficients in the database and equations in the Society of Aeronautical Engineers, Aerospace Information Report 1845 (SAE/AIR 1845).

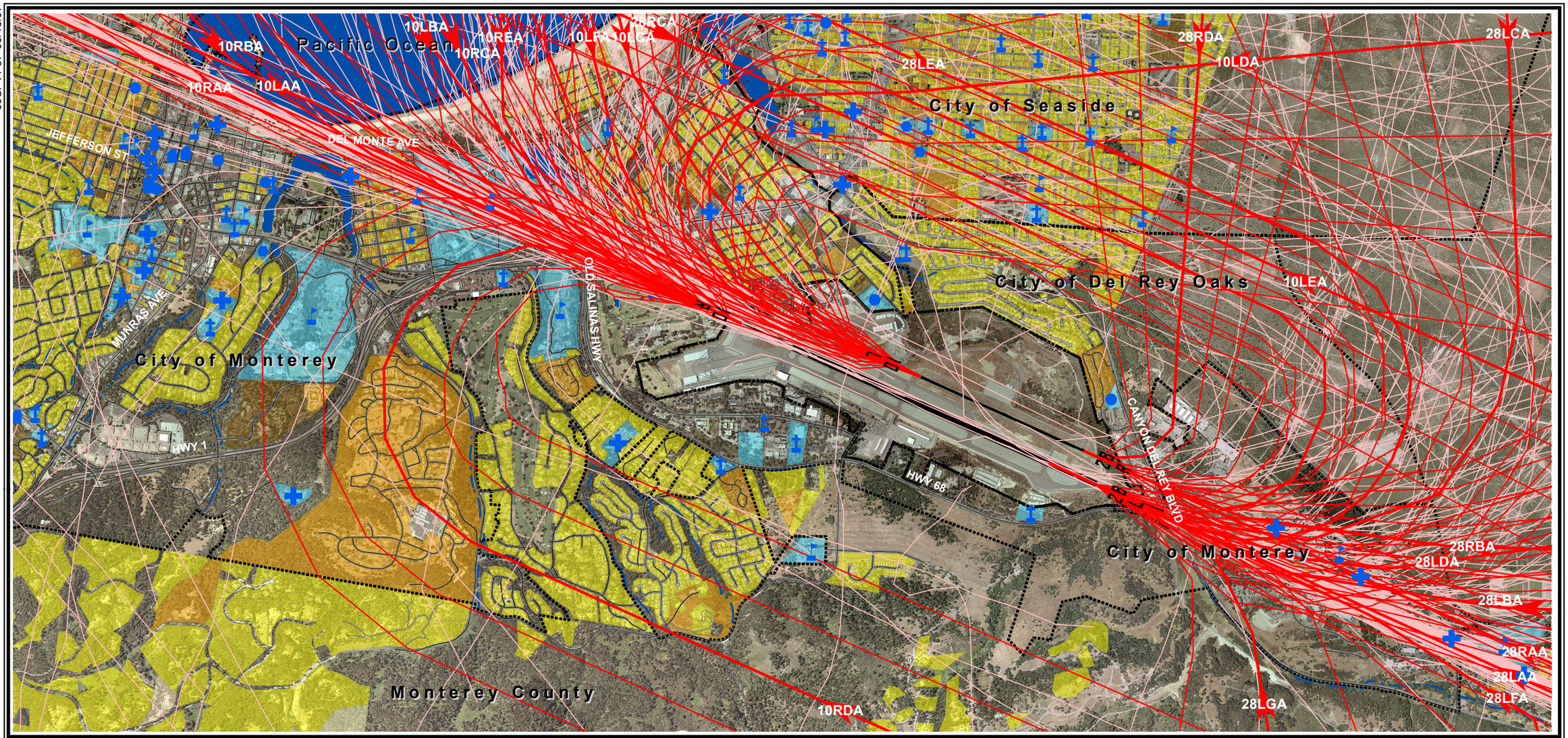
The AEDT computes separate departure profiles (altitude at a specified distance from the airport with associated velocity and thrust settings) for each of the various types of aircraft using the airport.

AEDT Output

Output data selected for calculation by the AEDT are annual average noise contours in CNEL. The CNEL is a measure of the 24-hour noise level of a community to allow for comparison be-tween the proposed project and continuation of the existing condition.

Computer files developed from data described in the previous section provided input to the AEDT, which generated output files for years and alternatives being evaluated. Contours were prepared for the following: existing condition (2015) depicted on **Exhibit K5**, 2025 depicted on **Exhibit K6**, and 2035 depicted on **Exhibit K7**. A depiction of the noise analysis results is contained within the following sections.

06SP14-3F-05/18/07



LEGEND

- Municipal Boundary
- Airport Boundary
- Consolidated Arrival Tracks
- Consolidated Arrival Sub-Tracks
- Radar Arrival Tracks
- Rural-Density Residential
- Low-Density Residential
- Medium-Density Residential
- High-Density Residential
- Manufactured Housing
- Water
- Noise-Sensitive Institutions
- Place of Worship
- Medical Facility
- Schools
- Fraternal Organization
- Theaters
- Libraries, Museums and Community Centers

TRACK LABEL DEFINITION

28LAD Example
28L - (Runway Designation)
A - (Track Designation)
D - (A-Arrival, D-Departure, TG-Touch-and-Go)

NORTH
0 2,000
1" = 2,000'

Source: Monterey County Assessor's Database.
Ortho-photography provided by Central Coast Joint Data Committee, Dated June and October 2003.
AARTS Data:
August 11, 2015,
August 27, 2015,
September 21, 2015,
September 21, 2015.

Exhibit K1
EXISTING AND FUTURE
CONSOLIDATED ARRIVAL TRACKS

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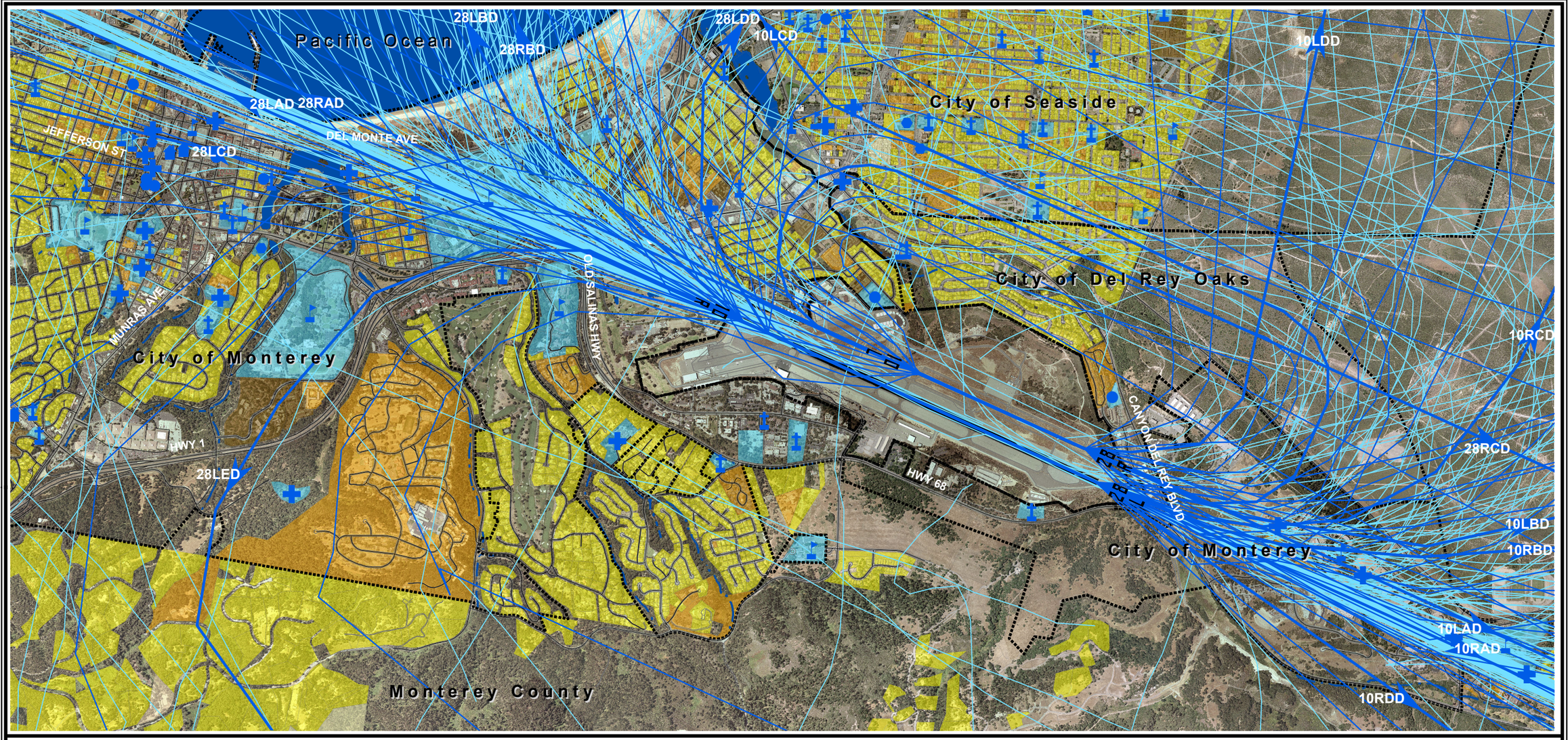
06SP14-3E-05/18/07



LEGEND

- Municipal Boundary
- Airport Boundary
- Consolidated Departure Tracks
- Consolidated Departure Sub-Tracks
- Radar Departure Tracks
- Rural-Density Residential
- Low-Density Residential
- Medium-Density Residential
- High-Density Residential
- Manufactured Housing
- Water
- Noise-Sensitive Institutions
- Place of Worship
- Medical Facility
- Schools
- Fraternal Organization
- Theaters
- Libraries, Museums and Community Centers

TRACK LABEL DEFINITION

28LAD Example
28L - (Runway Designation)
A - (Track Designation)
D - (A-Arrival, D-Departure, TG-Touch-and-Go)

NORTH
0 2,000
1" = 2,000'

Source: Monterey County Assessor's Database.
Ortho-photography provided by Central Coast Joint Data Committee, Dated June and October 2003.
AARTS Data:
August 11, 2015,
August 27, 2015,
September 21, 2015,
September 21, 2015.

Exhibit K2
EXISTING AND FUTURE
CONSOLIDATED DEPARTURE TRACKS

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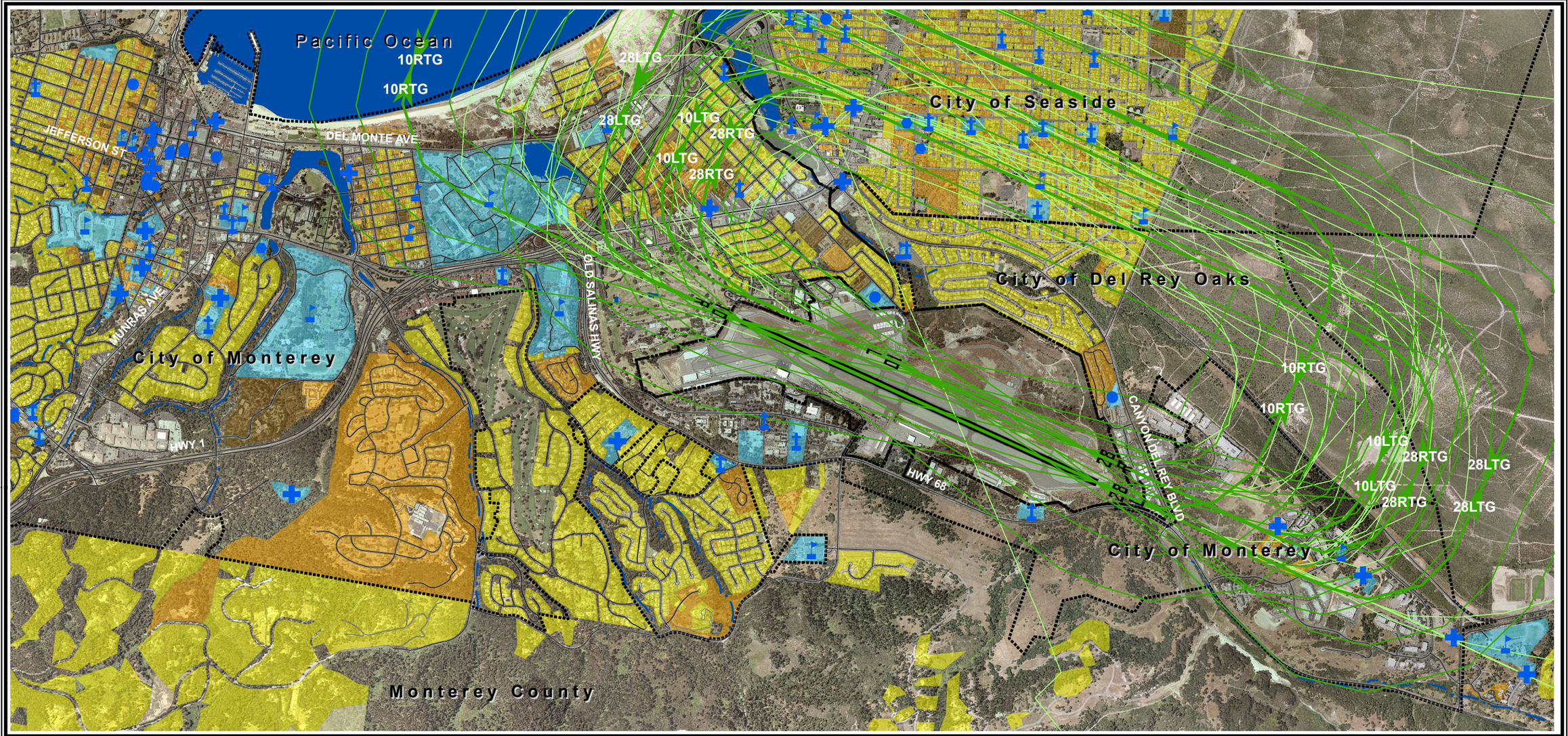
06SP14-3G-05/18/07



LEGEND

- Municipal Boundary
- Airport Boundary
- Consolidated Touch & Go Tracks
- Consolidated Touch & Go Sub-Tracks
- Radar Touch & Go Tracks
- Rural-Density Residential
- Low-Density Residential
- Medium-Density Residential
- High-Density Residential
- Manufactured Housing
- Water
- Noise-Sensitive Institutions
- Place of Worship
- Medical Facility
- Schools
- Fraternal Organization
- Theaters
- Libraries, Museums and Community Centers

TRACK LABEL DEFINITION

28LAD Example
28L - (Runway Designation)
A - (Track Designation)
D - (A-Arrival, D-Departure, TG-Touch-and-Go)

Source: Monterey County Assessor's Database.
Ortho-photography provided by Central Coast Joint Data Committee, Dated June and October 2003.
AARTS Data:
August 11, 2015,
August 27, 2015,
September 21, 2015,
September 21, 2015.

Exhibit K3
EXISTING AND FUTURE CONSOLIDATED TOUCH AND GO TRACKS

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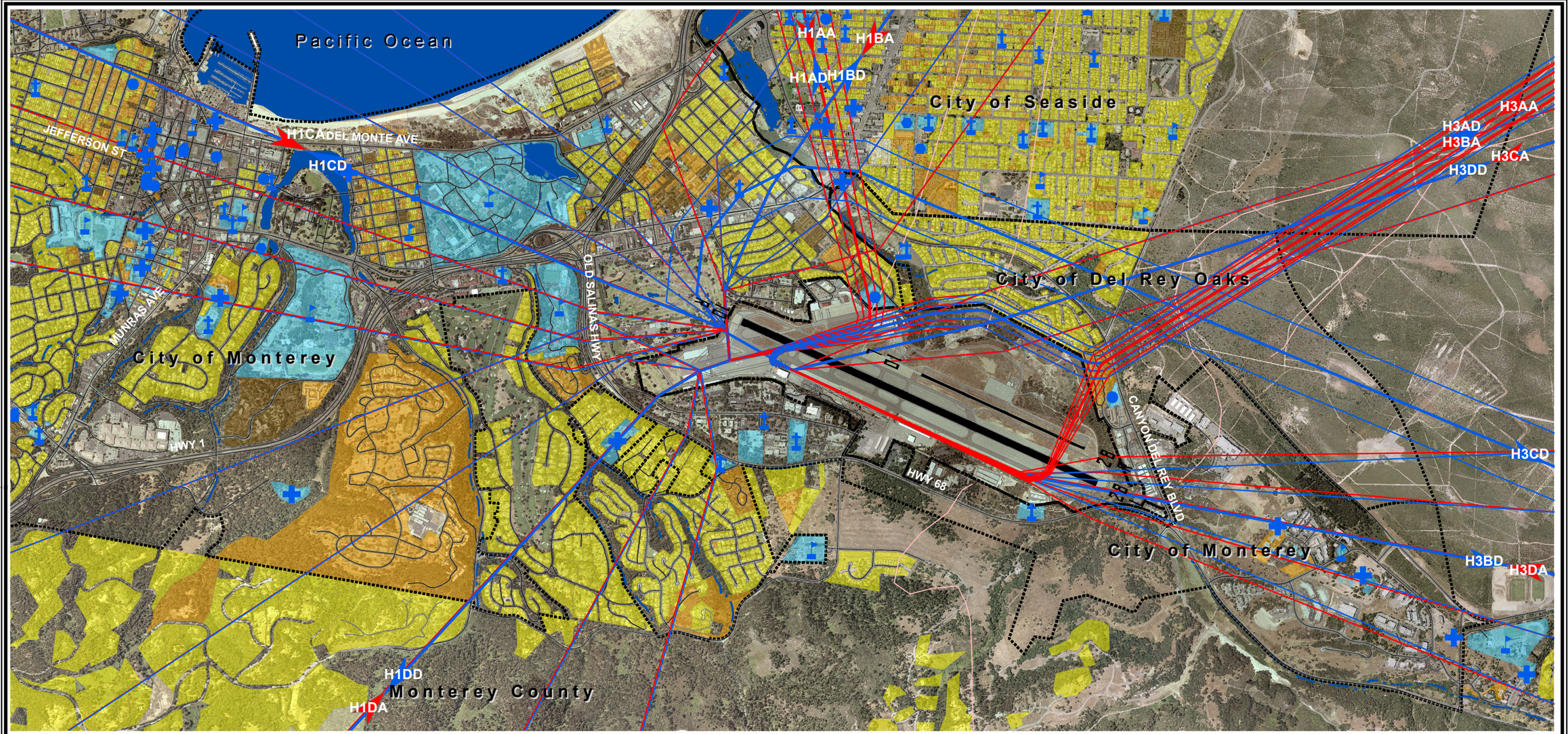
06SP14-3H-05/18/07



LEGEND

- Municipal Boundary
- Airport Boundary
- Consolidated Arrival Tracks
- Consolidated Arrival Sub-Tracks
- Radar Arrival Tracks
- Consolidated Departure Tracks
- Consolidated Departure Sub-Tracks
- Radar Departure Tracks
- Rural-Density Residential
- Low-Density Residential
- Medium-Density Residential
- High-Density Residential
- Manufactured Housing
- Water
- Noise-Sensitive Institutions
- Place of Worship
- Medical Facility
- Schools
- Fraternal Organization
- Theaters
- Libraries, Museums and Community Centers

TRACK LABEL DEFINITION

28LAD Example
28L - (Runway Designation)
A -(Track Designation)
D -(A-Arrival, D-Departure, TG-Touch-and-Go)

NORTH
0 2,000
1" = 2,000'

Source: Monterey County Assessor's Database.
Ortho-photography provided by Central Coast Joint Data Committee, Dated June and October 2003.
AARTS Data:
August 11, 2015,
August 27, 2015,
September 21, 2015,
September 21, 2015.

Exhibit K4
EXISTING AND FUTURE CONSOLIDATED HELICOPTER ARRIVAL AND DEPARTURE TRACKS

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Monterey Regional Airport

10R

10L

28R

28L

75 CNEL

70 CNEL

65 CNEL

Eligible for but did not participate in sound insulation program

Eligible for and recieved sound insulation

1" = 600 feet

0 800 1,600 3,200

1" = 800 Feet

N

2015 Noise Contours

- Municipal Boundary
- 2015 Noise Contour
- Airport Property
- Monterey County
- Parcels

Existing Land Use

- No Data
- Commercial
- High Density Residential
- Industrial
- Low Density Residential
- Medium Density Residential
- Park/Open Space
- Public
- Rural Density Residential
- Vacant/Undeveloped
- Noise-Sensitive Institutions
- Place of Worship
- Community Center/Meeting Hall
- Hospital
- Schools

SOURCE: MONTEREY COUNTY ASSESSOR'S OFFICE (2014)

Exhibit K5
MONTEREY REGIONAL AIRPORT NOISE EXPOSURE CONTOURS 2015

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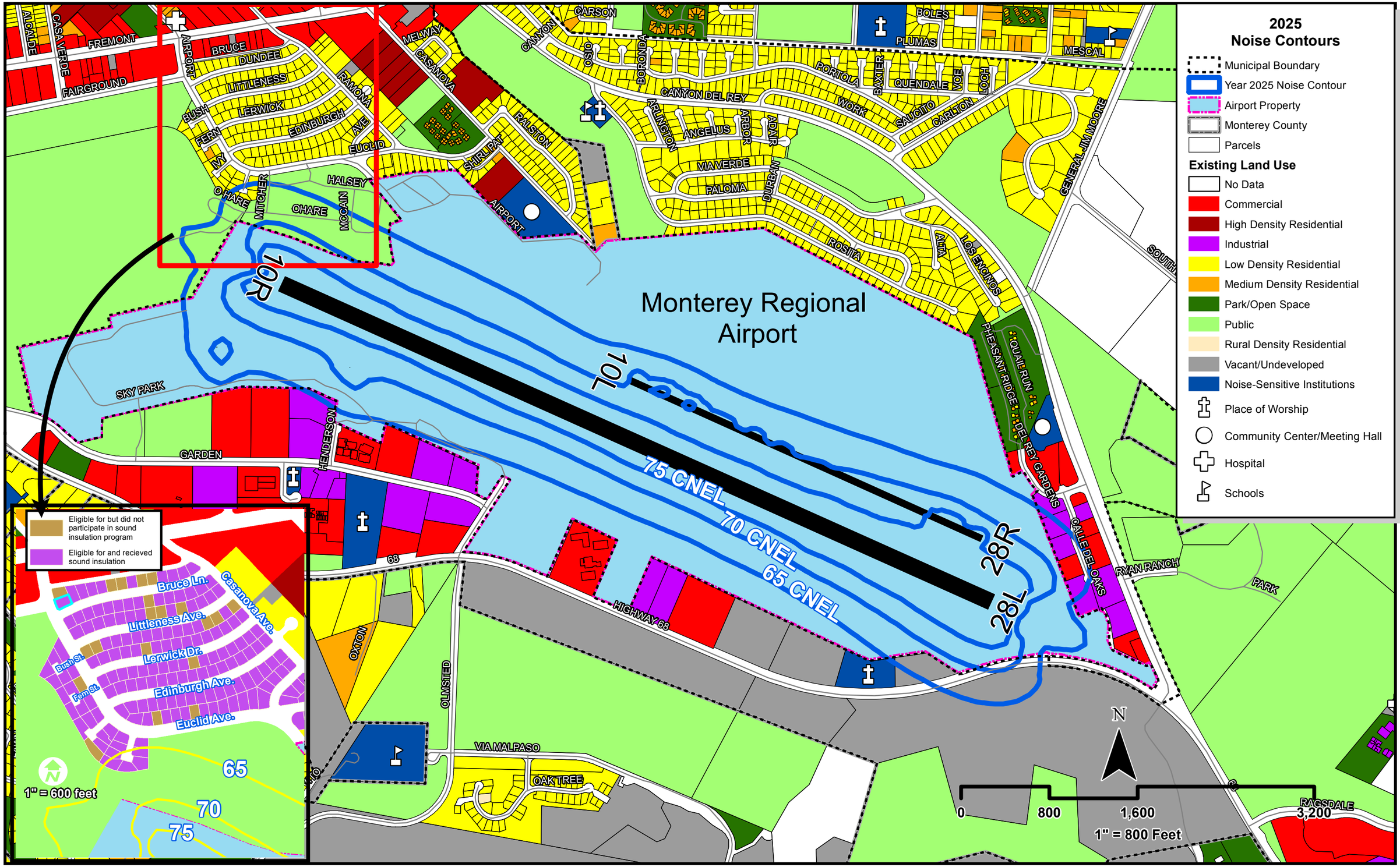

SOURCE: MONTEREY COUNTY ASSESSOR'S OFFICE (2014)

Exhibit K6
MONTEREY REGIONAL AIRPORT NOISE EXPOSURE CONTOURS 2025

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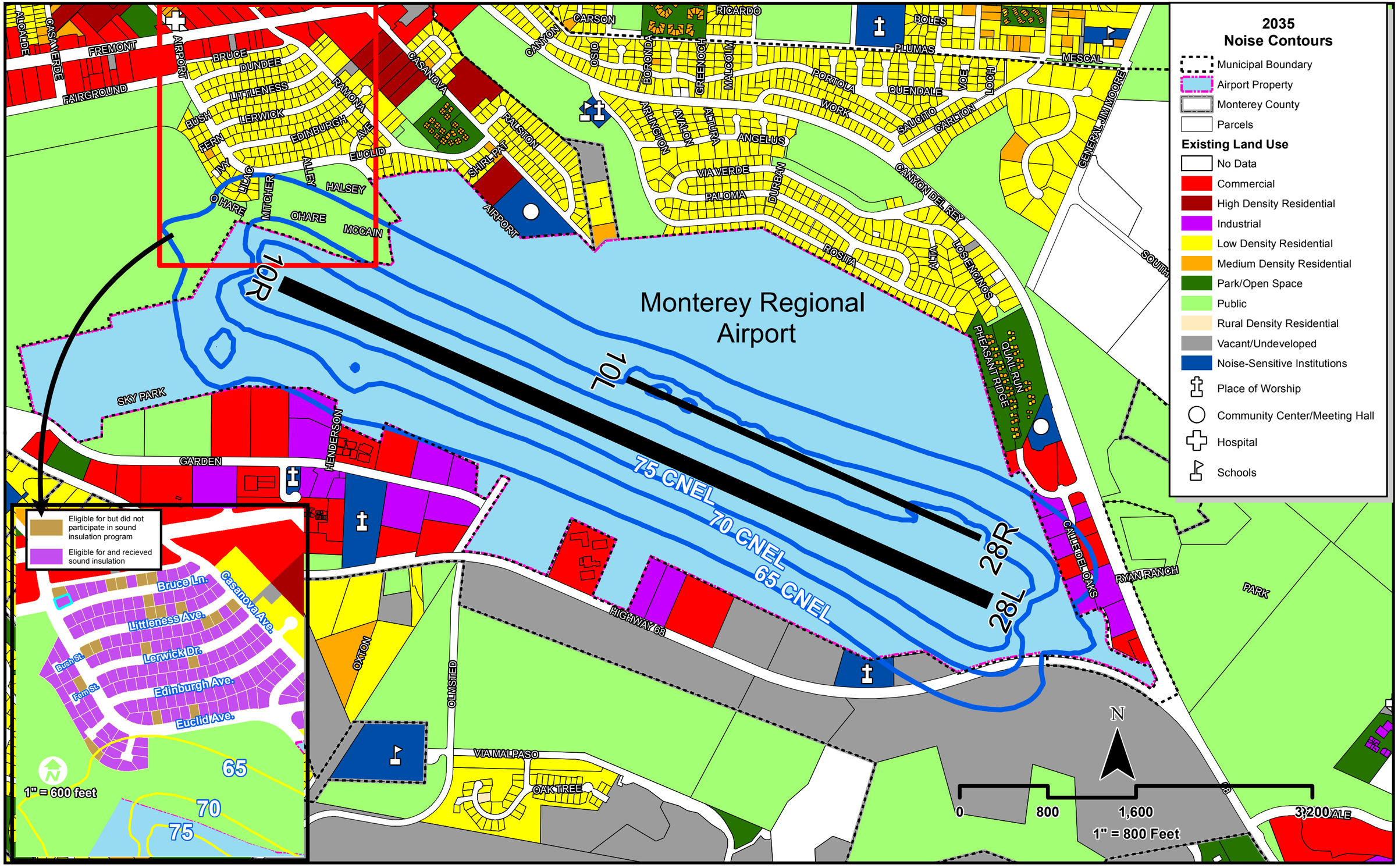

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MONTEREY REGIONAL AIRPORT NOISE EXPOSURE CONTOURS 2035

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MONTEREY
REGIONAL AIRPORT

Appendix L

VEHICULAR NOISE ASSESSMENT

FINAL

ENVIRONMENTAL NOISE ASSESSMENT
for the
Monterey Regional Airport's Proposed Master Plan and Associated Development Projects in Monterey County, California

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EXECUTIVE SUMMARY

The purpose of this technical report is to assess the potential noise impacts associated with the implementation of the proposed Monterey Airport Master Plan (AMP) Project (Proposed Project). This assessment utilizes the significance thresholds in Appendix G of the California Environmental Quality Act (CEQA) Guidelines.

One primary aspect of the Proposed Project is a multi-component airport safety enhancement project. This project is known as the Airport Safety Enhancement Project for Taxiway "A" Relocation & Associated Building Relocations.

The proposed Airport Safety Enhancement Project includes the following and would be phased over approximately 10 years:

- Relocate 44 general aviation (GA) hangars and a fuel tank from the southeast side of the Airport to the north side of the Airport
- Add up to 7 new GA hangars on the north side of the Airport
- Relocate the existing aircraft rescue and firefighting (ARFF) building and construct an ARFF service road
- Relocate the commercial terminal and necessary apron pavement (and associated parking and roadway improvements)
- Close Taxiway "K" at its connection with the new commercial terminal apron
- Implement a 52.5-foot southerly shift of 1,850 linear feet of Taxiway "A" and associated lighting, signage, and markings
- Remark hold lines on Taxiway "A" at Taxiway Connectors "G" and "J" to a 250-foot separation from the Runway 10L-28R centerline
- Install taxiway "islands" at Taxiway Connectors "G" and "J"
- Construct replacement vehicular parking along Fred Kane Drive

Other proposed short-term AMP projects include:

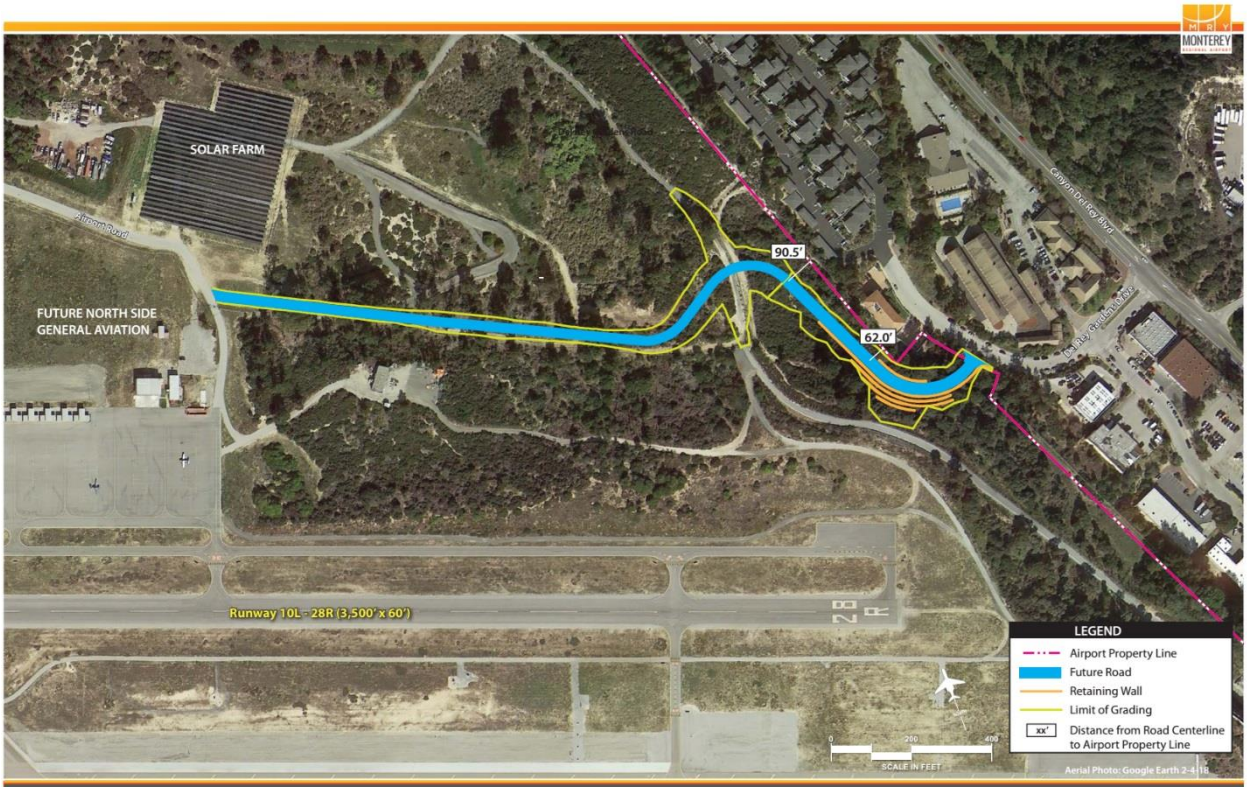
- Acquire a 5.5-acre private parcel near the proposed commercial terminal complex
- Construct a Highway 68 frontage road

Proposed long-term AMP projects include:

- Construct 106 new GA hangars on the north side of the Airport
- Redevelop the existing GA (small aircraft) hangar area (no increase in use intensity)
- Redevelop the existing airport industrial area (no increase in use intensity)
- Construct non-aviation uses on the north side of the Airport (north of Airport Road)
- Construct non-aviation uses on the south side of the Airport (north of Highway 68)
- Upgrade the perimeter fence
- Construct a consolidated maintenance building
- Acquire runway protection zone (RPZ) land (20 acres)
- Acquire RPZ avigation easement (14 acres)
- Extend Taxiway "B" to the Runway 28L threshold and construct geometry improvements for Taxiways "K" and "L"

One additional AMP project is construction of a new "north side" road, which would extend from Del Rey Gardens Drive in Del Rey Oaks (off Highway 218) to the northeast side of the Airport. Access to the north side of the Airport is currently provided via Airport Road, which runs through the Casanova Oak Knoll (CONA) neighborhood, located northwest of the Airport. The new "north side" road would provide additional access to the north side of the Airport and would allow access to be discontinued through the CONA neighborhood for areas east of Gate 22. Exhibit 1 shows the new "north side" road.

Exhibit 1. Proposed North Side Road Alignment



Noise levels from traffic along the major roadways in the Proposed Project vicinity were analyzed to determine traffic noise exposure levels for off-site noise-sensitive uses. The resultant exterior noise levels remain in the "acceptable" range when the Proposed Project traffic is added to the existing and cumulative average daily traffic data for the vicinity roads. The increases due to Proposed Project-related traffic are less than 1 dB at the modeled locations. In some cases, traffic levels decrease due to Proposed Project-related traffic patterns. Noise analyses for the new "north side" road are included in the traffic noise model. The addition of the north side road is not expected to produce a significant operational noise impact on the residential land uses in the vicinity. Use of north side road will also include emergency vehicles. While emergency vehicle noise from sirens may cause temporary annoyance, the operations are expected to be limited to infrequent emergency situations. Local noise regulations include exemptions for emergencies. Traffic noise from the north side road, including emergency vehicle use, are therefore less than significant.

Noise associated with short-term (construction) activities is potentially significant. Mitigation measures to address nighttime construction are included in the discussion. With the incorporation of these mitigation measures the construction noise impacts are expected to be less than significant.

1 INTRODUCTION

1.1 Purpose

The purpose of this report is to evaluate the potential noise impacts associated with implementation of the Monterey Airport Master Plan Project (Proposed Project) relative to the City of Monterey, County of Monterey, and City of Del Rey Oaks significance thresholds. The report includes a quantitative analysis of Proposed Project-related noise for construction and operational traffic.

1.2 Regional and Local Setting

The Proposed Project site is adjacent to the City of Monterey. Residential, institutional, and commercial land uses surround the Airport and Proposed Project site. Figure 1 shows the Proposed Project location. The Proposed Project site is generally bounded on all sides by the City of Monterey or the City of Del Rey Oaks. The City of Monterey's Noise Element (City of Monterey 2016) includes some descriptions of the region:

> The airport is surrounded by development, including the City of Monterey's Casanova Oak Knoll residential neighborhood, Ryan Ranch office/industrial park, Garden Road office park, U.S. Navy Golf Course, and Monterey County Fairgrounds.

1.3 Proposed Project Description

The projects that are evaluated within this Noise Report include the projects recommended in the Airport Master Plan's (AMP) capital improvement program, as well as the AMP's overall on-airport land use plan (which could include non-aviation development and redevelopment on the airport property). Proposed short-term development projects (occurring within 10 years) are evaluated at a project-specific level, while future long-term development projects (occurring within 20 years) are evaluated to the level of detail feasible based on available project information (i.e., at a programmatic level). Proposed long-term development projects would likely develop in phases over a long period of time, and future environmental analysis could be required prior to their approval and construction.

One primary aspect of the proposed AMP is a multi-component airport safety enhancement project. This project is known as the Airport Safety Enhancement Project for Taxiway "A" Relocation & Associated Building Relocations (Airport Safety Enhancement Project). Due to the need for federal funding and approval, a federal environmental assessment (EA) is also being prepared consistent with the requirements of the National Environmental Policy Act (NEPA). The Federal Aviation Administrative (FAA) is the lead agency for the EA.

The proposed Airport Safety Enhancement Project includes the following and would be phased over approximately 10 years:

- Relocate 44 general aviation (GA) hangars and a fuel tank from the southeast side of the Airport to the north side of the Airport
- Add up to 7 new GA hangars on the north side of the Airport
- Relocate the existing aircraft rescue and firefighting (ARFF) building and construct an ARFF service road
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- Close Taxiway "K" at its connection with the new commercial terminal apron
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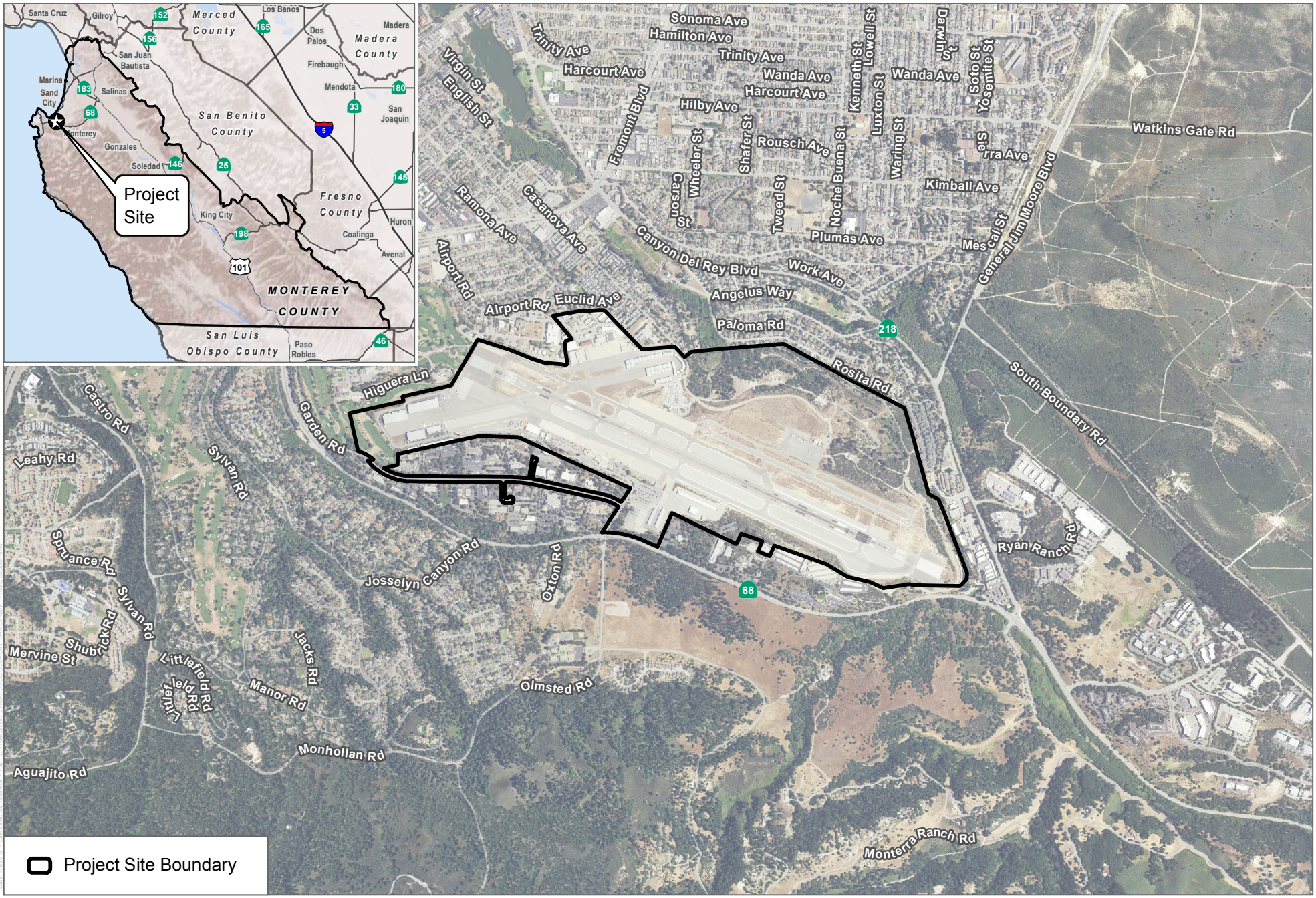

SOURCE: NAIP 2016

FIGURE 1

Project Location

Monterey Airport

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2 FUNDAMENTALS OF NOISE AND VIBRATION

The following is a brief discussion of fundamental noise concepts and basic terminology.

2.1 Sound, Noise, and Acoustics

Sound propagation is a process that consists of three components: the sound source, the sound path, and the sound receiver. All three components must be present for sound to propagate. Without a source to produce sound, there is no sound. Similarly, without a medium to transmit sound pressure waves, there is no sound transmitted. Finally, sound must reach a receiver; a hearing organ, sensor, or object must be present to perceive, register, or be affected by sound or noise. In most situations, there are many different sound sources, paths, and receptors. Acoustics is the field of science that deals with the production, propagation, reception, effects, and control of sound. Noise is defined as sound that is unpleasant, unexpected, or undesired.

2.2 Sound Pressure Levels and Decibels

Loudness of sound increases with increasing amplitude. Sound pressure amplitude is measured in units of micro-newton per square meter, also called a micropascal. One micropascal is approximately one-hundred billionth (0.00000000001) of normal atmospheric pressure. The pressure of a very loud sound may be 200 million micropascals, or 10 million times the pressure of the weakest audible sound. Because expressing sound levels in terms of micropascal would be very cumbersome, sound pressure level in logarithmic units is used instead to describe the ratio of actual sound pressure to a reference pressure squared. These units are called Bels. To provide a finer resolution, a Bel is subdivided into 10 decibels (dB).

2.3 A-Weighted Sound Level

Sound pressure level alone is not a reliable indicator of loudness. The frequency, or pitch, of a sound also has a substantial effect on how humans will respond. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness, or human response, is determined by the characteristics of the human ear.

Human hearing is limited not only in the range of audible frequencies, but also in the way it perceives the sound in that range. In general, the healthy human ear is most sensitive to sounds between 1,000 and 5,000 hertz, and it perceives a sound within that range as more intense than a sound of higher or lower frequency with the same magnitude. To approximate the frequency response of the human ear, a series of sound level adjustments is usually applied to the sound measured by a sound level meter. The adjustments (referred to as a weighting network) are frequency-dependent.

The A-scale weighting network approximates the frequency response of the average young ear when listening to ordinary sounds. When people make judgments about the relative loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Noise levels are typically reported in terms of A-weighted sound levels. All sound levels discussed in this report are A-weighted decibels (dBA), unless otherwise stated. Examples of typical noise levels for common indoor and outdoor activities are depicted in Table 1.

Table 1
Typical Sound Levels in the Environment and Industry

Common Outdoor Activities	Noise Level (dB)	Common Indoor Activities
—	110	Rock band
Jet fly over at 300 meters (1,000 feet)	100	—
Gas lawn mower at 1 meter (3 feet)	90	—
Diesel truck at 15 meters (50 feet), at 80 kilometers per hour (50 miles per hour)	80	Food blender at 1 meter (3 feet); garbage disposal at 1 meter (3 feet)
Noisy urban area, daytime; gas lawn mower at 30 meters (100 feet)	70	Vacuum cleaner at 3 meters (10 feet)
Commercial area; heavy traffic at 90 meters (300 feet)	60	Normal speech at 1 meter (3 feet)
Quite urban, daytime	50	Large business office; dishwasher next room
Quite urban, nighttime	40	Theater; large conference room (background)
Quite suburban, nighttime	30	Library
Quite rural, nighttime	20	Bedroom at night; concert hall (background)
—	10	Broadcast/recording studio
Lowest threshold of human hearing	0	Lowest threshold of human hearing

Source: Caltrans 2013.

2.4 Human Response to Changes in Noise Levels

"It is generally accepted that the average healthy ear … can barely perceive a noise level change of 3 dB" (Caltrans 2013). A change of 5 dBA is readily perceptible, and a change of 10 dBA is perceived as twice or half as loud. A doubling of sound energy results in a 3 dBA increase in sound, which means that a doubling of sound energy (e.g., doubling the average daily numbers of traffic on a road) would result in a barely perceptible change in sound level.

2.5 Noise Descriptors

Additional units of measure have been developed to evaluate the long-term characteristics of sound. The equivalent sound level (L_{eq}) is also referred to as the time-average sound level. It is the equivalent steady-state sound level that in a stated period of time would contain the same acoustical energy as the time-varying sound level during the same time period. The 1-hour A-

weighted equivalent sound level, $L_{eq}(h)$, is the energy average of the A-weighted sound levels occurring during a 1-hour period.

People are generally more sensitive and annoyed by noise occurring during the evening and nighttime hours. Thus, another noise descriptor used in community noise assessments—the community noise equivalent level (CNEL)—was introduced. The CNEL scale represents a time-weighted, 24-hour average noise level based on the A-weighted sound level. The CNEL accounts for the increased noise sensitivity during the evening hours (7:00 p.m. to 10:00 p.m.) and nighttime hours (10:00 p.m. to 7:00 a.m.) by adding 5 dBA and 10 dBA, respectively, to the average sound levels occurring during the evening and nighttime hours. CNEL or Day Night Level (L_{dn}[1]) are the basis for the County's noise standards.

2.6 Sound Propagation

Sound propagation (i.e., the passage of sound from a noise source to a receiver) is influenced by geometric spreading, ground absorption, atmospheric effects, and shielding by natural and/or built features. Sound levels attenuate (or diminish) at a rate of approximately 6 dBA per doubling of distance from an outdoor point source due to the geometric spreading of the sound waves. For a line source, such as vehicle traffic along a roadway, sound levels attenuate at a rate of approximately 3 dBA per doubling of distance. Atmospheric conditions such as humidity, temperature, and wind gradients can also temporarily alter sound levels. In general, the greater the distance the receiver is from the source, the greater the potential for variation in sound levels due to atmospheric effects. Additional sound attenuation can result from built features such as intervening walls and buildings, and by natural features such as hills and dense woods.

Additional definitions of common acoustical terms are provided in Appendix A.

[1] L_{dn} (also known as DNL) is comparable to CNEL, except that there is no evening component: the period from 7:00 a.m. to 10:00 p.m. is classified as daytime, and no adjustment to the noise levels is made during these hours; the period from 10:00 p.m. to 7:00 a.m. is classified as nighttime and 10 decibels is added to the hourly L_{eq}s occurring during these hours.

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3 REGULATORY SETTING

3.1 State

California Department of Health Services Guidelines

The State Department of Health Services has developed guidelines of community noise acceptability for use by local agencies (OPR 2003). Selected relevant levels are listed here:

- Below 60 dBA CNEL: normally acceptable for low-density residential use
- 50 to 70 dBA: conditionally acceptable for low-density residential use
- Below 65 dBA CNEL: normally acceptable for high-density residential use
- 60 to 70 dBA CNEL: conditionally acceptable for high-density residential, transient lodging, churches, educational, and medical facilities.

The acceptable exterior noise level for low-density residential use of 60 dBA CNEL would be reduced by a typical residential building envelope to an interior level of not greater than 45 dBA CNEL.

Caltrans Guidelines

Guidance regarding the determination of a substantial permanent increase in ambient noise levels in the project vicinity above existing levels is provided by the Federal Highway Administration (FHWA) and California Department of Transportation (Caltrans). In Title 23 Part 772 of the Code of Federal Regulations (23 CFR 772), a substantial noise increase for federally funded transportation projects is defined as a range (to be determined by each state's transportation department) between 5 and 15 dBA above existing ambient levels (FHWA 2010). In the State of California, Caltrans defines a substantial noise increase as 12 dBA or more (Caltrans 2011). Because the project is located in California, the threshold of 12 dBA or more is used to define a substantial increase.

Guidance from Caltrans was used in this analysis for permanent substantial noise increase thresholds. Similarly, for temporary noise from construction, the Caltrans Standard Specification Section 14-8.02 (Noise Control) was used. Section 14-8.02 (Noise Control) requires that construction activity not exceed 86 dBA L_{max} at 50 feet from job site activities from 9:00 p.m. to 6:00 a.m. and that internal combustion engines be equipped with manufacturer-recommended mufflers (Caltrans 2011).

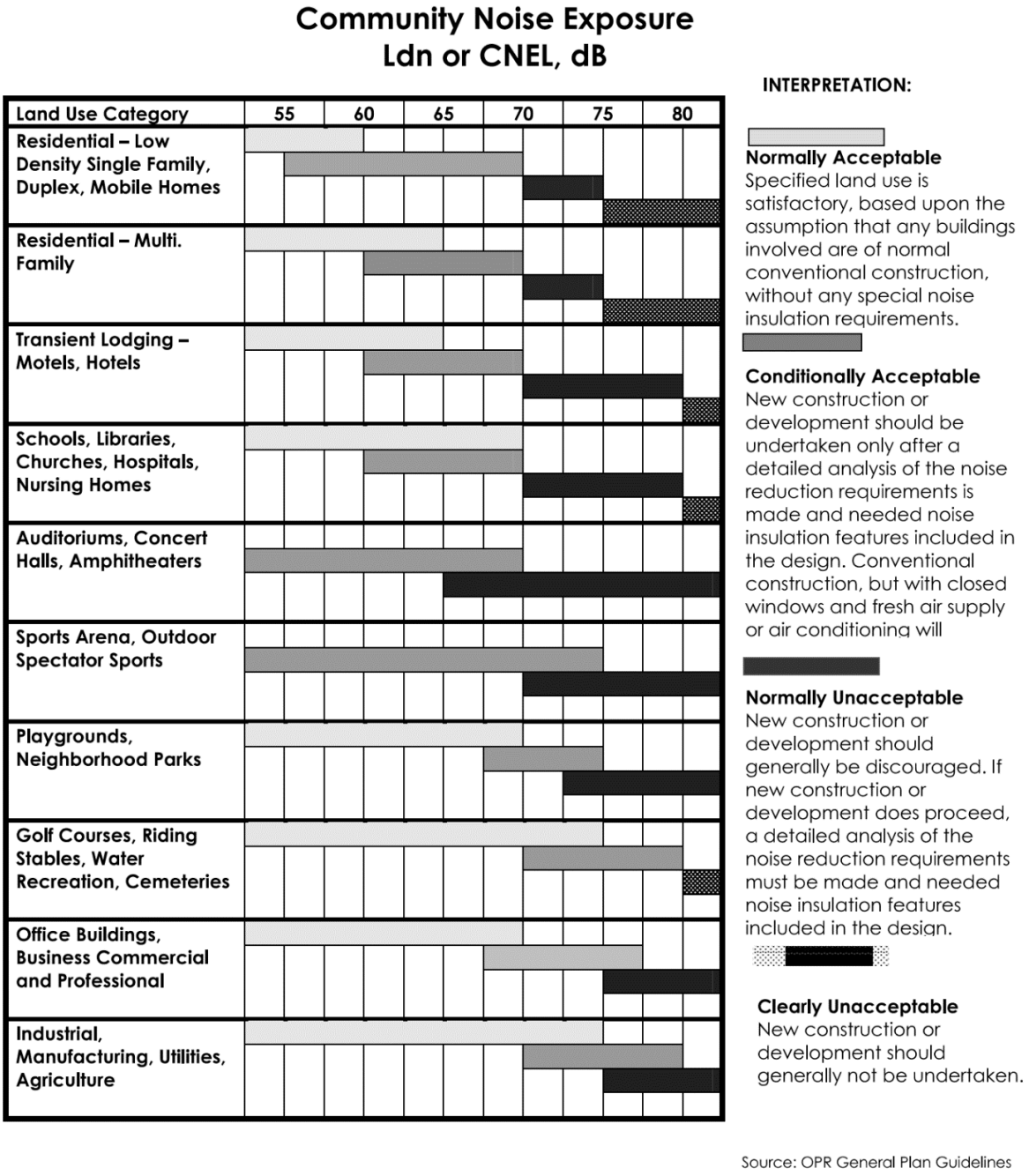
3.2 Local

City and County regulations are presented primarily for informational purposes and to add context to the noise level analyses. Traffic noise level increases resulting from the Proposed Project would be assessed using the regulations from the jurisdiction in which each road segment is located. However, noise from activities within the airport property (including construction) are not subject to these local regulations.

County of Monterey

Monterey County's exterior noise exposure standards are based on parameters established by the California Department of Health, Office of Noise Control and are presented in Table 2 (Table S-2 in the County Safety Element). Based on these standards, noise levels of 60 dBA L_{dn} or less are considered "normally acceptable." Generally, noise levels of 60 to 70 dBA L_{dn} are considered "conditionally acceptable" (County of Monterey 2010). With reference to the Proposed Project, off-site traffic noise exposure increases resulting from the Proposed Project along road segments located in the County would be subject to these exterior noise level criteria. These criteria would not be applicable to Airport operational noise located on-field.

Table 2
Community Noise Exposure L_{dn} or CNEL



Source: OPR General Plan Guidelines

Relevant policies from the County's Safety Element (County of Monterey 2010) are listed below:

- ***Policy S-7.2:*** Proposed development shall incorporate design elements necessary to minimize noise impacts on surrounding land uses and to reduce noise in indoor spaces to an acceptable level.
- ***Policy S-7.4:*** New noise generators may be allowed in areas where projected noise levels are "conditionally acceptable" only after a detailed analysis of the noise reduction requirements is made and needed noise mitigation features are included in project design.
- ***Policy S-7.5:*** New noise generators should generally be discouraged in areas identified as "normally unacceptable." Where such new noise generators are permitted, mitigation to reduce both the indoor and outdoor noise levels will be required.
- ***Policy S-7.6:*** Acoustical analysis shall be part of the environmental review process for projects when:

  b) Proposed noise generators are likely to produce noise levels exceeding the levels shown in the adopted Community Noise Ordinance when received at existing or planned noise-sensitive receptors.

- ***Policy S-7.8:*** All discretionary projects which propose to use heavy construction equipment that has the potential to create vibrations that could cause structural damage to adjacent structures within 100 feet shall be required to submit a pre-construction vibration study prior to the approval of a building permit. Projects shall be required to incorporate specified measures and monitoring identified to reduce impacts. Pile driving or blasting are illustrative of the type of equipment that could be subject to this policy.
- ***Policy S-7.9:*** No construction activities pursuant to a County permit that exceed "acceptable" levels listed in Policy S-7.1 (Table 2, which is Table S-2 in the County Safety Element) shall be allowed within 500 feet of a noise sensitive land use during the evening hours of Monday through Saturday, or anytime on Sunday or holidays, prior to completion of a noise mitigation study. Noise protection measures, in the event of any identified impact, may include but not be limited to:

  - Constructing temporary barriers; or
  - Using quieter equipment than normal.

- ***Policy S-7.10:*** Construction projects shall include the following standard noise protection measures:

  - Construction shall occur only during times allowed by ordinance/code unless such limits are waived for public convenience;

- All equipment shall have properly operating mufflers; and
- Lay-down yards and semi-stationary equipment such as pumps or generators shall be located as far from noise-sensitive land uses as practical.

In addition, the Monterey County Noise Control Ordinance (County of Monterey 2014) prohibits the operation of any device, which produces a noise level exceeding 85 dBA at a distance of 50 feet from the source, but does not apply to aircraft or any machine or device that is operated in excess of 2,500 feet from any occupied dwelling unit. Additionally, section 10.60.040 of the County Code apply to nighttime noise, in which it is prohibited to make, assist in making, allow, continue, create, or cause to be made any loud and unreasonable sound any day of the week from 10:00 p.m. to 7:00 a.m. the following morning within the unincorporated area of the County of Monterey. During this time period, a loud and unreasonable sound includes any sound that exceeds the exterior noise level standards set forth in Table 3:

Table 3
Exterior Noise Level Standards (Nighttime Only)

Nighttime hourly equivalent sound level (L_{eq} dBA)	45
Maximum level, dBA	65

Noise levels shall be measured using a Type 1 or Type 2 integrating sound level meter using the A-weighting network scale. The location of measurements shall be at or outside the property line of the property from which noise is emanating. Commercial agricultural operations, emergency vehicles, bells and chimes used for religious purposes or services, and specified outdoor gatherings are exempt from these requirements. As mentioned at the beginning of this section, City and County regulations are presented primarily for informational purposes and to add context to the noise level analyses. Noise from activities within the airport property (including construction) are not subject to these County regulations.

City of Monterey

The City of Monterey General Plan identifies the following goals for new development related to noise that may be applicable to the Proposed Project (City of Monterey 2016):

- ***Goal a:*** Minimize traffic noise in predominantly residential areas and ensure noise in commercial areas is at an acceptable level.
- ***Policy a.2:*** Route trucks and through traffic onto truck routes, even where such routing is not the shortest distance between points.

- ***Program a.2.1:*** Implement traffic calming measures in neighborhoods.
- ***Policy a.5:*** Protect areas adjacent to roadways and freeways with landscaped noise buffers or other means; sound walls should not be allowed.

b. Aircraft Noise

The Monterey Peninsula Airport is owned and operated by the Monterey Peninsula Airport District. The Airport is located directly adjacent to the City's border and encompasses approximately 600 acres. The Airport has two runways. Flight paths pass over various neighborhoods of the City.

The Monterey Peninsula Airport District has completed two studies: *Monterey Peninsula Airport Master Plan Update* (September 1992) and *FAR Part 150 Airport Noise Exposure Map Report* (November 1997). These studies estimate passenger growth and forecast operations. The actual passenger count has been substantially less than projected by the plans. In 2002, the actual passenger count was 380,000. Over the past several years, passenger growth has not met expectations so noise levels have been less than originally forecast. However, noise from general aviation and aircraft deviating from established flight paths and flying over neighborhoods are still a concern to the City.

- ***Policy b.1:*** Support improvements and operational changes at the airport that promote safety and noise reduction.
- ***Policy b.2:*** Work with the Airport District, Airport Land Use Commission, and surrounding cities in planning for appropriate land uses around the airport and developing solutions to existing noise problems.
- ***Policy b.3:*** Continue to encourage the airport to limit aircraft noise between the hours of 11 p.m. and 7 a.m.
- ***Policy b.4:*** Support limiting the number of fixed-base general aviation aircraft at the airport to the existing number.
- ***Policy b.5:*** Implement the following land use standards for properties that are exposed to noise levels in excess of 60 CNEL (Table 4, which is Table 8 in the City's General Plan).

Table 4
Noise Exposure Standards

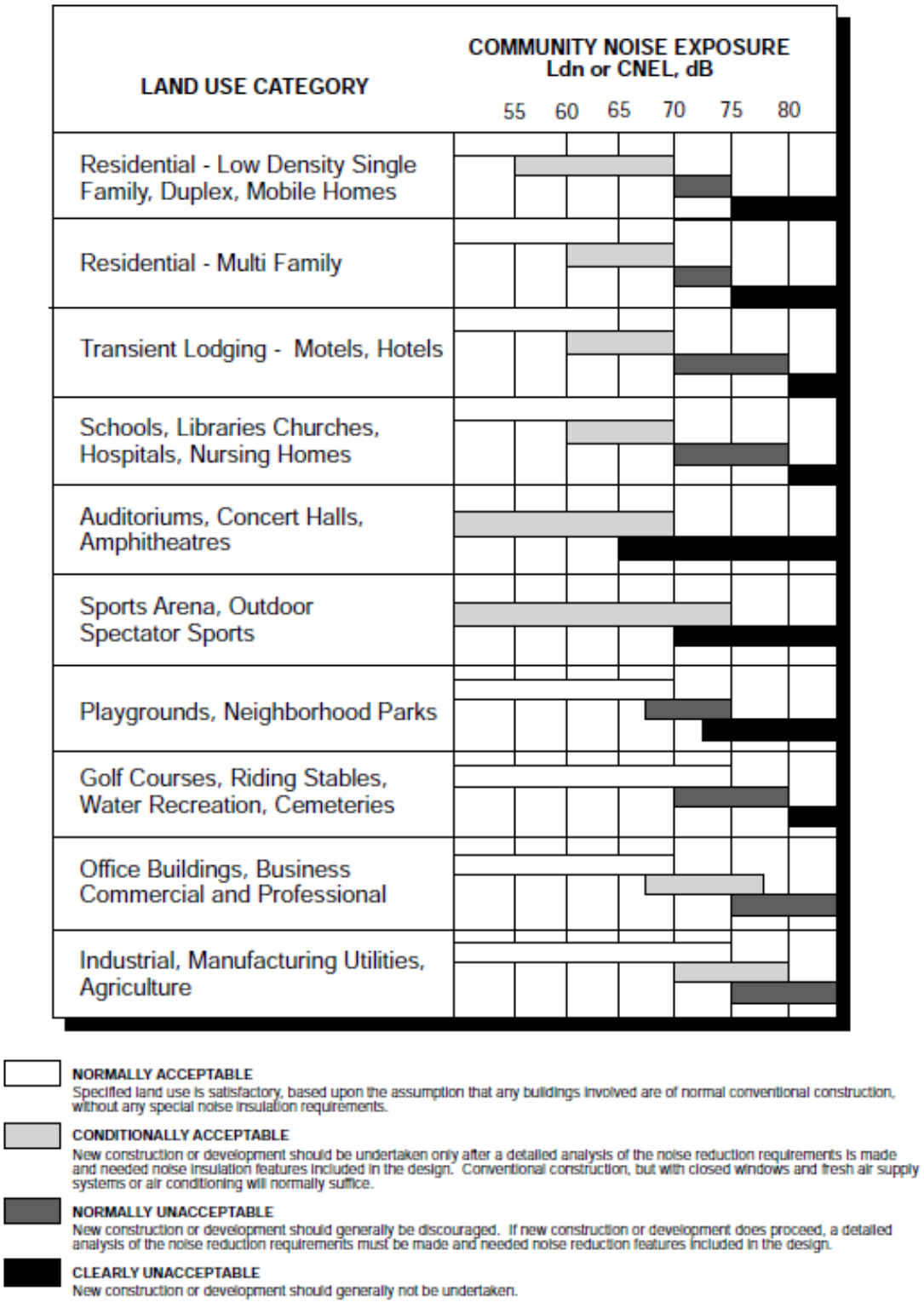
Noise Exposure	Land Use Standard
Above 75 CNEL	All land in this category should be under airport ownership and control.
CNEL 65-74	Soundproof (insulate) existing residences, schools, and other noise sensitive development to achieve interior noise levels of CNEL 45 or below. Require adequate sound insulation for all new residential and other noise sensitive development in areas exposed to noise levels from CNEL 65-69. Avoid areas exposed to noise levels above CNEL 70 for new residential or noise sensitive development unless abated.
CNEL 60-64	Require acoustical studies of proposed new residential and other noise sensitive development. Require sound insulation as necessary to achieve interior noise levels of CNEL 45 or below.

Goal c. Encourage quiet neighborhoods.

Goal d: Allow new construction only where existing or projected noise levels are acceptable or can be mitigated.

- ***Policy d.1:*** The City can require noise mitigations to reduce interior noise levels to an acceptable level. Table 5 (Table 9 in the City's General Plan) establishes the land use compatibility standards for new development.
- ***Policy d.2:*** Limit hours of noise generating construction activities. Include this requirement as a condition of project approval.

Table 5 - Land Use and Noise Compatibility Standards



With reference to the above land use and noise compatibility standards, off-site traffic noise exposure increases resulting from the Proposed Project along road segments located in the City would be subject to these exterior noise level criteria.

The City of Monterey Municipal Code Section 38-111 (A) identifies performance standards to be applied to all use classification in all zoning districts (City of Monterey 2017). Decibel levels are required to be compatible with neighboring uses, and no use shall create ambient noise levels which exceed the standards identified in Table 6. It should be noted that the Community Development Director may require an acoustic study for any proposed project that could have, or create, a noise exposure greater than that identified in the table. It should be noted the Airport is not within the City boundary, and therefore the noise standards identified in Table 6 would not be applicable to on-field operational noise of the airport facility.

Table 6
City of Monterey Maximum Noise Standards

Zone of Property Receiving Noise	Maximum Noise Level (dBA)
OS - Open Space District	60
R - Residential Districts	60
PS - Public and Semi-Public District	60
C - Commercial District	65
I - Industrial Districts	70
PD - Planned Development	Study Required

Notes: These noise standards shall be modified as follows to account for the effects of time and duration on the impact of noise levels: In R districts, the noise standard shall be 5 dB lower between 10:00 p.m. and 7:00 a.m.; noise that is produced for no more than a cumulative period of five minutes in any hour may exceed the standards above by 5 dB; and noise that is produced for no more than a cumulative period of one minute in any hour may exceed the standards above by 10 dB.
Source: City of Monterey 2017.

Section 38-112.2 of the City's Municipal Code (2017) limits the hours of construction for activities authorized by a building permit to the following: Monday through Friday between the hours of 7:00 a.m. and 7:00 p.m., on Saturday between 8:00 a.m. and 6:00 p.m., and on Sunday between 10:00 a.m. and 5:00 p.m. Pursuant to this section, a permit may be issued by the Zoning Administrator for requests to conduct construction activity outside listed hours for unique circumstances.

These regulations are presented primarily for informational purposes and to add context to the noise level analyses. However, noise from activities within the airport property (including construction) are not subject to these local regulations.

City of Del Rey Oaks

General Plan Noise Element

The General Plan Noise Element of Del Rey Oaks includes policy N-4 which clearly states impact level criteria:

> N-4 Noise/land use compatibility shall be considered impacted if exposed to noise levels on the exterior of a building that exceeds 65 dB, and on the interior of a building exceeds 45 dBA*
>
> N-6 The City will work with Monterey Peninsula Airport District to minimize impacts of proposed increase in airport operations and changes in different types of aircraft will not be supported by the City.

With reference to the above exterior noise exposure criterion, off-site traffic noise exposure increases resulting from the Proposed Project along road segments located in the City of Del Rey Oaks would be subject to these exterior noise level criteria.

Municipal Code

The City of Del Rey Oaks Municipal Code includes 8.20 Noise Control (City of Del Rey Oaks 1995). Relevant excerpts are reproduced below:

> 3. Excessive, unnecessary or unusually loud operation or use of hammers, hand powered saws, or similar implements; impact wrenches or similar equipment powered by compressed air, tolls or pieces of equipment powered by an internal combustion engine, such as but not limited to chain saws, blowers, lawn, mowers, electrically powered tools or equipment such as but not limited to saws drills, latches or routers before 7:00 a.m. or after 7:00 p.m. daily.
>
> C. Exemptions: Excessive, unnecessary or unusually loud noise as used in this chapter does not include noise or sound generated by the following:
>
> 1. Cries for emergency assistance and warning calls;
>
> 2. Radio, sirens, horns, and bells on police, fire and other emergency response vehicles;
>
> 3. Special events for which a permit has been obtained from the city are exempted; provided, there is compliance with all conditions which have been noted in writing on the permit. Excessive, unnecessary or unusually

loud noise produced as a result of noncompliance with any condition specified on the permit is not exempt from requirements of this chapter,

4. Activities on or in publicly owned property and facilities, or by public employees or their franchisees, while in the authorities discharge of their responsibilities, are exempt' provided that such activities have been authorized by the owner of such property or facilities or its agent or aby the employing authority;

These regulations are presented primarily for informational purposes and to add context to the noise level analyses. Noise from activities within the airport property (including construction) are not subject to these local regulations.

Vibration Standards

Numerous public and private organizations and governing bodies have provided guidelines to assist in the analysis of groundborne noise and vibration. To date, the City of Monterey has not adopted a threshold for ground-borne vibration impacts. The County of Monterey mentions a pre-construction vibration study in Policy S-7.8. Beyond this policy, the Department of Transportation (Caltrans) has adopted vibration standards to evaluate potential impacts related to construction activities. Information from Caltrans indicates that continuous vibrations with a peak particle velocity of approximately 0.1 inches/second begin to cause annoyance. For purposes of this analysis, the Caltrans threshold of 0.1 inches/second is used to evaluate the vibrational construction-related and operational impacts of the Proposed Project. For engineered concrete and masonry buildings, 0.3 inches/second PPV is a limit where building damage is possible. For non-engineered timber and masonry building, the building damage vibration limit is 0.2 inches/second PPV (Caltrans 2004). Hence, the use of the 0.1 inches/second vibration annoyance threshold is also meant to be very conservative in avoiding damage to existing structures in the Proposed Project vicinity.

3.3 Federal Standards

The EPA has set forth guidelines regarding noise levels identified as a requisite to protect public health and welfare related to noise in its document entitled "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety". This document provides 24-hour exposure limits to protect against hearing loss as 70 dB Leq (24), and also specifies indoor residential activity not be exposed to greater than L_{dn} of 45 dBA (EPA 1974).

In order to determine a significant increase in noise exposure from the traffic, the Federal Interagency Committee on Noise (FICON) has recommendations based on existing ambient sound levels without a project. The FICON studies assessed the annoyance effects of changes in ambient noise levels resulting from aircraft operations. The 2000 FICON findings provide some guidance as to the significance of changes in ambient noise levels due to transportation noise sources. The FICON recommendations are based on studies that relate aircraft and traffic noise levels to the percentage of persons highly annoyed by the noise. Annoyance is a measure of the general adverse reaction of people to noise that interferes with speech and conversation, sleep, or the desire for a tranquil environment.

The rationale for the FICON recommendations is that it is possible to consistently describe the annoyance of people exposed to transportation noise in terms of L_{dn}. The changes in noise exposure relative to existing noise levels are considered to be changes that are sufficient to cause annoyance and potentially to interfere with normal activities at sensitive land uses. Although the FICON recommendations were specifically developed to address aircraft noise impacts, they are also used for traffic noise analyses.

As shown in Table 7, an increase in noise from similar sources of 5 dBA or more would be noticeable where the ambient level is less than 60 dBA. Where the ambient level is between 60 and 65 dBA, an increase in noise of 3 dBA or more would be noticeable, and an increase of 1.5 dBA or more would be noticeable where the ambient noise level exceeds 65 dBA L_{dn}.

Table 7
Significance of Changes in Noise Exposure

Ambient Noise Level without Project	Increase Required for Significant Impact
< 60 dB	+5.0 dB or more
60-65 dB	+3.0 dB or more
> 65 dB	+1.5 dB or more

Source: (FICON, 2000)

Federal Transit Administration and Federal Railroad Administration Standards

Although the FTA standards are intended for federally funded mass transit projects, the impact assessment procedures and criteria included in the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (FTA 2006) are routinely used for projects evaluated by local jurisdictions. The FTA and Federal Railroad Administration (FRA) have published guidelines for assessing the impacts of ground-borne vibration associated with rail projects, which have been applied by other jurisdictions to other types of projects. The FTA construction vibration damage criterion for conventional structures is 0.2 inch/second peak particle velocity (PPV).

4 SIGNIFICANCE CRITERIA

Based on the criteria identified in Appendix G of the CEQA Guidelines, the Proposed Project would have a significant impact on noise if it would result in:

1. The exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
2. The exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
3. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
4. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels; or
6. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.

Significance Thresholds Applied to Project

Regarding Significance Threshold 1, a significant impact would occur if the Proposed Project would expose multifamily residences to traffic noise greater than 65 dBA CNEL. For single family homes, a significant impact would occur if traffic noise levels exceed 60 dBA CNEL. Up to 70 dBA CNEL traffic noise levels remain conditionally acceptable at residential areas, and conventional construction will normally suffice to achieve compliance with the interior standard of 45 dBA CNEL, with closed windows and fresh air supply systems or air conditioning. Proposed Project traffic noise levels greater than 70 dBA CNEL would produce a significant impact on residential areas in the City and County of Monterey. In the City of Del Rey Oaks, exterior levels of 65 dBA CNEL or greater as a result of existing plus Project-generated traffic would be considered a significant impact.

Regarding Significance Threshold 2, a significant impact would occur if the Proposed Project generates construction-related vibration that exceeds 0.1 inches/second PPV at existing residences in the Proposed Project vicinity. There are no operational concerns related to vibration or groundborne noise because no large impact or rotating equipment is planned for the site.

Regarding Significance Threshold 3, a significant noise impact would occur if Proposed Project-generated trip additions to the area roadway network were to cause a 3 dBA CNEL or greater increase over ambient traffic noise levels without the Proposed Project.

Regarding Significance Threshold 4, a significant temporary construction noise impact would occur if construction is occurring in the overnight period and produces noise levels exceeding 86 dBA L_{max} at 50 feet from job site activities from 9:00 p.m. to 6:00 a.m. (Caltrans 2011).

Regarding Significance Thresholds 5 and 6, this report specifically focuses on traffic noise impacts related to the Proposed Project.

5 METHODOLOGY

Ambient noise measurements were conducted to quantify the existing daytime noise environment at locations in the Proposed Project vicinity. Both short and long-term measurements were conducted. The short-term measurements were used to calibrate the traffic noise model. The long-term measurements were used to calculate existing CNEL in the Proposed Project vicinity.

The noise levels associated with roadway traffic were determined based on data obtained from the traffic impact report (Mott MacDonald 2018) for the Proposed Project. Datakustic's CadnaA sound modeling software was used to model the traffic noise that would result from the roadway traffic volumes identified in the Mott MacDonald report. CadnaA software includes traffic noise modeling algorithms based on the Federal Highway Administration's Traffic Noise Model (TNM), Version 2.5 (FHWA 2004) software. Field noise measurements and corresponding manual traffic counts were used to calibrate the model to ensure model assumptions and inputs accurately reflect existing conditions, and that the model will reliably calculate traffic noise levels from predicted future traffic volumes.

Noise levels resulting from the proposed construction activities have been calculated using the Federal Highway Administration (FHWA) Roadway Construction Noise Modeling software (FHWA 2008). Noise levels from proposed construction traffic routes are also assessed using CadnaA. Similar traffic noise results are presented.

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6 EXISTING CONDITIONS

The ambient noise in the Proposed Project vicinity is dominated by road traffic and airport operations. To address the existing noise environment of the Proposed Project vicinity, noise measurements were conducted in the vicinity of the Proposed Project site. Details and results of those measurements are discussed in the following section. Following the measurement discussion, a brief summary of existing traffic noise modeling results is included.

6.1 Ambient Noise Monitoring

General ambient and traffic noise measurements were conducted at the site to determine the existing noise levels in the Proposed Project vicinity. The measurements were conducted by Christopher Barnobi, of Dudek, using a Rion NL-62 sound level meter. This sound level meter meets the current American National Standards Institute standard for a Type 1 Precision sound level meter. The sound level meter was positioned on a tripod at a height of approximately five feet above the ground and fitted with a windscreen during measurements. The instrument was calibrated prior to measurements.

The short-term noise measurements were conducted on March 6 and 7, 2018. All traffic noise measurements were 15 minutes long. The measured average noise levels and the concurrent traffic volumes are presented in Table 8.

Table 8
Measured Noise Levels and Traffic Volumes

Site	Location: Noise Sources Observed	Start Time	L_{eq}[1] (dBA)	Cars	MT[2]	HT[3]	B/M[4]
ST1	Euclid Avenue: Traffic, Birds, Distant Kids Playing, Distant Traffic, 3 feet from the edge of the pavement	3/6/2018 15:29	56.8	30	2	0	0
ST2	Airport Road/ Euclid Avenue: Traffic, Birds, distant Industrial, rustling Leaves, 3 feet from the Edge Of Pavement	3/6/2018 15:54	61.5	60	10	0	1
ST3	Canyon Del Rey Boulevard: Traffic, Birds, distant Aircraft, 15 feet from the Edge Of Pavement	3/6/2018 16:22	69.7	249	11	0	2
ST4	Fremont: Traffic, 3 feet from the Edge Of Pavement	3/7/2018 15:45	70.8	386	13	0	4/2
ST5	Garden Road: Traffic, Distant Aircraft, 10 feet from the Edge Of Pavement	3/7/2018 16:20	66.5	91	11	2	0

Notes:
1 Equivalent Continuous Sound Level (Time-Average Sound Level)
2 Medium Trucks
3 Heavy Trucks
4 Buses or Motorcycles depending on location

Despite focusing on traffic noise, the measurements also included aircraft flyovers and other common noise sources. The measured sound levels were as high as 70.8 dBA L_{eq} at ST4. The lowest short-term sound level measured was 56.8 dBA L_{eq} at ST1.

The long-term measurements were completed using four SoftDB Model Piccolo sound level meters, which were field calibrated prior to each measurement. The Piccolo sound level meters meet the ANSI standard for a Type 2 general purpose sound level meter. The meters collected hourly measurements across a 24-hour period on Wednesday March 7, 2018, and Thursday March 8, 2018. The monitor at LT2 only collected data for part of the 24 hours, but the data appears to be consistent with the data from the other monitors. Results are shown in Table 9 and on Figure 2.

Table 9
Long-Term Measurement Results

Location	Daytime	Nighttime	Ldn	CNEL
	(dBA)			
LT1	51	45	53	53
LT2	48	43	51	52
LT3	51	45	53	53
LT4	57	48	58	58

CNEL and L_{dn} calculated from measured hourly average noise levels ranges from 51 to 58 dBA.

Appendix B includes an Hourly L_{eq} Time History Plot. All monitoring locations show hourly Leq levels below 45 dBA between the late night / early morning hours of midnight to about 5:00 a.m. LT4 located along Ramona Avenue generally has the highest measured hourly Leq.

6.2 Noise Modeling

The CadnaA noise modeling software was used to model noise generated by existing and future traffic along vicinity roadways. The road alignments, the number and types of vehicles on the roadway, vehicle speeds, receiver locations, and other data were input into the noise model. The data are based on the sound level measurements, vicinity GIS data, and Proposed Project plans.

Based on sound level measurement results and traffic counts, the traffic noise model was calibrated to within approximately 3 dB of the measured results. Traffic speeds were the primary parameter altered during the calibration process. A CadnaA default local road vehicle mix (i.e., percentage of cars, trucks, and motorcycles) was used for local roads.

SOURCE: NAIP 2016

DUDEK

0 750 1,500 Feet

FIGURE 2

Noise Measurement Locations

Monterey Airport

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6.3 Traffic Noise Modeling – Current Conditions

The existing CNEL along major roadways was modeled to establish existing traffic noise levels (Figure 3). The CNEL values in Table 10 were modeled in CadnaA for existing roadway traffic volumes based on Average Daily Traffic (ADT) for the existing traffic scenario and are therefore different than the dBA L_{eq} values measured for each roadway in the field (and presented in Table 8). The measured L_{eq} values reflect actual traffic occurring during the short-term measurement, which is used to calibrate the model; the 24-hour noise level (CNEL) associated with existing traffic on a daily basis is then calculated using the calibrated model. The modeled receiver locations (indicated by M#) were set at certain distances from the road to match the distance from the road to the closest residential building façade.

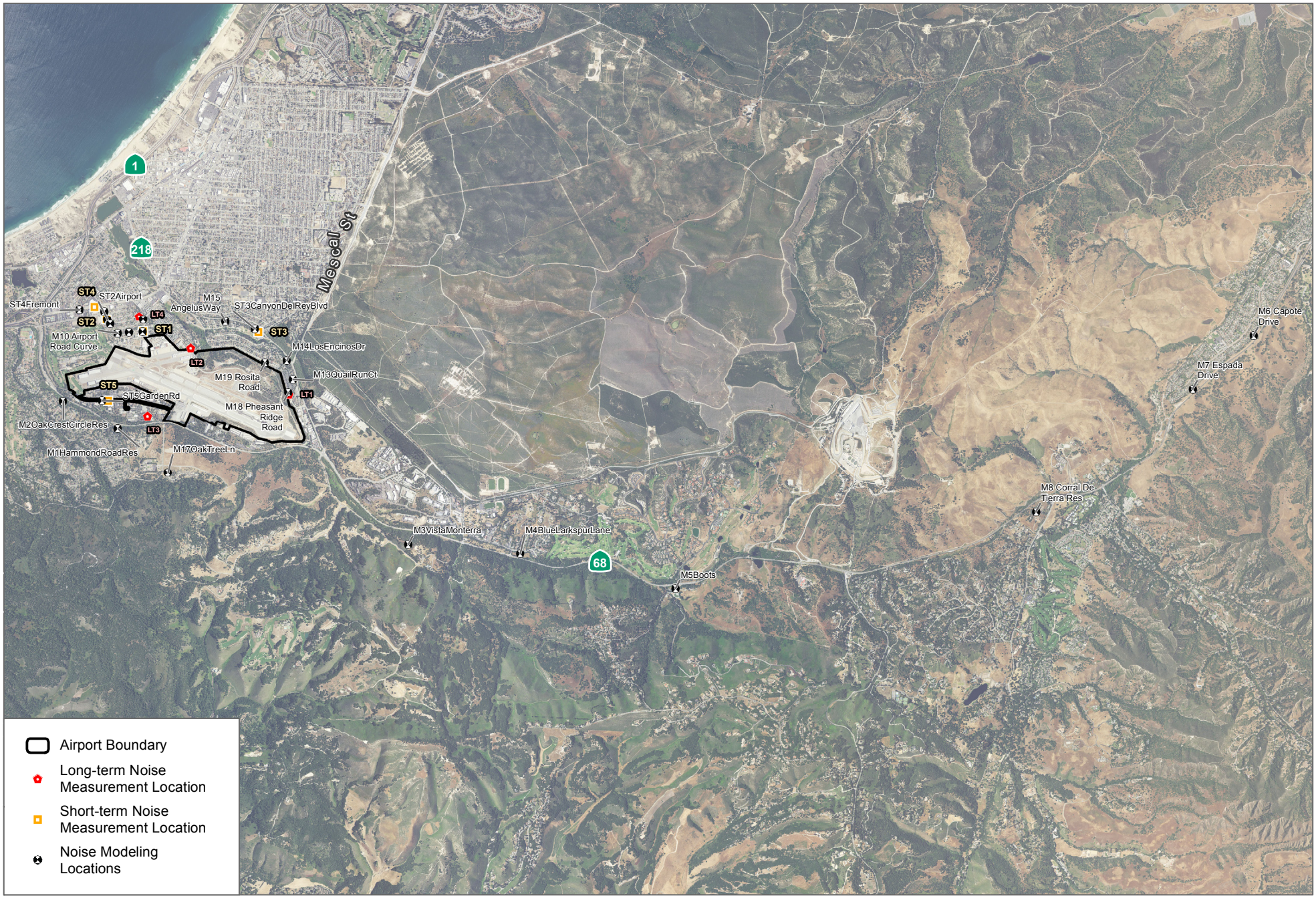
Table 10
Calculated Existing Community Noise Equivalent Level (CNEL)
Associated with Local Roadways

Figure Indicator	Noise Modeling Location	Calculated CNEL (dBA)
M1	Hammond Road Residence (County of Monterey)	53
M2	Oak Crest Circle Residence (County of Monterey)	59
M3	Vista Monterra (County of Monterey)	42
M4	Blue Larkspur Lane (County of Monterey)	57
M5	Boots (County of Monterey)	59
M6	Capote Drive (County of Monterey)	62
M7	Espada Drive (County of Monterey)	53
M8	Corral De Tierra Residence (County of Monterey)	47
M9	Airport Rd Residence (City of Monterey)	57
M10	Airport Road Curve (City of Monterey)	53
M11	Lerwick Drive (City of Monterey)	50
M12	Airport Near Euclid (City of Monterey)	49
M13	Quail Run Court (City of Del Rey Oaks)	54
M14	Los Encinos Drive (City of Del Rey Oaks)	57
M15	Angelus Way (City of Del Rey Oaks)	59
M16	Ramona Avenue (City of Monterey)	49
M17	Oak Tree Lane (County of Monterey)	48
M18	Pheasant Ridge Road (City of Del Rey Oaks)	47
M19	Rosita Road (City of Del Rey Oaks)	42

Based upon the calculated/modeled CNEL values presented in Table 10, one existing residential lot (M6) has existing calculated traffic noise exposure greater than the normally acceptable range (of 60 dBA CNEL).

6.4 Airport Noise

Noise impacts from aircraft operations related to the Airport are assessed in a separate appendix to the EIR.



SOURCE: NAIP 2016

DUDEK

0 2,600 5,200 Feet

FIGURE 3

Noise Modeling Locations

Monterey Airport

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7 PROPOSED PROJECT IMPACT ANALYSIS AND MITIGATION

Under the Proposed Project, the Project site will primarily be affected by aircraft and traffic noise as well as emergency vehicle noise. The Proposed Project will also generate traffic trips, resulting in potential increases in traffic noise along vicinity roadways. Finally, construction of the Proposed Project would generate temporary (short-term) construction noise, which could affect noise-sensitive uses in the Proposed Project vicinity. Each of these potential impacts is discussed below.

7.1 Traffic Noise

Traffic data was taken from research conducted for the *Monterey Regional Airport Environmental Impact Report Traffic Impact Analysis* (TIA) (Mott MacDonald 2018) regarding average daily traffic (ADT) volumes existing on the vicinity roadway network, as well as for traffic forecasts addressing a number of future roadway traffic scenarios.

ADT volumes for segments not directly analyzed in the TIA were derived from intersection volumes immediately adjacent to analyzed segments. Specifically, ADT was derived utilizing an assumption that ADT corresponds to 10% of traffic that occurs during the PM peak hour period and adjusted to create a 24-hour segment count. Proposed Project traffic was included based on the specified project trip generation and trip distribution specified within the TIA. Table 11 shows the ADT numbers for the analyzed traffic scenarios in the traffic impact analysis.

Table 11
Average Daily Traffic Scenarios

Traffic Study Roadway Segment	Existing Conditions	Existing Plus Proposed Project Short-Term	Existing Plus Alternative 1 Project Short-Term	Cumulative Conditions (includes projected growth in enplanements)	Cumulative Plus Proposed Project Long-Term	Cumulative Plus Alternative 1 Project Long-Term
Highway 68, from Highway 1 to Begin/End Freeway	79,000	79,006	79,006	86,900	89,326	89,326
Highway 68, from Begin/End Freeway to Josselyn Canyon Road	18,800	18,776	18,790	20,000	22,070	22,093
Highway 68, from Josselyn Canyon Road to Olmsted Road	19,600	19,576	19,590	20,800	22,870	24,963
Highway 68, from Olmsted Road to Highway 218	22,100	22,062	22,086	23,800	27,173	27,170

Table 11
Average Daily Traffic Scenarios

Traffic Study Roadway Segment	Existing Conditions	Existing Plus Proposed Project Short-Term	Existing Plus Alternative 1 Project Short-Term	Cumulative Conditions (includes projected growth in enplanements)	Cumulative Plus Proposed Project Long-Term	Cumulative Plus Alternative 1 Project Long-Term
Highway 68, from Highway 218 to Ragsdale Drive	26,400	26,406	26,394	28,100	32,375	32,376
Highway 68, from Ragsdale Drive to Laureles Grade						
SR 68, from Ragsdale Drive to York Road	19,000	19,006	18,994	20,500	24,543	24,552
SR 68, from York Road to Boots Road – Pasadera Drive	21,800	21,806	21,794	23,200	27,139	27,148
SR 68, from Boots Road – Pasadera Drive to Laureles Grade	19,500	19,506	19,494	23,100	27,039	27,048
Highway 68, from Laureles Grade to Corral De Tierra Road	21,000	21,006	20,994	21,500	25,439	25,448
Highway 68, from Corral De Tierra Road to Torero Drive						
SR 68, from Corral De Tierra Road to San Benancio Road	22,800	22,806	22,794	24,900	28,839	28,848
SR 68, from San Benancio Road to Torero Drive	24,000	24,006	23,994	26,400	30,339	30,348
Highway 68, from Torero Drive to Begin/End Freeway	23,600	23,606	23,594	25,900	29,839	29,848
Airport Road North of Fairground Road	4,200	4,272	4,190	6,100	6,090	6,090
Airport Road South of Fairground Road	4,200	4,272	4,190	6,100	6,090	6,090
Airport Rd, west of Euclid						
Airport Road West of Mitcher Street	2,400	2,472	2,390	2,800	2,790	2,790
Airport Road West of Euclid Avenue	2,400	2,472	2,390	2,800	2,790	2,790
Del Rey Gardens Drive, west of Hwy 218	1,000	1,000	1,102	1,200	8,113	8,133
North Side Road, west of Del Rey Gardens Drive, New Road	0	0	102	0	6,913	6,933

Table 11
Average Daily Traffic Scenarios

Traffic Study Roadway Segment	Existing Conditions	Existing Plus Proposed Project Short-Term	Existing Plus Alternative 1 Project Short-Term	Cumulative Conditions (includes projected growth in enplanements)	Cumulative Plus Proposed Project Long-Term	Cumulative Plus Alternative 1 Project Long-Term
Ramona Avenue South of Littleness Avenue	1,000	1,009	985	1,400	1,409	1,400
Olmsted Road South of Garden Road	2,000	1,942	1,924	3,000	6,717	6,794

Notes: ADT = average daily traffic

The ADT values illustrated in Table 11 were used with the calibrated CadnaA traffic noise model to calculate existing and future noise levels along the identified roadway segments without and with the Proposed Project, in order to determine worst-case traffic noise exposure levels for existing noise-sensitive land uses.

7.1.1 Off-Site Noise Impacts Associated with Proposed Project Traffic

The Proposed Project would contribute vehicle trips onto the regional roadway network, particularly onto the major roadways in close proximity to the Proposed Project. To evaluate the change in noise level on area roadways from Proposed Project trip contributions, traffic noise modeling was performed. Modeling of traffic noise focused on existing residential locations along vicinity roads, using the following methodology. First, the distances from the roadway to the closest existing residences located along each roadway segment of concern were determined from aerial photographs. Some of these existing residential areas include existing landscaping or small fences along the roadway. Next, current traffic volume data (on an average daily trip basis) for each segment was entered into the model. The same evaluation was then performed using the "Existing Plus Project" traffic volumes. The results are presented in Table 12.

Table 12
Short-term Proposed Project Contribution to Off-Site Traffic Noise
(Off-Site Traffic Noise Level Increase)

Roadway (segment)	CNEL (dB)		
	Existing	*Existing + Project*	*dB Change*
County of Monterey			
M1 Hammond Road Residence	53	53	0
M2 Oak Crest Circle Residence	59	59	0
M3 Vista Monterra	42	42	0
M4 Blue Larkspur Lane	57	57	0
M5 Boots	59	59	0
M6 Capote Drive	62	62	0
M7 Espada Drive	53	53	0
M8 Corral De Tierra Residence	47	47	0
M17 Oak Tree Lane	48	48	0.3
City of Monterey			
M9 Airport Rd Residence	57	57	0.1
M10 Airport Road Curve	53	53	0.3
M11 Lerwick Drive,	50	50	0.1
M12 Airport Near Euclid	49	50	0.9
M16 Ramona Avenue	49	49	0
City of Del Rey Oaks			
M13 Quail Run Court	54	54	0
M14 Los Encinos Drive	57	57	0.1
M15 Angelus Way	59	59	0
M18 Pheasant Ridge Road	47	47	0.7
M19 Rosita Road	42	42	0

Based upon existing roadway traffic volumes compared to "existing plus project" roadway traffic volumes, the addition of Proposed Project traffic to the roadway network would result in an increase of less than 1 dBA CNEL at existing residences along the examined roadway segments (which is below the discernible level of change for the average human ear as discussed in the Human Response to Changes in Noise Levels section). Thus, a less than significant impact is expected for Proposed Project-related off-site traffic noise increases affecting existing residences in the vicinity.

None of the modeled off-site receptors would experience noise traffic levels that increase from below 65 dBA CNEL to greater than 65 dBA CNEL, comparing the Existing to the Existing plus Project traffic scenarios. Since the most-restrictive limit of acceptable exterior noise exposure for

residences in the vicinity of the Proposed Project is 65 dBA CNEL (applicable in Del Rey Oaks), Proposed Project-related traffic noise increases would not cause traffic noise exposure at existing residences to exceed an established standard. Proposed Project-specific traffic noise impacts would therefore be less than significant.

A new "north side" road would be constructed as part of the Proposed Project. This road has the potential to impact residences near the proposed road alignment. M18 and M19 represent residential locations where the predicted exterior noise exposure level from the new "north side" road would be the greatest. The noise level increases due to Proposed Project-related traffic at these locations would be less than 1 dB. Thus, a less than significant impact is expected for Proposed Project-related off-site traffic noise increases affecting existing residences associated with the "north side" road.

7.1.2 Cumulative Noise Impacts Associated with Proposed Project Traffic

The Proposed Project's contributions to long-term traffic noise levels on the roadway network are considered in this section. Table 13 shows the modeling results for the Cumulative Condition (including projected growth in enplanements) and Cumulative Plus Project Long-Term traffic scenarios.

Table 13
Long-term Proposed Project Contribution to Cumulative Off-Site Traffic Noise (Off-Site Traffic Noise Level Increase)

Roadway (segment)	CNEL (dB)			
	Existing	*Cumulative (including projected growth in enplanements)*	*Cumulative + Project, Long-Term*	*dB Change from Existing to Cumulative + Project*
County of Monterey				
M1 Hammond Road Residence, City of Monterey	53	53	54	0.6
M2 Oak Crest Circle Residence	59	59	60	0.6
M3 Vista Monterra	42	42	43	0.7
M4 Blue Larkspur Lane	57	57	58	0.9
M5 Boots	59	59	60	1.1
M6 Capote Drive, City of Del Rey Oaks	62	63	63	1
M7 Espada Drive	53	53	54	1
M8 Corral De Tierra Residence	47	48	48	1
M17 Oak Tree Lane	48	49	49	1.2
City of Monterey				
M9 Airport Rd Residence	57	58	58	1.6
M10 Airport Road Curve	53	54	54	1.7

Table 13
Long-term Proposed Project Contribution to Cumulative Off-Site Traffic Noise
(Off-Site Traffic Noise Level Increase)

Roadway (segment)	CNEL (dB)			
	Existing	*Cumulative (including projected growth in enplanements)*	*Cumulative + Project, Long-Term*	*dB Change from Existing to Cumulative + Project*
M11 Lerwick Drive,	50	51	51	1.6
M12 Airport Near Euclid	49	51	51	2.2
M16 Ramona Avenue	49	51	51	1.5
City of Del Rey Oaks				
M13 Quail Run Court	54	55	5	1.4
M14 Los Encinos Drive	57	58	58	1.5
M15 Angelus Way	59	60	61	1.4
M18 Pheasant Ridge Road	47	48	49	2.1
M19 Rosita Road	46	46	47	0.1

Comparing Existing Condition and Cumulative Plus Project scenarios, the Proposed Project's contribution to overall traffic on the vicinity roadways is expected to be less than 3 dB CNEL. This change in noise levels is less than the threshold of perception outside of a carefully controlled acoustic laboratory environment. With a less than perceptible increase in Cumulative traffic noise levels for vicinity residences, the Proposed Project would not have a substantial contribution to a cumulatively significant noise impact.

None of the modeled off-site receptors would experience noise traffic levels that increase from below 65 dBA CNEL to greater than 65 dBA CNEL, comparing the Existing Condition to the Cumulative with Project traffic scenarios. Since the most-restrictive limit of acceptable exterior noise exposure for residences in the vicinity of the Proposed Project is 65 dBA CNEL (applicable in Del Rey Oaks), Proposed Project-related traffic noise increases would not cause traffic noise exposure at existing residences to exceed an established standard.

7.2 Construction Noise

7.2.1 Construction Equipment Noise Levels

Construction noise is a temporary phenomenon. Construction noise levels will vary from hour to hour and day to day, depending on the equipment in use, the operations being performed, and the distance between the source and receptor.

Construction is expected to include demolition, site preparation, grading, paving, building construction, and architectural coating. Construction equipment with substantially higher noise-generation characteristics (such as pile drivers, rock drills, blasting equipment) would not be necessary.

The Federal Highway Administration (FHWA) has developed the 2006 (RCNM) software, which can be used to evaluate construction noise from any major construction proposal. RCNM contains a large database of construction equipment, including noise generation level and load factor (percentage of time each piece of equipment is active on a typical construction site). Dudek used RCNM to assess construction noise impacts of the Proposed Project.

Construction noise is difficult to quantify because of the many variables involved, including the specific equipment types, size of equipment used, percentage of time in use, condition of each piece of equipment, and number of pieces of equipment that will actually operate on site. The construction vehicle assemblage would include standard equipment such as dozers, tractors, loaders, backhoes, excavators, graders, scrapers, trenchers, lifts, paving equipment, rollers, compressors, and miscellaneous trucks. Specified and measured noise level ranges for various pieces of construction equipment at a distance of 50 feet are presented in Table 14. The noise values presented are used as reference noise data for respective equipment in RCNM. The construction equipment is expected to be spread out, with some equipment occasionally operating along the perimeter of the site while most of the time the equipment is expected to be operating near the major improvement areas.

Table 14
Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Use Factor (%)	Measured L_{max} @50ft (dBA, slow)
All Other Equipment >5 HP (spec)	50	85
Auger Drill Rig	20	84
Backhoe	40	78
Compactor (ground)	20	83
Compressor (air)	40	78
Concrete Saw	20	90
Crane	16	81
Dozer	40	82
Dump Truck	40	76
Excavator	40	81
Flat Bed Truck	40	74
Front End Loader	40	79
Generator	50	81
Generator (<25KVA)	50	73
Gradall	40	83

Table 14
Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Use Factor (%)	Measured L_{max} @50ft (dBA, slow)
Grader *(spec)	40	85
Man Lift	20	75
Paver	50	77
Pickup Truck	40	75
Pneumatic Tools	50	85
Pumps	50	81
Roller	20	80
Scraper	40	84
Tractor *(spec)	40	84
Warning Horn	5	83
Welder / Torch	40	74

* (spec) indicates that the L_{max} is based on common specifications for this equipment, not measured data.
Source: DOT 2006.

7.2.2 Construction Schedule

Table 15 shows the proposed construction activities with phase years and location (North side or South side of the Airport).

Table 15
Short-term Proposed Project Construction Activities

Construction Phase	Construction Activity on North or South Side of Airport	Years per Phase	Description of Construction Activity
Phase 1 (2019-2021)	North	3	General Aviation (GA) Prep/Install hangars; temporary Airport Rescue & Firefighting (ARFF) building
Phase 2 (2022-2026)	South	5	Demo South GA & ARFF; grade and construct terminal, apron, roads, rental car lot; construct terminal parking garage. Repair haul road.
Phase 3 (2027)	South	1	Demolish old terminal; construct new ARFF
Phase 4 (2028)	South	1	Restripe TW A & move hold lines; Construct surface lot/garage along Fred Kane Dr.
Phase 5 (2029)	North	1	Construct "north side" road
Phase 5 (2029)	South		Construct Highway 68 frontage loop road
Total		**11**	

7.2.3 Construction Traffic Noise

Exhibit 2 shows proposed construction vehicle haul routes. Construction vehicles are proposed to travel along Airport Road through the Casanova Oak Knoll (CONA) neighborhood to reach Fremont Street until a future "north side" road is constructed.

Exhibit 2. Proposed Project Construction Vehicle Routes

Table 16
Short-term Proposed Project Construction Trips as a Percentage of Existing Average Daily Traffic (ADT)

Construction Phase	Total Daily Construction Trips (PCE)	Construction Activity Area	Proposed Project Haul Routes	Existing ADT	Construction Trips % of ADT
1	26	North	Airport Rd	2,400	1.1%
1	26	North	Fremont St	19,000	0.1%
2	40	South	Olmsted Rd	5,800	0.7%
2	40	South	Highway 68	18,800	0.2%
3	12	South	Olmsted Rd	5,800	0.2%
3	12	South	Highway 68	18,800	0.1%
4	74	South	Olmsted Rd	5,800	1.3%
4	74	South	Highway 68	18,800	0.4%
5	34	North	Airport Rd	2,400	1.4%
5	34	North	Fremont St	19,000	0.2%
5	24	South	Olmsted Rd	5,800	0.4%
5	24	South	Highway 68	18,800	0.1%

Notes:

1. Total Daily Construction Trips (PCE) includes trips by construction workers and truck trips, with truck trips converted to Passenger Car Equivalents (PCE).
2. Construction Activity Area refers to construction activities on the north and south sides of the Airport.
3. Haul routes include roads closest to the project site that would be most affected by construction vehicle trips. Construction vehicles trips would disperse onto other roads as they move farther from the project site, reducing the potential for construction traffic impacts.
4. The haul routes and construction phases where construction-related trips would represent more than 1% of existing daily traffic are shaded in red.

As shown in Table 16, construction traffic is expected to increase the average daily traffic by less than 2% in all construction phases. To increase traffic noise levels by 3 dB, a doubling of existing daily traffic is required. With less than a 2% increase in average daily traffic due to construction traffic, the traffic noise increase due to the construction traffic is expected to be less than 3 dB. The expected traffic noise increase is therefore below the discernible level of change for the average human ear as discussed in the Human Response to Changes in Noise Levels section (Caltrans 2013). Thus, a less than significant impact is expected for Proposed Project-related off-site construction traffic noise increases affecting existing residences in the vicinity.

7.2.4 Airport (On-Site) Construction Noise

Phase 1 of construction of the Proposed Project is expected to commence in 2019 and then continue over a 3-year period, with expected completion in 2021. This work is specific to the north side of the Airport. Phase 1 includes preparing and installing general aviation hangers. Phase 1 would also include the construction of a temporary Airport Rescue and Firefighting (ARFF) building. The closest residential receptors are located on Rosita Road, 650 feet from the construction activities. Typical construction distances for most sensitive receptors would be at least 1,000 feet during construction activities.

There will be a period where Phases 2, 3, and 4 occur on the south side of the Airport from 2022 to 2028. Construction operations on the south side of the Airport will be 2,000 to 3,000 feet further away from residential noise sensitive receptors located on the north side of the airport. This additional distance dramatically reduces the potential for construction noise impacts such that the impacts associated with the south side construction projects are considered less than significant for residential receivers on the north side of the Airport.

On the south side of the airport, two churches, a hotel, and some lower density residential buildings exist. The Shoreline Community Church and Believers Church International are located on Garden Road. The churches would be located about 1,000 feet west of Phase 2 construction areas and 750 feet from Phase 3 and 4 construction areas. The hotel would be about 250 feet from frontage road construction and over 300 feet from other construction activities. The closest residence (south of SR 68 and west of Olmstead Road) would be about 650 feet from frontage road construction and about 1,000 feet from main areas of construction. Other residences exist in this area, but are located further from proposed construction areas.

Phase 2 would include earth movement from the south side of the Airport to the north side disposal areas. Vehicles would be using the service road during the day and may travel directly across the runway during late night construction. For this phase, operations on the north side of the Airport are expected to be short in duration and intermittent since earth will be unloaded on the north side.

In 2029, Phase 5 would return to the North side of the Airport. During this phase, North Side Road will be constructed. Also during this phase, on the south side of the Airport, a Highway 68 frontage road would be constructed. The frontage road construction efforts would be located about 1,000 feet from the churches on Garden Road and about 2,000 feet east of Calvary Chapel.

Table 17 shows the expected equipment use by phase for the construction phases of the Proposed Project.

Table 17
Short-term Typical Construction Equipment for Construction

Construction Phase Name	Equipment	Number of pieces of Equipment
Phase 1: Building Construction	Cranes	1
	Forklifts	3
	Generator Sets	1
	Tractors/Loaders/Backhoes	3
	Trenchers	1
	Welders	1
Phase 1: Architectural Coating	Air Compressors	1
Phase 2: Transporting Earth to North Side for Disposal	Dump Truck	11
Phase 2: Demolition, Grading, and Construction on South Side of Airport	Grader	1
	Dozer	1
	Scraper	1
	Front End Loader	2
	Generator Sets	1
	Tractors/Backhoes	5
Phase 3: Demolition and Construction on South Side of Airport	Grader	1
	Dozer	1
	Scraper	2
	Backhoes	2
	Forklifts	3
	Generator Sets	1
Phase 4: Construction of Surface Lot/Garage on South Side of Airport	Pavers	2
	Paving Equipment	2
	Rollers	2
Phase 5: Highway 68 Frontage Road on South Side of Airport	Excavator	2
	Grader	1
	Dozer	1
	Scraper	2
	Backhoes	2
Phase 5: Grading for Circulation Improvements (North Side)	Excavator	2
	Grader	1
	Dozer	1
	Scraper	2
	Backhoes	2
Phase 5: Paving for Circulation Improvements (North Side)	Pavers	2
	Paving Equipment	2
	Rollers	2

The magnitude of the impact would depend on the type of construction activity, equipment, duration of the construction phase, distance between the noise source and receiver, and any intervening structures. The typical operating cycles for construction equipment involve one or two minutes of full power operation followed by three or four minutes at lower power settings. Noise from construction equipment generally exhibits point source acoustical characteristics. A point source sound is attenuated (is reduced) at a rate of 6 decibels per doubling of distance from the source for "hard site" conditions and at 7.5 decibels per doubling of distance for "soft site" conditions. A hard site is characterized by ground surface covered by pavement, or hard compacted soils; a soft site is characterized by ground covered with vegetation, or loose soil with a rough surface (such as tilled land). These rules apply to the propagation of sound waves with no obstacles between source and receivers, such as topography (ridges or berms) or structures (FTA 2006).

Table 18 shows the calculated noise levels at nearby noise-sensitive receptors during construction phases for the Proposed Project. The results are from the RCNM software and based on construction equipment defaults assumed for the Proposed Project based on the phase description. The noise levels shown in Table 18 take into account operation of multiple pieces of construction equipment simultaneously for the L_{eq} results. More details from the RCNM analysis can be found in Appendix C. These noise levels are based on surveys conducted by the United States Environmental Protection Agency in 1971. In the time since 1971, regulations have been enforced to improve noise generated by certain types of construction equipment to meet worker noise exposure standards. Also because of stringent air quality emissions standards, newer, cleaner, and quieter heavy equipment is used on most construction projects in California. Thus, construction phase noise levels indicated in Table 18 represent a conservative estimate of anticipated equipment noise. L_{max} levels are focused on the single piece of equipment with the highest L_{max}. These L_{max} results do not account for multiple pieces of equipment producing maximum levels at the same time, since this is an unlikely occurrence. Because construction phases typically include multiple pieces of equipment operating simultaneously, the calculated L_{eq} levels can be higher than the L_{max} for an individual piece of equipment.

Table 18
RCNM Results Summary

Case Description	Noise Sensitive Receptor Levels		
	Lmax (dBA)	*Leq (dBA)*	*Exceeds 86 dBA L_{max} at 50 feet*
Phase 1: Building Construction 650' from Rosita Rd. Residences	58	61	No
Phase 1: Architectural Coating 650' from Rosita Rd. Residences	55	51	No
Phase 2: Earth Movement On North	64	71	No

Table 18
RCNM Results Summary

Case Description	Noise Sensitive Receptor Levels		
	Lmax (dBA)	*Leq (dBA)*	*Exceeds 86 dBA L_{max} at 50 feet*
Side of Airport 200' from Rosita Rd. Residences			
Phase 2: Demolition, Grading, and Construction on South Side of Airport at Hotel 300'	69	74	No
Phase 2: Demolition, Grading, and Construction on South Side of Airport at Church 1,000'	59	64	No
Phase 3: Demolition and Construction on South Side of Airport at Church 300'	69	73	No
Phase 3: Demolition and Construction on South Side of Airport at Church 750'	62	65	No
Phase 4: Construction of Surface Lot/Garage on South Side of Airport at Church 300'	74	72	No
Phase 4: Construction of Surface Lot/Garage on South Side of Airport at Church 750'	66	64	No
Phase 5: Highway 68 Frontage Road at Hotel 250'	71	73	No
Phase 5: Highway 68 Frontage Road at Church 1000'	59	61	No
Phase 5: Highway 68 Frontage Road at Church 2000'	53	55	No

Case Description	Multifamily Residences Del Rey Gardens Drive				
	Typical 1000'		*Worst Cast 200'*		*Exceeds 86 dBA L_{max} at 50 feet*
	Lmax (dBA)	*Leq (dBA)*	*Lmax (dBA)*	*Leq (dBA)*	
Phase 5: Grading North Side Road	59	61	73	74	No
Phase 5: Paving North Side Road	59	60	73	74	No

North Side Construction Noise Impacts. For Phase 1, the shortest distance between the closest construction activity and neighboring residences would be approximately 650 feet. This distance was used to evaluate construction noise levels at the residences during Phase 1. During Phase 5 (Construction of North Side Road), both worst-case and typical distances are used. The worst-case condition at 200 feet represents when road construction will be closest to the multifamily residential buildings off of Del Rey Gardens Drive. Typical conditions represent noise levels if

construction were being conducted near the center of the Proposed Project work area (i.e., 1,000 feet from the residences).

For Phase 2, the assumed distance from the closest disposal area to the nearest noise sensitive receptors is 200 feet. Since most work during this phase is expected to occur on the south side of the Airport, the L_{eq} is expected to be lower than calculated the 71 dBA for residences on the north side of the Airport as shown in Table 18. It should be noted that the calculated L_{max} of 64 dBA is as much as 20 dB greater than the hourly L_{eq} during the nighttime hours as shown in Appendix B.

As the table shows, the highest noise levels for northern residential receptors are expected to occur during the North Side Road Construction efforts when they are closest to the multifamily residential area near Del Rey Gardens Drive. Construction-related noise levels could reach up to 74 dBA L_{eq} at these multifamily residential areas. While the expected construction L_{eq} would increase the ambient noise levels in the vicinity, the noise levels expected at these residences are not greater than a diesel truck driving at 50 miles per hour about 50 feet away (Caltrans 2013).

South Side Construction Noise Impacts. Phases 2, 3, 4, and 5 occur on the south side of the Airport where the closest noise sensitive receptors include a hotel, churches, and residences. Construction noise levels at the closest noise sensitive receptor, the hotel, are expected to be up to 74 dBA L_{eq}. Calculated construction noise levels at the churches would be up to 65 dBA L_{eq}, which is less than a lawn mower at 100 feet (Caltrans 2013).

The construction activities would be temporary and would conclude with the completion of the Proposed Project. However, some construction activities are expected to occur during nighttime hours when residents are especially sensitive to noise. The final column in the Table 18 indicates if construction equipment anticipated to be used in a specific construction phase would exceed the Caltrans' guideline of no more than 86 dB L_{max} at 50 feet from the source (refer also to Table 14). For example, a concrete saw has an L_{max} of 90 dBA at 50 feet, but is not specifically expected to be used as a primary piece of equipment for any phases. (However, a concrete saw may be necessary for short-term use when concrete removal is conducted, primarily during Phase 2 on the south side). The other pieces of equipment have L_{max} below 86 dBA at 50 feet.

The levels of construction noise anticipated to occur during the Proposed Project are allowed during the daytime hours by both the City of Del Rey Oaks and the City of Monterey. However, during Phase 2, some on-airport construction activities are expected to occur during nighttime hours due to a potential need to close the runway during construction. With at least some of the expected construction activity occurring during nighttime hours, construction operations are considered a Potentially Significant temporary noise impact in the short term.

7.3 Construction Vibration Impact to Off-Site Residences

The heavier pieces of construction equipment used at this site would include dozers, graders, and pavers. Ground-borne vibration information related to construction activities has been collected by the California Department of Transportation (Caltrans) (Caltrans 2004). Based on published vibration data, the anticipated construction equipment would generate a peak particle velocity of approximately 0.09 inch/second or less at a distance of 25 feet (FTA 2006).

Information from Caltrans indicates that continuous vibrations with a peak particle velocity of approximately 0.1 inch/second begin to annoy people. Ground-borne vibration is typically attenuated over short distances. The closest existing residences are located over 200 feet from the areas of major construction and over 1,000 feet from the center of the Proposed Project. At these distances, the peak particle velocity from construction would be below 0.1 inch/second and would also be below the threshold of perceptibility. Therefore, impacts related to vibration from construction activities would **be less than significant.**

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8 MITIGATION MEASURES

Traffic noise increases due to the Proposed Project are expected to be **less than significant**, and thus no mitigation is required.

Short-term construction noise impacts are considered **potentially significant** for the existing nearby residences, due to the potential for certain construction activities to be carried out overnight. Consequently, the following mitigation measures are required to address potentially significant night-time construction noise.

Mitigation Measure MM-NOI-1: Nighttime noise-generating construction activities have the potential to create significant impacts. To address these impacts the following mitigation measures are provided:

1. Construction truck hauling operations may proceed through the CONA neighborhood only in the time period from 7 a.m. to 7 p.m. Outside these hours, construction hauling activity shall use a route that does not proceed through the CONA neighborhood.
2. For construction activity occurring within approximately 500 feet of residences, portable noise barriers shall be installed near nighttime construction areas. The locations of the barriers should break the line-of-sight from the construction area(s) to any residential locations visible from the construction area. This may include erection of temporary plywood barriers to create a break in the line-of-sight, or erection of a tent employing sound blanket walls around the stationary noise source(s).
3. Avoid the unnecessary idling of equipment and stage construction equipment as far as reasonable from residences.
4. Notify adjacent uses of the construction schedule.
5. All noise-producing project equipment and vehicles using internal combustion engines shall be equipped with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment.
6. The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only.

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9 ALTERNATIVE IMPACT ANALYSIS AND MITIGATION

Comparison of Project Alternatives

There are two alternatives being considered in detail in the EIR: the Proposed Project and Alternative 1. The major difference between the two projects is the location of the permanent ARFF building and the timing of the construction of the "north side" road. Under the Proposed Project, the existing ARFF building would be permanently relocated on the south side of the Airport in the general location of the existing commercial terminal building. Since there would be up to a 6- or 7-year gap between when the existing ARFF building would be demolished and the permanent ARFF building would be constructed, a temporary ARFF building would be necessary. This temporary ARFF building would be installed on the north side GA apron. An on-airport ARFF service road would be constructed to maintain acceptable on-airport emergency response times. However, for off-airport calls, the ARFF emergency vehicles would use existing Airport Road west through the CONA neighborhood since the new "north side" road would not yet be constructed. This would create longer off-airport emergency response times than currently occur.

Under Alternative 1, the existing ARFF building would be permanently relocated to the north GA apron at the same time as the southeast GA hangars and fuel tank are relocated to the north side. The new "north side" road would be constructed, as well as an on-airport ARFF service road, to provide acceptable on- and off-airport emergency response times.

Table 19 compares the phasing of the Safety Enhancement Project between the two alternatives:

Table 19
Comparison of Phasing for the Safety Enhancement Project Proposed Project vs. Alternative 1

Construction Phases	Proposed Project	Alternative 1
Phase 1	Years 1–3: Construct the necessary pavement and infrastructure to relocate approximately 44 GA tenants from the southeast part of the Airport to north of the airfield. Install a temporary ARFF facility on the Navy Flying Club apron.	Years 1–3: Construct the necessary pavement and infrastructure to relocate approximately 44 GA tenants from the southeast part of the Airport to north of the airfield. Concurrent with site preparation for the north side GA area, construct a 24-foot-wide "north side" road that would go from the north GA area to State Route (SR) 218 via a connection with Del Rey Garden Drive. Construct a permanent ARFF building in the general location of the existing Navy Flying Club buildings.

Table 19
Comparison of Phasing for the Safety Enhancement Project Proposed Project vs. Alternative 1

Construction Phases	Proposed Project	Alternative 1
Phase 2	Years 4–8: Demolish the existing ARFF building and demolish or relocate the southeast GA facilities. Construct a new commercial terminal complex (including apron, terminal loop road and roundabout, and vehicular parking lots and garage). Close Taxiway "K" between Runway 10R-28L and Taxiway "A."	Years 4–7: Demolish the existing ARFF building and demolish or relocate southeast GA facilities. Construct a new commercial terminal complex (including apron, terminal loop road and roundabout, and vehicular parking lots). Close Taxiway "K" between Runway 10R-28L and Taxiway "A."
Phase 3	Year 9: Demolish the existing terminal building. Construct a new ARFF building.	Year 8: Remark 1,850-lf portion of Taxiway "A" to 327.5 feet from Runway 10R-28L and relocate taxiway signage and lighting. Remark hold lines on Taxiways "G" and "J" at 250 feet from the Runway 10R-28L centerline. Provide apron islands at Taxiways "G" and "J." Demolish the existing terminal building.
Phase 4	Year 10: Remark 1,850-lf portion of Taxiway "A" to 327.5 feet from Runway 10R-28L and relocate taxiway signage and lighting. Remark hold lines on Taxiways "G" and "J" at 250 feet from the Runway 10R-28L centerline. Provide apron islands at Taxiways "G" and "J." Realign Fred Kane Drive and construct a second parking structure and surface parking lots, as needed.	Year 9: Construct replacement surface parking along Fred Kane Drive.

In addition to the new permanent ARFF building, the Proposed Project and Alternative 1 have differences in the type and amount of vehicular parking proposed for south of the new commercial terminal and along Fred Kane Drive. Under the Proposed Project, there would be a net increase of 669 vehicular parking spaces for the commercial terminal complex in two parking garages and three surface lots. Under Alternative 1, initially, there would be a net increase of 321 vehicular parking spaces for the commercial terminal complex in three surface lots.

Finally, depending on the alternative, a proposed Highway 68 frontage road would also be changed. Under the Proposed Project is the frontage road is planned as a full loop, while under Alternative 1 it is planned as a cul-de-sac to avoid some of the rare plants in the area. The proposed acquisition of a 5.5-acre parcel near the proposed commercial terminal complex would occur under either alternative as would all future long-term projects.

9.1 Project Alternative Traffic Noise

The traffic impact assessment addressed the Proposed Project and Alternative 1 (refer to Section 7.1 Traffic Noise, Table 11). The following sections present results from the traffic noise model using these input traffic data for the Project Alternative 1.

9.1.1 Off-Site Noise Impacts Associated with Project Alternative Traffic

The alternative project would contribute vehicle trips onto the regional roadway network, similar to the Proposed Project. To evaluate the change in noise level on area roadways from alternative project trip contributions, traffic noise modeling was performed.

The results are presented in Table 20.

Table 20
Short-term Project Alternative Contribution to Off-Site Traffic Noise
(Off-Site Traffic Noise Level Increase)

Roadway (segment)	CNEL (dB)		
	Existing	*Existing + Project Alt*	*dB Change*
County of Monterey			
M1 Hammond Road Residence	53	53	0
M2 Oak Crest Circle Residence	59	59	0
M3 Vista Monterra	42	42	0
M4 Blue Larkspur Lane	57	57	0
M5 Boots	59	59	0
M6 Capote Drive	62	62	0
M7 Espada Drive	53	53	0
M8 Corral De Tierra Residence	47	47	0
M17 Oak Tree Lane	48	48	0.4
City of Monterey			
M9 Airport Rd Residence	57	57	0
M10 Airport Road Curve	53	53	0.2
M11 Lerwick Drive	50	50	0.1
M12 Airport Near Euclid	49	50	0.8
M16 Ramona Avenue	49	49	0
City of Del Rey Oaks			
M13 Quail Run Court	54	54	0
M14 Los Encinos Drive	57	57	0.1
M15 Angelus Way	59	59	0
M18 Pheasant Ridge Road	47	47	0.7
M19 Rosita Road	42	42	0

Based upon existing roadway traffic data compared to the "existing plus project alternative" data, the addition of Project traffic under Alternative 1 to the roadway network would result in an increase of less than 1 dB at existing residences along the examined roadway segments. This change in traffic noise level is below the discernible level of change for the average human ear as discussed in the Human Response to Changes in Noise Levels section. Thus, a less than significant impact is expected for Alternative 1 project-related off-site traffic noise increases affecting existing residences in the vicinity.

None of the modeled off-site receptors would experience noise traffic levels that increase from below 65 dBA CNEL to greater than 65 dBA CNEL, comparing the Existing to the Existing plus Project Alternative traffic scenarios. Since the most-restrictive limit of acceptable exterior noise exposure for residences in the vicinity of the Project is 65 dBA CNEL (applicable in Del Rey Oaks), project-alternative-related traffic noise increases would not cause traffic noise exposure at existing residences to exceed an established standard. Project-specific traffic noise impacts under Alternative 1 would therefore be less than significant.

9.1.2 Cumulative Noise Impacts Associated with Project Alternative 1 Traffic

The Alternative 1 project contributions to long-term traffic noise levels on the roadway network are considered in this section. Table 21 shows the modeling results for Cumulative Condition (including projected growth in enplanements) and Cumulative Plus Alternative 1 Long-Term traffic scenarios.

Table 21
Long-term Project Alternative 1 Contribution to Cumulative Off-Site Traffic Noise (Off-Site Traffic Noise Level Increase)

Roadway (segment)	CNEL (dB)			
	Existing	*Cumulative (including projected growth in enplanements)*	*Cumulative + Project, Long-Term Alterative 1*	*dB Change from Existing to Cumulative + Project*
County of Monterey				
M1 Hammond Road Residence, City of Monterey	53	54	54	0.9
M2 Oak Crest Circle Residence	59	60	60	0.6
M3 Vista Monterra	42	43	43	0.7
M4 Blue Larkspur Lane	57	58	58	0.9
M5 Boots	59	60	60	1.1
M6 Capote Drive, City of Del Rey Oaks	62	63	63	1
M7 Espada Drive	53	54	54	1

Table 21
Long-term Project Alternative 1 Contribution to Cumulative Off-Site Traffic Noise
(Off-Site Traffic Noise Level Increase)

Roadway (segment)	CNEL (dB)			
	Existing	*Cumulative (including projected growth in enplanements)*	*Cumulative + Project, Long-Term Alterative 1*	*dB Change from Existing to Cumulative + Project*
M8 Corral De Tierra Residence	47	48	48	1
M17 Oak Tree Lane	48	49	49	1.3
City of Monterey				
M9 Airport Rd Residence	57	58	58	1.6
M10 Airport Road Curve	53	54	54	1.7
M11 Lerwick Drive,	50	51	51	1.6
M12 Airport Near Euclid	49	51	51	2.2
M16 Ramona Avenue	49	51	51	0
City of Del Rey Oaks				
M13 Quail Run Court	54	55	55	1.4
M14 Los Encinos Drive	57	58	58	1.5
M15 Angelus Way	59	60	61	1.4
M18 Pheasant Ridge Road	47	48	49	2.1
M19 Rosita Road	46	46	47	0.1

Comparing Existing Conditions and Cumulative Plus Project Alternative 1, the Alternative 1 contribution to overall traffic on the vicinity roadways is expected to be less than 3 dB CNEL. This change in noise levels is less than the threshold of perception. With a less than perceptible increase in Cumulative traffic noise levels for vicinity residences, Alternative 1 would not have a substantial contribution to a cumulatively significant noise impact.

None of the modeled off-site receptors would experience noise traffic levels that increase from below 65 dBA CNEL to greater than 65 dBA CNEL, when comparing the Existing Conditions to the Cumulative with project alternative traffic scenarios. Since the most-restrictive limit of acceptable exterior noise exposure for residences in the vicinity of the Project is 65 dBA CNEL (applicable in Del Rey Oaks), project-alternative-related traffic noise increases would not cause traffic noise exposure at existing residences to exceed an established standard.

9.2 Project Alternative Construction Noise

General discussion of construction noise is provided in Section 7.2, Construction Noise. This Project Alternative analysis follows the same methodology as the construction noise analysis presented for the Proposed Project in Section 7.2.

9.2.1 Construction Schedule

Table 22 shows the proposed Project Alternative Construction Activities.

Table 22
Proposed Project Alternative Construction Activities

Table 16. Alternative 1 Project Construction Activities			
Construction Phase	**Construction Activity on North or South Side of Airport**	**Years per Phase**	**Description of Construction Activity**
Phase 1 (2019-2021)	North	3	General Aviation (GA) Prep/Install hangars; Construct new Airport Rescue & Firefighting (ARFF) building; Construct "north side" road
Phase 2 (2022-2025)	South	4	Demo South GA & ARFF; grade and construct terminal, apron, roads, rental car & terminal surface lots. Repair haul road.
Phase 3 (2026)	South	1	Restripe TW A & move hold lines; Demolish old terminal
Phase 4 (2027)	South	1	Construct surface parking along Fred Kane Dr.
Phase 5 (2028)	South	1	Construct Highway 68 frontage cul-de-sac
Total		**10**	

9.2.2 Construction Traffic Noise

Exhibit 3 shows the proposed construction vehicle haul routes. Construction vehicles are proposed to travel along Del Rey Gardens Drive instead of Airport Road.

Exhibit 3. Alternative 1 Project Construction Vehicle Haul Routes

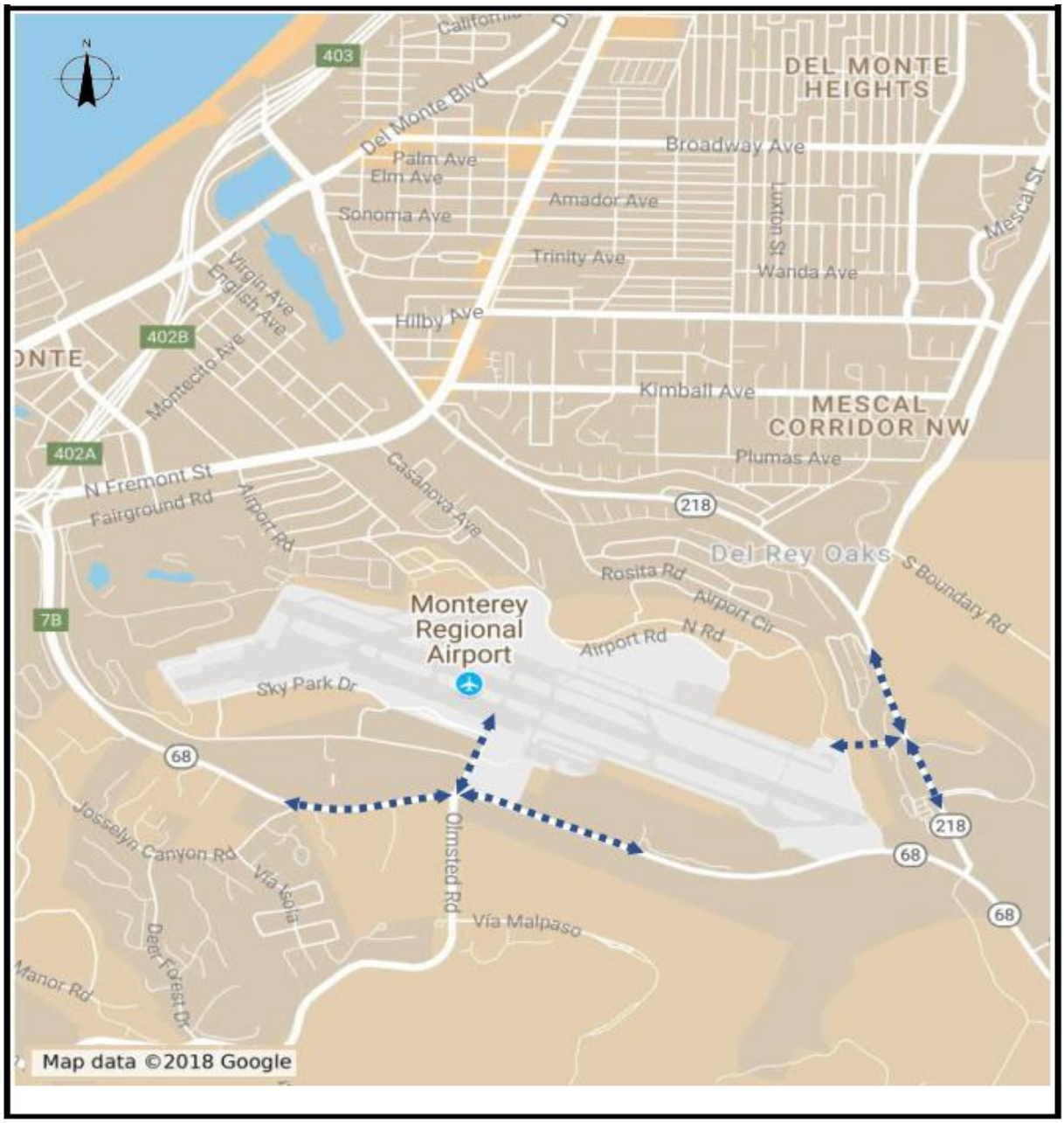

Table 23
Alternative 1 Proposed Project Construction Trips as a Percentage of Existing Average Daily Traffic (ADT)

Construction Phase	Total Daily Construction Trips (PCE)	Construction Activity Area	Alternative 1 Project Haul Routes	Existing ADT	Construction Trips % of ADT
1	38	North	Del Rey Gardens Dr	1,000	3.8%
1	38	North	Highway 218	13,200	0.3%
2	50	South	Olmsted Rd	5,800	0.9%
2	50	South	Highway 68	18,800	0.3%
3	10	South	Olmsted Rd	5,800	0.2%
3	10	South	Highway 68	18,800	0.1%
4	58	South	Olmsted Rd	5,800	1.0%
4	58	South	Highway 68	18,800	0.3%
5	10	South	Olmsted Rd	5,800	0.2%
5	10	South	Highway 68	18,800	0.1%

Notes:

1. Total Daily Construction Trips (PCE) includes trips by construction workers and truck trips, with truck trips converted to Passenger Car Equivalents (PCE).
2. Construction Activity Area refers to construction activities on the north and south sides of the Airport.
3. Haul routes include roads closest to the project site that would be most affected by construction vehicle trips. Construction vehicles trips would disperse onto other roads as they move farther from the project site, reducing the potential for construction traffic impacts.
4. The haul routes and construction phases where construction-related trips would represent more than 1% of existing daily traffic are shaded in red.

As shown in Table 23, construction traffic is expected to increase the average daily traffic by less than 4% in all construction phases. To increase traffic noise levels by 3 dB, a doubling of existing daily traffic is required. With less than a 4% increase in average daily traffic due to construction traffic, the traffic noise increase due to the construction traffic is expected to be less than 3 dB. The expected traffic noise increase is therefore below the discernible level of change for the average human ear in an outdoor environment as discussed in the Human Response to Changes in Noise Levels section (Caltrans 2013). Thus a less than significant impact is expected for alternative-project-related off-site construction traffic noise increases affecting existing residences in the vicinity.

9.2.3 Airport (On-Site) Construction Noise

The main results from the project construction analysis in Section 7.2.4 apply to Alternative 1. For Alternative 1, the north side road is included in Phase 1 (not Phase 5). The noise impacts for

residences along Del Rey Gardens Drive remain the same, but occur during a different phase of construction. The other construction noise impacts would generally be the same for Alternative 1 as for the Project.

9.2.4 Construction Vibration

As discussed for the Proposed Project, construction vibration levels are expected to be less than significant due to the large distance between areas of construction and the residential receptors in the vicinity. The same analysis applies to the project Alternative 1.

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10 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Traffic noise impacts due to Alternative 1 are expected to be **less than significant**.

Short-term construction noise impacts are considered **potentially significant** for the existing nearby residences. With incorporation of Mitigation Measure MM NOI 1 short-term construction noise impacts associated with the Proposed Project would be reduced to less than significant.

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APPENDIX A

Definitions

APPENDIX A
Definitions

Term	Definition
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
A-Weighted Sound Level (dBA)	The sound pressure level in decibels as measured on a sound-level meter using the A-weighted filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Community Noise Equivalent Level (CNEL)	CNEL is the A-weighted equivalent continuous sound exposure level for a 24-hour period with a 10 dB adjustment added to sound levels occurring during nighttime hours (10 p.m. to 7 a.m.) and a 5 dB adjustment added to the sound levels occurring during the evening hours (7 p.m. to 10 p.m.).
Decibel (dB)	A unit for measuring sound pressure level, equal to 10 times the logarithm to the base 10 of the ratio of the measured sound pressure squared to a reference pressure, which is 20 micropascals.
Equivalent Sound Level (L_{eq})	The sound level corresponding to a steady-state sound level and containing the same total energy as a time varying signal over a given sample period. L_{eq} is designed to average all of the loud and quiet sound levels occurring over a specific time period.

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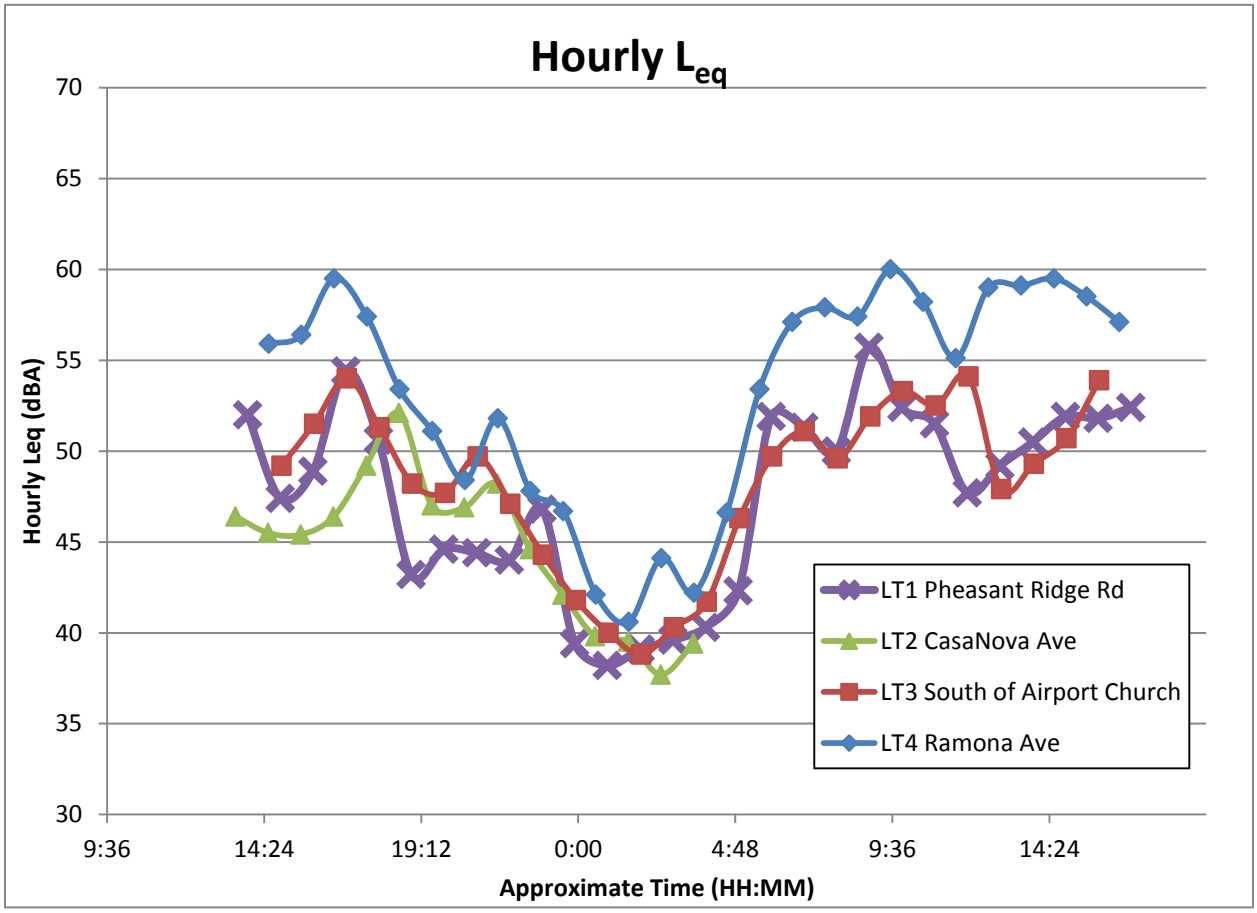
APPENDIX B

Hourly L_{eq} Time History of Long-Term Measurements

APPENDIX B
Hourly L_{eq} Time History of Long-Term Measurements

Figure B-1: Hourly L_{eq} Time History of Long-Term Measurements



*LT3 is in the rear parking lot of the Shoreline Community Church

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APPENDIX C

RCNM Modeling

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 4/17/2018
Case Description: Phase1_Architectural Coating

		---- Receptor #1 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Euclid Ave 500'	Residential	65	60	55

			Equipment			
	Impact		Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Compressor (air)	No	40		77.7	500	0

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	Night
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Compressor (air)		57.7	53.7	N/A	N/A	N/A	N/A	N/A
	Total	57.7	53.7	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 4/17/2018
Case Description: Phase1_Building Construction

		---- Receptor #1 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Euclid Avenue 500 feet	Residential	65	60	55

			Equipment			
	Impact		Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Crane	No	16		80.6	500	0
Man Lift	No	20		74.7	500	0
Man Lift	No	20		74.7	525	0
Man Lift	No	20		74.7	550	0
Generator	No	50		80.6	500	0
Backhoe	No	40		77.6	500	0
Backhoe	No	40		77.6	550	0
Backhoe	No	40		77.6	600	0

Slurry Trenching Machine	No	50	80.4	500	0	
Welder / Torch	No	40	74	780	0	

Results

	Calculated (dBA)		Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Crane	60.6	52.6	N/A	N/A	N/A	N/A	N/A
Man Lift	54.7	47.7	N/A	N/A	N/A	N/A	N/A
Man Lift	54.3	47.3	N/A	N/A	N/A	N/A	N/A
Man Lift	53.9	46.9	N/A	N/A	N/A	N/A	N/A
Generator	60.6	57.6	N/A	N/A	N/A	N/A	N/A
Backhoe	57.6	53.6	N/A	N/A	N/A	N/A	N/A
Backhoe	56.7	52.8	N/A	N/A	N/A	N/A	N/A
Backhoe	56	52	N/A	N/A	N/A	N/A	N/A
Slurry Trenching Machine	60.4	57.3	N/A	N/A	N/A	N/A	N/A
Welder / Torch	50.1	46.2	N/A	N/A	N/A	N/A	N/A
Total	60.6	63.2	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/3/2018
Case Description: Phase 2

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residence	Residential	65	60	55

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Dump Truck	No	40		76.5	200	0
Dump Truck	No	40		76.5	200	0
Dump Truck	No	40		76.5	200	0
Dump Truck	No	40		76.5	200	0
Dump Truck	No	40		76.5	200	0
Dump Truck	No	40		76.5	200	0
Dump Truck	No	40		76.5	200	0
Dump Truck	No	40		76.5	200	0
Dump Truck	No	40		76.5	200	0
Dump Truck	No	40		76.5	200	0
Dump Truck	No	40		76.5	200	0

Results

		Calculated (dBA)		Noise Limits (dBA)				
				Day		Evening		Night
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Dump Truck		64.4	60.4	N/A	N/A	N/A	N/A	N/A
Dump Truck		64.4	60.4	N/A	N/A	N/A	N/A	N/A
Dump Truck		64.4	60.4	N/A	N/A	N/A	N/A	N/A
Dump Truck		64.4	60.4	N/A	N/A	N/A	N/A	N/A
Dump Truck		64.4	60.4	N/A	N/A	N/A	N/A	N/A
Dump Truck		64.4	60.4	N/A	N/A	N/A	N/A	N/A
Dump Truck		64.4	60.4	N/A	N/A	N/A	N/A	N/A
Dump Truck		64.4	60.4	N/A	N/A	N/A	N/A	N/A
Dump Truck		64.4	60.4	N/A	N/A	N/A	N/A	N/A
Dump Truck		64.4	60.4	N/A	N/A	N/A	N/A	N/A
Dump Truck		64.4	60.4	N/A	N/A	N/A	N/A	N/A
Dump Truck		64.4	60.4	N/A	N/A	N/A	N/A	N/A
	Total	64.4	70.8	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 4/30/2018
Case Description: Phase 2

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residence	Residential	65	60	55

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Dump Truck	No	40		76.5	200	0

Results

		Calculated (dBA)		Noise Limits (dBA)				
				Day		Evening		Night
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Dump Truck		64.4	60.4	N/A	N/A	N/A	N/A	N/A
	Total	64.4	60.4	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 4/16/2018
Case Description: Phase5_Grading

---- Receptor #6 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Typical 1000'	Residential	65	60	55

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Excavator	No	40		80.7	1000	0
Excavator	No	40		80.7	1000	0
Grader	No	40	85		1000	0
Dozer	No	40		81.7	1000	0
Scraper	No	40		83.6	1000	0
Scraper	No	40		83.6	1000	0
Backhoe	No	40		77.6	1000	0
Backhoe	No	40		77.6	1000	0

			Results				
	Calculated (dBA)		Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Excavator	54.7	50.7	N/A	N/A	N/A	N/A	N/A
Excavator	54.7	50.7	N/A	N/A	N/A	N/A	N/A
Grader	59	55	N/A	N/A	N/A	N/A	N/A
Dozer	55.6	51.7	N/A	N/A	N/A	N/A	N/A
Scraper	57.6	53.6	N/A	N/A	N/A	N/A	N/A
Scraper	57.6	53.6	N/A	N/A	N/A	N/A	N/A
Backhoe	51.5	47.6	N/A	N/A	N/A	N/A	N/A
Backhoe	51.5	47.6	N/A	N/A	N/A	N/A	N/A
Total	59	61	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 4/16/2018
Case Description: Phase5_Grading

---- Receptor #5 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Worst Case 200'	Residential	65	60	55

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)

Excavator	No	40		80.7	200	0
Excavator	No	40		80.7	200	0
Grader	No	40	85		200	0
Dozer	No	40		81.7	225	0
Scraper	No	40		83.6	225	0
Scraper	No	40		83.6	225	0
Backhoe	No	40		77.6	250	0
Backhoe	No	40		77.6	250	0

Results

	Calculated (dBA)		Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Excavator	68.7	64.7	N/A	N/A	N/A	N/A	N/A
Excavator	68.7	64.7	N/A	N/A	N/A	N/A	N/A
Grader	73	69	N/A	N/A	N/A	N/A	N/A
Dozer	68.6	64.6	N/A	N/A	N/A	N/A	N/A
Scraper	70.5	66.5	N/A	N/A	N/A	N/A	N/A
Scraper	70.5	66.5	N/A	N/A	N/A	N/A	N/A
Backhoe	63.6	59.6	N/A	N/A	N/A	N/A	N/A
Backhoe	63.6	59.6	N/A	N/A	N/A	N/A	N/A
Total	73	74.4	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 4/16/2018
Case Description: Phase5_Paving

---- Receptor #6 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
School Typical 1000'	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	1000	0
Paver	No	50		77.2	1000	0
All Other Equipment > 5 HP	No	50	85		1000	0
All Other Equipment > 5 HP	No	50	85		1000	0
Roller	No	20		80	1000	0
Roller	No	20		80	1000	0

Results

	Calculated (dBA)		Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax

Equipment	*Lmax	Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax
Paver	51.2	48.2	N/A	N/A	N/A	N/A	N/A
Paver	51.2	48.2	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	59	56	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	59	56	N/A	N/A	N/A	N/A	N/A
Roller	54	47	N/A	N/A	N/A	N/A	N/A
Roller	54	47	N/A	N/A	N/A	N/A	N/A
Total	59	60.1	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 4/16/2018
Case Description: Phase5_Paving

---- Receptor #5 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Worst Case 200'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	200	0
Paver	No	50		77.2	200	0
All Other Equipment > 5 HP	No	50	85		200	0
All Other Equipment > 5 HP	No	50	85		225	0
Roller	No	20		80	225	0
Roller	No	20		80	225	0

Results

Equipment	Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax
Paver	65.2	62.2	N/A	N/A	N/A	N/A	N/A
Paver	65.2	62.2	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	73	69.9	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	71.9	68.9	N/A	N/A	N/A	N/A	N/A
Roller	66.9	59.9	N/A	N/A	N/A	N/A	N/A
Roller	66.9	59.9	N/A	N/A	N/A	N/A	N/A
Total	73	73.6	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

MONTEREY
REGIONAL AIRPORT

Appendix M

TRAFFIC IMPACT ANALYSIS REPORT

MOTT MACDONALD

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TECHNICAL MEMORANDUM

To: Coffman Associates
From: Mott MacDonald
Date: May 1, 2018

RE: Traffic Impact Analysis Report for the Monterey Regional Airport's Proposed Master Plan and Associated Development Projects, Comparison of HCM 2010 vs 6th Edition Analysis

1. Introduction

Mott MacDonald is in the process of preparing the Traffic Impact Analysis (TIA) report for the Monterey Regional Airport's Proposed Master Plan and Associated Development Projects. Mott MacDonald began working on the TIA in November 2016.

During preparation the TIA, updates to two of the industry-standard reference documents used in the TIA were released; the Transportation Research Board (TRB) updated the 2010 Highway Capacity Manual (HCM) with the 6th Edition HCM and the Institute of Transportation Engineers (ITE) updated the 9th Edition of the Trip Generation Manual with the 10th Edition.

This memorandum provides a comparison of the results of the TIA's Existing Conditions scenario using the HCM 2010 and HCM 6th Edition methodologies, to determine whether differences in the HCM 6th Edition would affect the results or conclusions of the TIA.

This memorandum also provides a trip generation comparison of project trips using the ITE 9th Edition and 10th Edition *Trip Generation Manuals*, to determine whether differences in the new manual would result in higher project trip generation estimates.

2. HCM 2010 vs HCM 6th Edition Methodologies

Intersection traffic operations, based on average delay (in seconds per vehicle) and Level of Service (LOS), are being evaluated in the TIA with the Synchro© traffic analysis software (Version 9) using Highway Capacity Manual 2010 (HCM 2010) methodologies. The Synchro© traffic analysis software is widely used in the traffic engineering industry. The TRB released the latest version of the HCM (HCM 6th Edition) in October 2016. Software enabling the use of HCM 6th Edition methodologies was not available at the commencement of the TIA.

Mott MacDonald recently obtained the Synchro© traffic analysis software (Version 10), which allows the use of HCM 6th Edition methodologies. Existing Conditions intersection levels of service and delay at the project intersections using HCM 2010 and HCM 6th Edition methodologies are shown in **Table 1**.

MOTT MACDONALD

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San Jose, CA 95110
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Table 1. Existing Conditions Intersection LOS Comparison: HCM 2010 vs HCM 6th Edition

						1		2		3
	N-S Street	E-W Street	Int Control	LOS Std	Peak Hour	Existing HCM 2010		Existing HCM 6th Ed		Decrease in Delay with HCM 6th Edition**
						Delay	LOS	Delay	LOS	
1	Olmsted Road	Highway 68	Signal	C/D	AM	51.0	D	51.5	D	0.50
					PM	126.0	F	124.9	F	1.10
2	Olmsted Road	Garden Road	One-Way Stop	D	AM	10.7	B	10.7	B	**0.00**
					PM	10.8	B	10.8	B	**0.00**
3	Olmsted Way	Fred Kane Drive	All-Way Stop	D	AM	7.6	A	7.6	A	**0.00**
					PM	8.2	A	8.2	A	**0.00**
4	Airport Road	Euclid Avenue	Two-Way Stop	D	AM	9.8	A	10.1	B	0.30
					PM	10.1	B	10.2	B	0.10
5	Airport Road	N. Fremont Street	Signal	D	AM	11.7	B	11.6	B	0.10
					PM	14.2	B	14.3	B	0.10
6	Del Monte Boulevard	Highway 218	Signal	C/D	AM	34.3	C	32.1	C	2.20
					PM	38.9	D	35.9	D	3.00
7	Highway 218	Fremont Boulevard	Signal	C/D	AM	31.3	C	29.0	C	2.30
					PM	46.1	D	41.9	D	4.20
8	Highway 218	General Jim Moore Blvd	Signal	C/D	AM	17.0	B	16.2	B	0.80
					PM	15.2	B	15.2	B	**0.00**
9	Highway 218	Del Rey Gardens Drive	One-Way Stop	C/D	AM	24.1	C	24.2	C	0.10
					PM	19.0	C	20.1	C	1.10
10	Highway 218	Ryan Ranch Road	Signal	C/D	AM	6.9	A	7.2	A	0.30
					PM	16.6	B	16.5	B	0.10
11	Josselyn Canyon Road	Highway 68	Signal	C/D	AM	44.5	D	44.5	D	**0.00**
					PM	19.8	B	19.8	B	**0.00**
12	Highway 218	Highway 68	Signal	C/D	AM	24.3	C	24.3	C	**0.00**
					PM	29.7	C	29.5	C	0.20
13	Ragsdale Drive	Highway 68	Signal	C/D	AM	12.3	B	12.7	B	0.40
					PM	4.2	A	4.4	A	0.20
14	York Road	Highway 68	Signal	C/D	AM	25.3	C	24.8	C	0.50
					PM	42.8	D	42.5	D	0.30
15	Pasadera Drive	Highway 68	Signal	C/D	AM	47.5	D	46.3	D	1.20
					PM	14.5	B	15.7	B	1.20
16	Laureles Grade Road	Highway 68	Signal	C/D	AM	27.2	C	26.6	C	0.60
					PM	31.7	C	31.1	C	0.60
17	Corral de Tierra Road	Highway 68	Signal	C/D	AM	35.2	D	34.8	C	0.40
					PM	57.8	E	57.2	E	0.60
18	San Benancio Road	Highway 68	Signal	C/D	AM	70.3	E	69.7	E	0.60
					PM	18.9	B	18.8	B	0.10
19	Torero Drive	Highway 68	One-Way Stop	C/D	AM	*	F	*	F	**0.00**
					PM	111.3	F	111.3	F	**0.00**
									Sum of Decreases in Delay with HCM 6th Edition	18.90
									Sum of Increases in Delay with HCM 6th Edition	4.30
									Overall Decrease in Delay with HCM 6th Edition	14.60

Notes:

1 Column 1: Existing Conditions delay and Level of Service (LOS) using HCM 2010 Methodologies.

2 Column 2: Existing Conditions delay and LOS using HCM 6th Edition Methodologies.

3 Column 3: Decreases in delay with HCM 6th Edition are shown in red text.

4 Column 3: Increases in delay with HCM 6th Edition are shown in black text.

5 Column 3: No change in delay between HCM 2010 and HCM 6th Edition shown in bold text.

As shown in **Table 1**, the differences in delay and LOS when comparing the HCM 2010 and HCM 6th Edition methodologies in the analysis of signalized, one-way stop, and all-way stop controlled intersections is minimal. Depending on the location, the HCM 6th Edition analysis results in either less delay (up to 4.2 seconds), slightly more delay (up to 1.2 seconds), or no difference. Considering the sum of the average delay at all the study intersections, the HCM 6th Edition results in a decrease of 18.9 seconds, an increase of 4.3 seconds, and no change at four intersections. The overall difference in delay is a decrease of 14.6 seconds with the HCM 6th Edition.

The differences between the HCM 2010 and HCM 6th Edition in the analysis of signalized and unsignalized intersections are negligible and would not affect the results or conclusions of the TIA.

The TIA also includes an assessment of construction impacts. In determining construction impacts, truck trips associated with the project's construction activities were converted to passenger car equivalents per guidelines in the 2010 HCM (i.e., each truck is estimated to be the equivalent of 2 passenger vehicles). The HCM 6th Edition also uses a passenger car equivalent of 2 passenger vehicles per truck.

3. ITE Trip Generation Manual 9th Edition vs 10th Edition

The TIA includes Long-Term development scenarios that contain a variety of non-aviation land uses, including General Light Industrial and Office Park on the north side of the Airport, and High-Turnover Restaurant, Medical-Dental Office, and General Office on the south side of the Airport.

Trip generation rates in the TIA for the non-aviation land uses are based on rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 9th Edition, 2012. The ITE released a new version (10th Edition) of the *Trip Generation Manual* in September 2017. This memorandum also provides a comparison of the estimated trips that would be generated by the project's Long-Term development scenarios using the ITE 9th Edition and 10th Edition *Trip Generation Manuals*, to determine whether differences in the new manual would result in higher trip generation estimates for the Long-Term non-aviation land uses.

Table 2 provides a trip generation comparison between the Proposed Project Long-Term scenario using ITE 9th Edition and 10th Edition trip generation rates. **Table 3** provides a trip generation comparison between the Alternative 1 Project Long-Term scenario using ITE 9th Edition and 10th Edition trip generation rates.

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Table 2. Proposed Project Long-Term Trip Generation Comparison: ITE 9th Edition vs 10th Edition

Proposed Project Long-Term	WEEK DAY	WEEKDAY AM PK HR			WEEKDAY PM PK HR		
Total Net New Generated Trips (9th Edition ITE)	10,991	1,370	1,164	206	1,368	265	1,103
Total Net New Generated Trips (10th Edition ITE)	9,723	1,091	918	173	996	191	805
Decrease in Trips with 10th Edition ITE	(1,268)	(279)	(246)	(33)	(372)	(74)	(298)

Table 3. Alt 1 Project Long-Term Trip Generation Comparison: ITE 9th Edition vs 10th Edition

Alternative 1 Project Long-Term	WEEK DAY	WEEKDAY AM PK HR			WEEKDAY PM PK HR		
Total Net New Generated Trips (9th Edition ITE)	10,991	1,370	1,164	206	1,368	265	1,103
Total Net New Generated Trips (10th Edition ITE)	9,723	1,091	918	173	996	191	805
Decrease in Trips with 10th Edition ITE	(1,268)	(279)	(246)	(33)	(372)	(74)	(298)

As shown in **Tables 2** and **3**, the ITE 10th Edition Trip Generation Manual results in lower trip generation estimates than the 9th Edition for the same land uses. Therefore, estimating trips generated by the project in the Long-Term scenarios using the ITE 10th Edition Trip Generation Manuals would not create any more project impacts than when using the 9th Edition Manual, and may result in fewer impacts.

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Traffic Impact Analysis Report for the Monterey Regional Airport's Proposed Master Plan and Associated Development Projects, Monterey County, California

Final Report

September 7, 2018

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R. Monterey Regional Airport EIR Traffic Impact Analysis Memorandum of Assumptions

Executive summary

This Traffic Impact Analysis (TIA) report serves as the basis for the Traffic and Circulation Element of the Draft Environmental Impact Report (DEIR) for the Monterey Regional Airport (Airport) Master Plan and its associated projects.

This Traffic Impact Analysis evaluates the potential traffic impacts associated with the projects and actions recommended in the Monterey Regional Airport's Airport Master Plan (AMP). The following four project conditions are analyzed in this study:

Project Conditions

- Proposed Project Short-Term (occurring within ten years)
- Alternative 1 Project Short-Term (occurring within ten years)
- Proposed Project Long-Term (occurring within 20 years)
- Alternative 1 Project Long-Term (occurring within 20 years)

This study includes the following analysis scenarios:

Analysis Scenarios

Weekday AM and PM peak hour traffic operations were analyzed for the following scenarios:

- Existing Conditions
- Existing Plus Proposed Project Short-Term
- Existing Plus Alternative 1 Project Short-Term
- Background Conditions[1] (includes projected growth in enplanements)
- Background Plus Proposed Project Short-Term
- Background Plus Alternative 1 Project Short-Term
- Cumulative Conditions[2] (includes projected growth in enplanements)
- Cumulative Plus Proposed Project Long-Term
- Cumulative Plus Alternative 1 Project Long-Term

Intersections

The study includes detailed level of service analyses for the following study intersections:

1. Olmsted Road / Highway 68
2. Olmsted Road / Garden Road
3. Olmsted Way / Fred Kane Drive
4. Airport Road / Euclid Avenue

[1] Background conditions include those trips generated by approved but not yet built projects in the project vicinity, which have been combined with existing traffic to obtain background traffic volumes.

[2] Cumulative conditions include regional 20-year growth forecasts as well as approved, but not yet built projects in the project vicinity.

5. Airport Road / N. Fremont Street
6. Del Monte Boulevard / Highway 218
7. Highway 218 / Fremont Boulevard
8. Highway 218 / General Jim Moore Boulevard
9. Highway 218 / Del Rey Gardens Drive
10. Highway 218 / Ryan Ranch Road
11. Josselyn Canyon Road / Highway 68
12. Highway 218 / Highway 68
13. Ragsdale Drive / Highway 68
14. York Road / Highway 68
15. Pasadera Drive / Highway 68
16. Laureles Grade Road / Highway 68
17. Corral De Tierra Road / Highway 68
18. San Benancio Road / Highway 68
19. Torero Drive / Highway 68

Roadway Segments

The study includes detailed level of service analyses for the following study road segments under existing conditions.[3] Future scenarios (including project scenarios) are discussed qualitatively:

1. Highway 68, from Highway 1 to Begin/End Freeway
2. Highway 68, from Begin/End Freeway to Josselyn Canyon Road
3. Highway 68, from Josselyn Canyon Road to Olmsted Road
4. Highway 68, from Olmsted Road to Highway 218
5. Highway 68, from Highway 218 to Ragsdale Drive
6. Highway 68, from Ragsdale Drive to Laureles Grade
7. Highway 68, from Laureles Grade to Corral De Tierra Road
8. Highway 68, from Corral De Tierra Road to Torero Drive
9. Highway 68, from Torero Drive to Begin/End Freeway

Based on the analysis, the Proposed Project Short-Term and Alternative 1 Project Short-Term project scenarios would generate the same amount (and a very small amount) of net new trips on the study road network. The major difference between these project scenarios is how the trips would be distributed (or redistributed) throughout the study network. In terms of net new trips on the study road network, both the Proposed Project Short-Term and Alternative 1 Project Short-Term scenarios are projected to only generate 10 net new daily trips, with 1 net new trip occurring during the AM peak hour and 2 net new trips occurring during the PM peak hour. At some locations, the redistribution of trips would result in a reduction of traffic.

The Proposed Project Long-Term and Alternative 1 Project Long-Term project scenarios contain opportunities for a variety of non-aviation land uses. Representative land uses for purposes of this analysis include General Light Industrial and Office Park on the north side of the Airport, and High-Turnover Restaurant, Medical-Dental Office, and General Office on the south side of

[3] Within the study area, other roadway segments are controlled by numerous controlled intersections and a separate segment analysis is not necessary. This includes the segments of Highway 218 (Canyon Del Rey Road/Boulevard) in the vicinity of the Airport.

the Airport. These non-aviation land uses were chosen for evaluation to represent a conservative (most-impactful), high-level assessment of the possible road network improvements that may be required to accommodate these types of development.

The analysis associated with these Long-Term non-aviation land uses was only considered at a programmatic level. Project-specific traffic studies and other environmental analyses would be required before any of these non-aviation land uses could be developed.

As discussed above, the Proposed Project Short-Term and Alternative 1 Project Short-Term project scenarios would generate a very small amount of net new trips on the study road network, and at some locations, would result in a reduction of traffic. The study intersections and road segments that operate deficiently under the "plus project" scenarios would also operate deficiently under the "without project" scenarios, and the trips generated by these project scenarios would have a negligible effect on traffic operations.

The study intersections and road segments that currently operate deficiently, or are projected to operate deficiently under future conditions, are located along State Highways, and these facilities would operate deficiently even without the trips generated by these project scenarios.

Nevertheless, based on the California Department of Transportation (Caltrans) significant impact criteria, the addition of one project trip can be considered a significant impact when a facility is already operating at unacceptable levels of service without project traffic. Mitigations to reduce the project's impacts to less than significant are provided for each location.

The short-term project scenarios would be responsible for a fair-share contribution towards the total cost of the improvements, based on the relative number of project trips they would add to the facility in question. These improvements would have to be approved by Caltrans, and sufficient funding may not be available for these improvements to be implemented. In these cases, the project's impacts would remain significant and unavoidable due to infeasible mitigation measures.

Project impacts and mitigation measures for the Proposed Project Short-Term and Alternative 1 Project Short-Term scenarios are summarized in Table ES-1. In the long term, future (conservative) development would be the same for either alternative. Cumulative traffic impacts will need to be mitigated on a regional level.

The Airport Master Plan's Sustainability Action Plan identifies the following potential Transportation Demand Management (TDM) strategies to reduce vehicle trips and air emissions:

- Encourage employee and public bicycling by providing convenient, secure bicycle facilities on Airport premises, provide incentives for employees that bike to work, and consider a bike-sharing program for employees and passengers.
- Provide subsidized bus passes to employees and construction workers.
- Facilitate shared vehicle usage by providing infrastructure and vanpool/carpool/alternative fuel vehicle incentives such as rebates and/or preferred parking for staff.
- Provide employee and passenger incentives to encourage the use of alternative fuel vehicles.
- Encourage the use of alternative fuel ground support equipment and shuttle buses.
- Collaborate with local and regional transit authorities regarding multiple transit connection opportunities.

- Develop a reduced idling plan for commercial, construction, airport service, and tenant vehicles.

NOTE: The State of California has approved Senate Bill (SB) 743, which creates a process to change the way that the California Environmental Quality Act (CEQA) addresses transportation impacts. Specifically, the Governor's Office of Planning and Research (OPR) is required to amend the CEQA Guidelines to provide an alternative to level of service (LOS) for evaluating transportation impacts. Particularly within areas served by transit, those alternative criteria must "promote the reduction of greenhouse gases, the development of multimodal transportation networks, and a diversity of land uses." (PRC §21099(b)(1).) Measurements of transportation impacts may include "vehicle miles traveled (VMT), vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated." Once the CEQA Guidelines are amended to include those alternative criteria, auto delay will no longer be considered a significant impact under CEQA. SB 743 also amends congestion management law to allow cities and counties to opt out of LOS standards within certain infill areas.[4] The CEQA Guidelines changes proposed by OPR have been sent to the California Natural Resources Agency for final administrative approval. Analysis of the Proposed Project's VMT will be addressed in the Traffic, Air Quality, and Greenhouse Gases sections of the EIR.

[4] http://opr.ca.gov/ceqa/updates/sb-743/, Transportation Impacts (SB 743), (accessed November 1, 2017).

Table ES-1: Traffic Impacts and Mitigation Measures

Scenario # →					1	2	3	4	5	6	7
	N-S Street	E-W Street	Int Control	Miti #	Existing	Ex+Prop Short-Term	Ex+Alt 1 Short-Term	Background	Back+Prop Short-Term	Back+Alt 1 Short-Term	Cumulative
1	Olmsted Road	Highway 68	Signal	–	–	–	–	–	–	–	–
2	Olmsted Road	Garden Road	One-Way Stop	–	–	–	–	–	–	–	–
3	Olmsted Way	Fred Kane Drive	All-Way Stop	–	–	–	–	–	–	–	–
4	Airport Road	Euclid Avenue	Two-Way Stop	–	–	–	–	–	–	–	–
5	Airport Road	N. Fremont Street	Signal	–	–	–	–	–	–	–	–
6	Del Monte Blvd	Highway 218	Signal	*M#1*	Add 2nd NB Del Monte LTL	Add 2nd NB Del Monte LTL	Add 2nd NB Del Monte LTL	–	–	–	–
				M#6	–	–	–	Add 2nd NB Del Monte LTL & NB RTO Add SB Del Monte SB RTO	Add 2nd NB Del Monte LTL & NB RTO Add SB Del Monte SB RTO	Add 2nd NB Del Monte LTL & NB RTO Add SB Del Monte SB RTO	–
				M#10	–	–	–	–	–	–	Add 3rd NB Del Monte LTL & NB RTO Add 2nd SB Del Monte LTL & SB RTO Add EB Hwy 218 RTL Add 3rd WB Hwy 218 LTL
7	Highway 218	Fremont Blvd	Signal	*M#2*	Add 2nd NB Hwy 218 LTL	Add 2nd NB Hwy 218 LTL	Add 2nd NB Hwy 218 LTL	Add 2nd NB Hwy 218 LTL	Add 2nd NB Hwy 218 LTL	Add 2nd NB Hwy 218 LTL	–
				M#11	–	–	–	–	–	–	Add 2nd NB Hwy 218 LTL Add 2nd EB Fremont Blvd LTL Add 2nd WB Fremont Blvd LTL
8	Highway 218	General Jim Moore Blvd	Signal	–	–	–	–	–	–	–	–
9	Highway 218	Del Rey Gardens Dr	One-Way Stop	*M#7*	–	–	–	Signalize Add 2nd NB Hwy 218 TH LN Add 2nd SB Hwy 218 TH LN	Signalize Add 2nd NB Hwy 218 TH LN Add 2nd SB Hwy 218 TH LN	Signalize Add 2nd NB Hwy 218 TH LN Add 2nd SB Hwy 218 TH LN	Signalize Add 2nd NB Hwy 218 TH LN Add 2nd SB Hwy 218 TH LN
10	Highway 218	Ryan Ranch Road	Signal	*M#12*	–	–	–	–	–	–	Add 2nd NB Hwy 218 TH LN
11	Josselyn Canyon Road	Highway 68	Signal		–	–	–	–	–	–	–
12	Highway 218	Highway 68	Signal	*M#13*	–	–	–	–	–	–	–
13	Ragsdale Drive	Highway 68	Signal		–	–	–	–	–	–	–
14	York Road	Highway 68	Signal	*M#3*	Proposed Roundabout	Proposed Roundabout	–	Proposed Roundabout	Proposed Roundabout	–	Modified Roundabout
15	Pasadera Drive	Highway 68	Signal		–	–	–	–	–	–	–
16	Laureles Grade Road	Highway 68	Signal	*M#8*	–	–	–	Modified Roundabout	Modified Roundabout	–	Modified Roundabout
17	Corral de Tierra Road	Highway 68	Signal	*M#4*	Proposed Roundabout	Proposed Roundabout	–	Proposed Roundabout	Proposed Roundabout	–	Modified Roundabout
18	San Benancio Road	Highway 68	Signal	*M#9*	–	–	–	Proposed Roundabout	Proposed Roundabout	–	Modified Roundabout
19	Torero Drive	Highway 68	One-Way Stop	*M#5*	Proposed Roundabout	Proposed Roundabout	–	Modified Roundabout	Modified Roundabout	–	Modified Roundabout

Notes:
1 NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound
2 LTL = Left-Turn Lane, RTL = Right-Turn Lane, TH LN = Through Lane, RTO = Right-Turn Overlap Phasing
3 Proposed Roundabout = Roundabout layout as proposed in the *Highway 68 Scenic Highway Plan* study. Layouts shown in Appendix F.
4 Modified Roundabout = Base roundabout layout as proposed in the *Highway 68 Scenic Highway Plan* study, and modified to achieve acceptable operations. Layouts shown in Appendix F.
5 – = Not applicable or mitigation not required due to no project impact.
6 All the above mitigations that apply to project scenarios also apply to the corresponding non-project scenarios (i.e., Existing, Background, & Cumulative Conditions) and the need for these mitigations would not be triggered by the project. Therefore, the project would be responsible for a fair-share contribution to these improvements.

1 Introduction

This Traffic Impact Analysis (TIA) report serves as the basis for the Traffic and Circulation Element of the Draft Environmental Impact Report (DEIR) for the Monterey Regional Airport (Airport) Master Plan and its associated projects.

1.1 Project Description

The projects that will be evaluated within the Draft EIR include all the projects recommended in the Airport Master Plan as well as the overall on-airport land use plan (which could include non-aviation development and redevelopment on the Airport property). Short-term projects on the Airport property (occurring within ten years) have been evaluated at a project-specific level. Long-term development projects on the Airport property (occurring within 20 years) have only been addressed at a programmatic level due to the lack of project details. Long-term development projects would likely develop in phases over a long period of time. Future environmental analysis for long-term projects will be required prior to approval and construction of these projects.

There are two alternatives for the short-term projects; the Proposed Project Short-Term and the Alternative 1 Project Short-Term. Access to the north side of the Airport is currently provided via Airport Road, which runs through the Casanova Oak Knoll (CONA) neighborhood, located northwest of the Airport. The major difference between the Proposed Project Short-Term and the Alternative 1 Project Short-Term is that the Alternative 1 Project Short-Term includes construction of a new roadway, referred to as the North Side Road, which would extend from Del Rey Gardens Drive in Del Rey Oaks (off Highway 218) to the northeast side of the Airport. The North Side Road would provide access to the north side of the Airport and would allow access through the CONA neighborhood from east of Gate 22 to be discontinued.

Proposed Project Short-Term

The following items are part of the Airport Safety Enhancement Project for Taxiway "A" Relocation & Associated Building Relocations:[5]

- Relocation of 44 General Aviation (GA) hangars from the southeast side of the Airport to the north side of the Airport
- Addition of up to 7 new GA hangars on the north side of the Airport
- Location of a temporary aircraft rescue and firefighting (ARFF) building on the north side

[5] The potential traffic impacts associated with the proposed Airport Safety Enhancement Project for Taxiway "A" Relocation & Associated Building Relocations (safety enhancement project) have been assessed as part of an Environmental Assessment (EA), a federal environmental document prepared consistent with the requirements of the National Environmental Policy Act (NEPA). The Federal Aviation Administrative (FAA) is the lead agency for the EA. The results of the EA TIA have been incorporated into this DEIR TIA. The Proposed Airport Safety Enhancement Project for Taxiway "A" Relocation & Associated Building Relocations includes several inter-related, connected actions associated with increasing the runway-taxiway separation to 327.5 feet (ft) between Taxiway A and Runway 10R-28L to provide additional runway-taxiway separation.

- Relocation of the commercial terminal and apron and permanent ARFF building (and associated parking and roadway improvements) on the south side to accommodate a 52.5-foot southerly shift of a portion of Taxiway "A"[6]

Other proposed short-term airport projects include:

- Land acquisition of a 5.5-acre parcel
- Construction of a Highway 68 frontage loop road

The relocation of the General Aviation hangars from the southeast to the north side of the Airport will cause a redistribution of traffic within the study network. This will reduce traffic at some study intersections and increase traffic at other study intersections. In some cases, it will add and/or subtract traffic from individual movements at study intersections. Under the Proposed Project Short-Term scenario, access to the relocated hangars on the north side of the Airport will be via Airport Road, through the Casanova Oak Knoll Neighborhood (CONA), which is located northwest of the airport.

Alternative 1 Project Short-Term

The following items are part of the Airport Safety Enhancement Project for Taxiway "A" Relocation & Associated Building Relocations (see previous Footnotes 5 and 6):

- Relocation of 44 General Aviation (GA) hangars from the southeast side of the Airport to the north side of the Airport
- Addition of up to 7 new GA hangars on the north side of the Airport
- Reallocation of Port-a-Port T-Hangars and the Navy Flying Club Hangar trips (total of 7 hangars)
- Relocation of the ARFF Building from the south side of the Airport to the north side of the Airport
- North Side Road construction
- Relocation of the commercial terminal and apron (and associated parking and roadway improvements) on the south side to accommodate a 52.5-foot southerly shift of a portion of Taxiway "A"

Other proposed short-term airport projects include:

- Land acquisition of a 5.5-acre parcel
- Construction of a Highway 68 frontage cul-de-sac road

With this alternative, the relocation of the 44 General Aviation hangars from the southeast to the north side of the Airport will also cause a redistribution of traffic within the study network. However, under this project alternative, access to the relocated hangars on the north side of the Airport would be via the North Side Road from Highway 218 and Del Rey Gardens Drive instead of Airport Road through the CONA neighborhood. The Port-a-Port T-Hangars and the Navy Flying Club Hangar are already located on the north side of the Airport. Under this alternative, they would be relocated from their current location but would still be on the north side of the

[6] As discussed in detail in Sections 2.5.2 and 2.6.1 of the EIR, the relocated commercial terminal is proposed to contain approximately 100,000 square feet of building space to address efficiency issues of the existing terminal. Based on preliminary analysis of the proposed commercial terminal's functional spaces, approximately eight percent of the building would be used for administrative functions and 16 percent for building systems and support areas. The remaining 76 percent of the building would be used for arrival and departure functions, the main concourse, and other public spaces. Additional commercial apron depth would be provided to allow the proper parking of the larger aircraft currently operating at the Airport without penetrations of the airfield's safety areas. The existing commercial apron depth does not meet standards. No new vehicular trips are associated with the terminal relocation; the number of aircraft gate positions (five) would remain the same as the existing terminal. Future enplanement levels at the Airport are related to regional and national markets and overall trends in aviation, and are included in the future scenarios of this report as discussed in Sections 5.1 and 7.1.

Airport. However, the construction of the North Side Road would mean traffic generated by the Port-a-Port T-Hangars and the Navy Flying Club would be redistributed to the north side of the Airport via the North Side Road from Highway 218 and Del Rey Gardens Drive instead of Airport Road through the CONA neighborhood.

It is important to note that both the Proposed Project Short-Term and the Alternative 1 Project Short-term scenarios would generate the same amount (and a very small amount) of net new trips on the study road network. The major difference between these project scenarios is how the trips would be distributed (or re-distributed) throughout the study network.

There are also two alternatives for the long-term projects; the Proposed Project Long-Term and the Alternative 1 Project Long-Term. Traffic associated with the Proposed Project and Alternative 1 Project components listed above for the short-term scenarios would also be included in the long-term scenarios, with the following additions:

Proposed Project Long-Term

- Addition of 106 new GA hangars on the north side of the Airport
- Long-Term Non-Aviation Development on the north side of the Airport
- Long-Term Non-Aviation Development on the south side of the Airport
- Redevelopment of the existing airport industrial area (no change in land use intensity)
- North Side Road construction
- Perimeter fence upgrades
- Maintenance building construction
- Runway Protection Zone (RPZ) land acquisition (20 acres)
- RPZ avigation easement (14 acres)
- Taxiway “B” extension to the Runway 28L threshold

Alternative 1 Project Long-Term

- Addition of 106 new GA hangars on the north side of the Airport
- Long-Term Non-Aviation Development on the north side of the Airport
- Long-Term Non-Aviation Development on the south side of the Airport
- Redevelopment of the existing airport industrial area (no change in land use intensity)
- Perimeter fence upgrades
- Maintenance building construction
- Runway Protection Zone (RPZ) land acquisition (20 acres)
- RPZ avigation easement (14 acres)
- Taxiway “B” extension to the Runway 28L threshold

It is important to note that both the Proposed Project Long-Term and the Alternative 1 Project Long-term scenarios would generate the same amount of net new trips on the study road network. There is no difference in the long-term “worst-case” buildout of the Airport between the two alternatives (other than the permanent location of the ARFF building on the north side of the Airport under the Alternative 1 Project scenario.

A project location map is included as **Figure 1. Figures 2** and **3** show the Proposed Project development concept and the Alternative 1 Project development concept, respectively.

1.2 Scope of Work

This study analyzes the potential traffic impacts of the proposed project on the surrounding roadway network. The study area was developed through consultation with Caltrans, Monterey County, and the cities of Monterey, Seaside, and Del Rey Oaks; and Program j.2.1 of the City of Monterey General Plan, which defines the traffic impact study area for proposed projects to include roadway segments where project traffic is expected to increase the existing traffic by two percent (2%) or more. The endpoints between relevant roadway segments were used to derive the study intersections. These facilities would potentially be impacted the greatest from the project.

The study includes the operational evaluation of the following intersections and a qualitative evaluation of the following roadway segments:

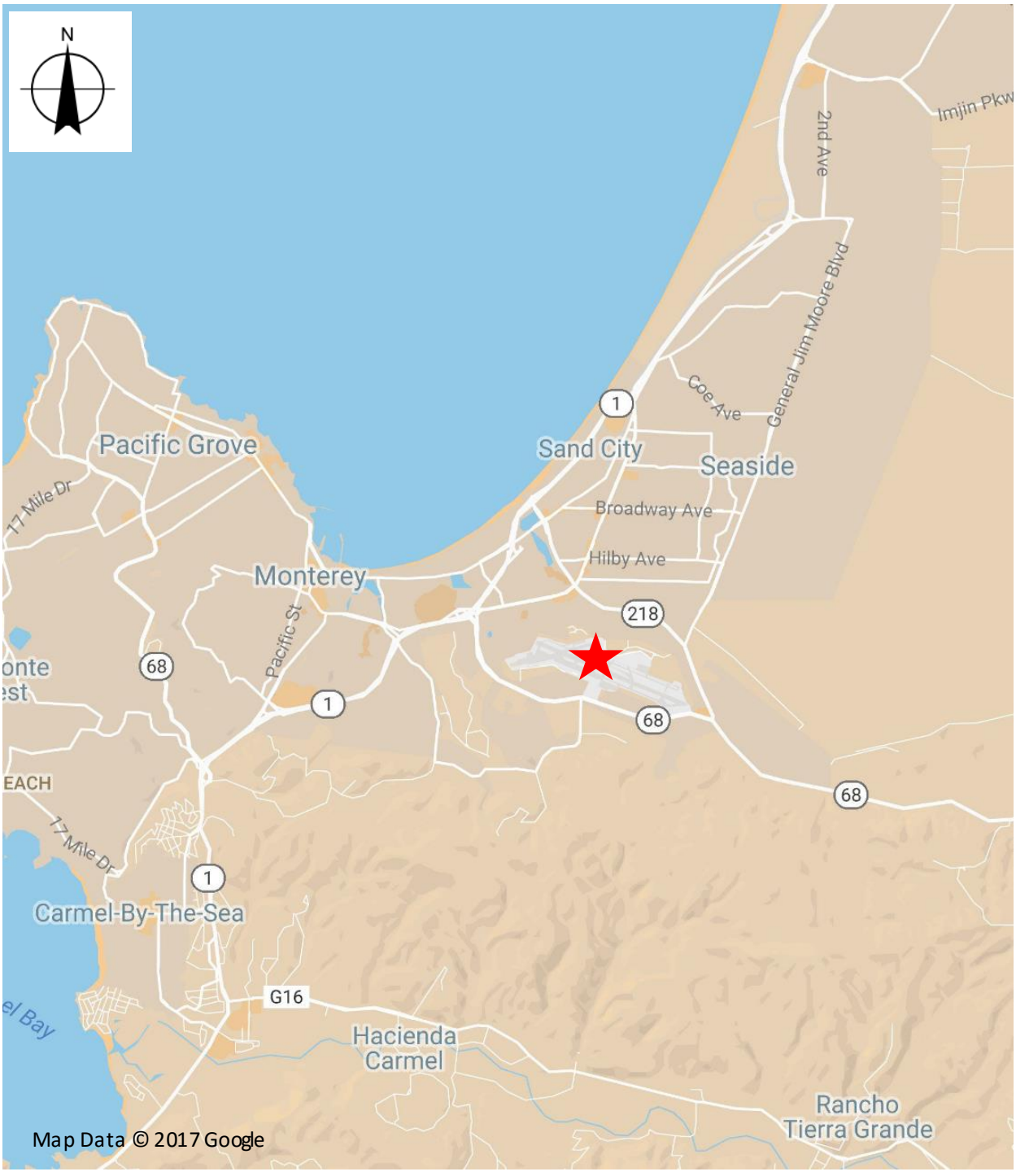
Intersections

1. Olmsted Road / Highway 68
2. Olmsted Road / Garden Road
3. Olmsted Way / Fred Kane Drive
4. Airport Road / Euclid Avenue
5. Airport Road / N. Fremont Street
6. Del Monte Boulevard / Highway 218
7. Highway 218 / Fremont Boulevard
8. Highway 218 / General Jim Moore Boulevard
9. Highway 218 / Del Rey Gardens Drive
10. Highway 218 / Ryan Ranch Road
11. Josselyn Canyon Road / Highway 68
12. Highway 218 / Highway 68
13. Ragsdale Drive / Highway 68
14. York Road / Highway 68
15. Pasadera Drive / Highway 68
16. Laureles Grade Road / Highway 68
17. Corral De Tierra Road / Highway 68
18. San Benancio Road / Highway 68
19. Torero Drive / Highway 68

Roadway Segments

1. Highway 68, from Highway 1 to Begin/End Freeway
2. Highway 68, from Begin/End Freeway to Josselyn Canyon Road
3. Highway 68, from Josselyn Canyon Road to Olmsted Road
4. Highway 68, from Olmsted Road to Highway 218
5. Highway 68, from Highway 218 to Ragsdale Drive
6. Highway 68, from Ragsdale Drive to Laureles Grade
7. Highway 68, from Laureles Grade to Corral De Tierra Road
8. Highway 68, from Corral De Tierra Road to Torero Drive
9. Highway 68, from Torero Drive to Begin/End Freeway

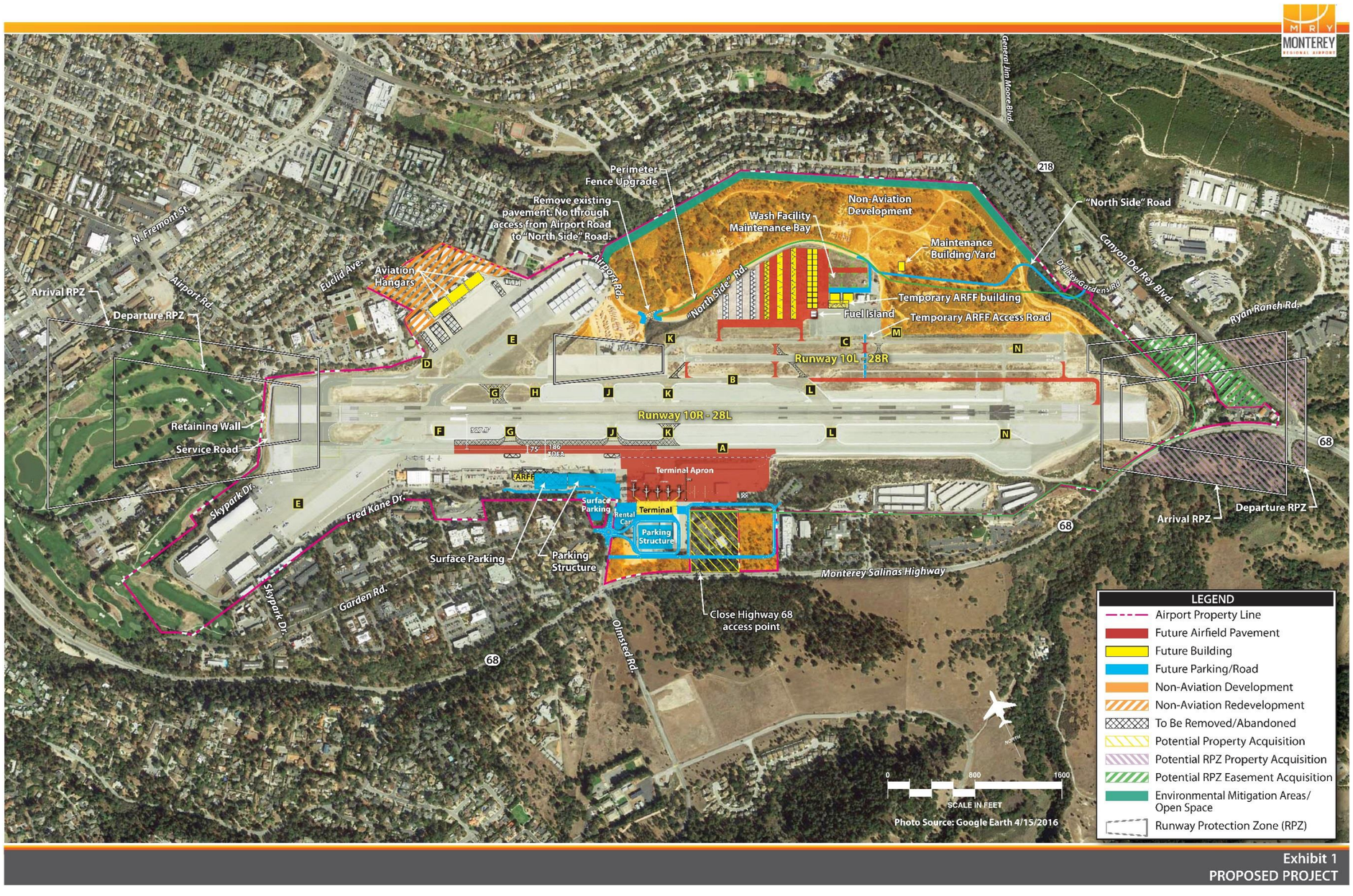
Figure 1: Project Location Map



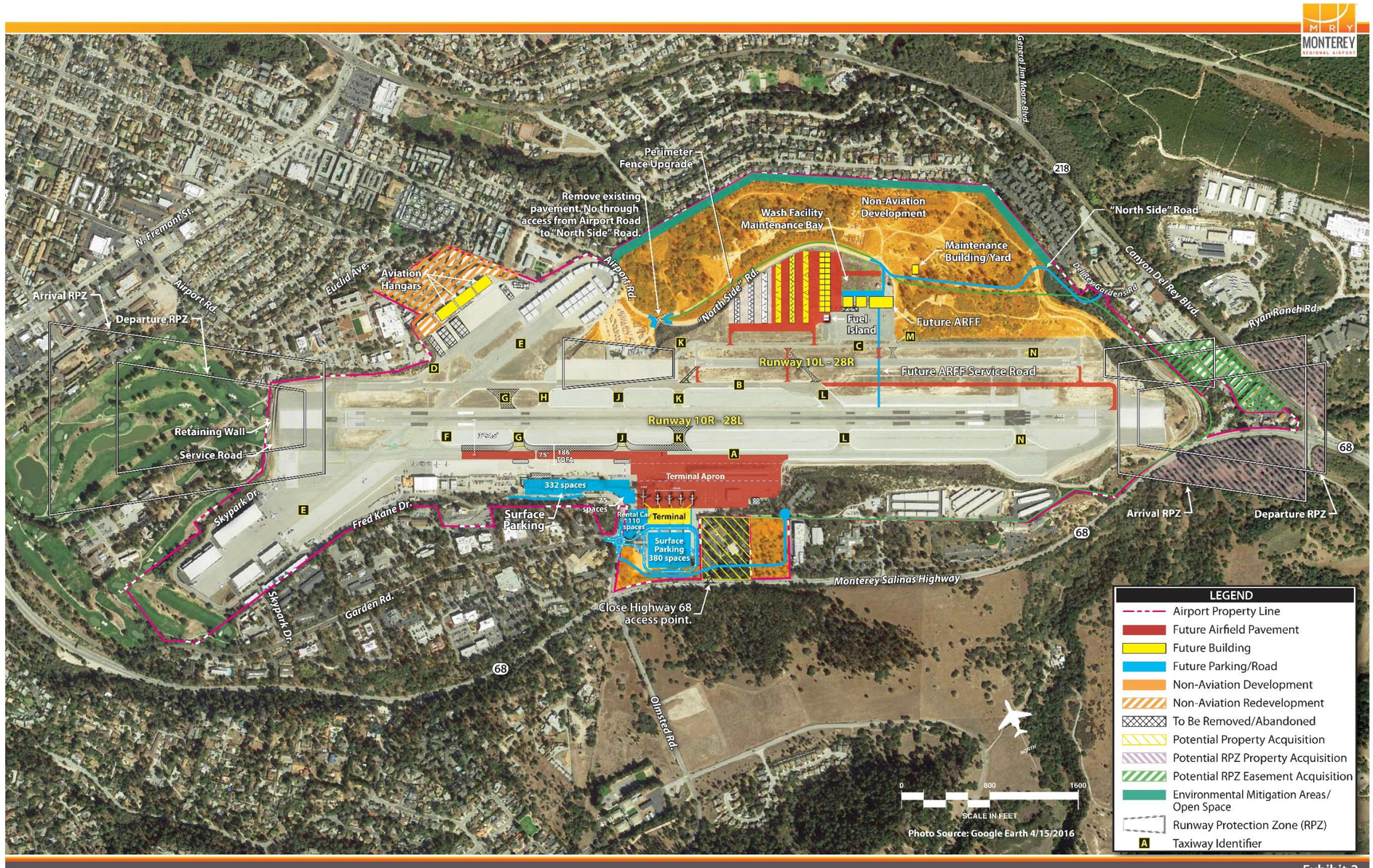
LEGEND

★ Proposed Project Location

Figure 2: Proposed Project Development Concept



Fire 3: Alternative 1 Project Development Concept



Beyond the limits of the study area, the project trips disperse onto numerous local streets or onto regional facilities. The impact of trips that disperse on the local road network lessens as they move away from the project site. The local streets and intersections included in the analysis were identified as potentially having the greatest impact from the project.

Analysis Scenarios

Weekday AM and PM peak hour traffic operations were analyzed for the following conditions:

- Existing Conditions
- Existing Plus Proposed Project Short-Term
- Existing Plus Alternative 1 Project Short-Term
- Background Conditions[7] (includes projected growth in enplanements)
- Background Plus Proposed Project Short-Term
- Background Plus Alternative 1 Project Short-Term
- Cumulative Conditions[8] (includes projected growth in enplanements)
- Cumulative Plus Proposed Project Long-Term
- Cumulative Plus Alternative 1 Project Long-Term

1.3 Traffic Operation Evaluation Methodologies and Level of Service Standards

At the commencement of this study, a Memorandum of Assumptions (MOA) was prepared that presented the analysis methodologies and assumptions that would be used in the study. The MOA included, but was not limited to, a description of the project and methods for data collection, operational analyses, project trip generation, distribution and assignment, future traffic volume forecasting, and significant impact criteria. The MOA was submitted to and approved by representatives at Caltrans, the Transportation Agency for Monterey County, the County of Monterey, and the Cities of Monterey, Seaside, and Del Rey Oaks. The MOA is included in **Appendix R**.

Intersection and road segment traffic operations were evaluated based on the Level of Service (LOS) concept, and the LOS standard adopted by the jurisdiction within which the intersection is located. LOS is a quantitative description of an intersection's operation, ranging from LOS A to LOS F. Level of service "A" represents free flow un-congested traffic conditions. Level of service "F" represents highly congested traffic conditions with what is commonly considered unacceptable delay to vehicles at intersections. The intermediate levels of service represent incremental levels of congestion and delay between these two extremes. LOS descriptions for signalized intersections are included in **Appendix A**. LOS descriptions for unsignalized intersections with two-way stop control are included in **Appendix B**. LOS descriptions for unsignalized intersections with all-way stop control are included in **Appendix C**. LOS descriptions for roundabout-controlled intersections are included in **Appendix D**.

Intersection traffic operations were evaluated using the Synchro© traffic analysis software (Version 9) using Highway Capacity Manual 2010 (HCM 2010) methodologies. Synchro© is widely used in the traffic engineering industry and its use is accepted by Caltrans, Monterey County, and the Cities of Monterey, Seaside, and Del Rey Oaks. The HCM is published by the Transportation Research Board (TRB). The TRB released the latest version of the HCM (HCM

[7] Background conditions include those trips generated by approved but not yet built projects in the project vicinity, which have been combined with existing traffic to obtain background traffic volumes.

[8] Cumulative conditions include regional 20-year growth forecasts as well as approved, but not yet built projects in the project vicinity.

6th Edition) in October 2016. Software enabling the use of HCM 6th Edition methodologies was not available at the commencement of this study. However, differences between the HCM 2010 and HCM 6th Edition in the analysis of signalized and unsignalized intersections are negligible and would not affect the results or conclusions of this study.

Intersection operations are based upon the average vehicular delay at the intersection. The average delay is then correlated to a level of service. For one-way and two-way stop controlled intersections, the vehicle delay for side street traffic is analyzed. LOS for each side street movement is based on the distribution of gaps in the major street traffic stream and driver judgment in selecting gaps. Improvements may be warranted when a side street approach reaches LOS F for one-way and two-way stop controlled intersections. When using the HCM 2010 methods for the analysis of signalized intersections, the overall intersection delay is used to determine LOS. The 95th percentile vehicle queues at all signalized study intersections were estimated using the Synchro© traffic analysis software (Version 9). The 95th percentile queue lengths (in feet) are queues that have a 5-percent probability of being exceeded during the analysis period.

A saturation flow rate of 1,600 vehicles per lane per hour was used for the eastbound and westbound through movements along Highway 68, as requested by Caltrans District 5 staff in an email dated May 17, 2017.

Existing conditions two-lane highway segment operations are based on percent time spent following (PTSF), per Exhibit 15-3 of the 2010 HCM. Multi-lane highway segment operations are based on density in passenger cars per mile per lane (pc/mi/ln) per Exhibit 14-4 of the 2010 HCM. LOS descriptions for two-lane highway and multi-lane highway road segments are included in **Appendix E**.

The study area covers the jurisdictions of multiple public agencies, including the Cities of Monterey; Del Rey Oaks; and Seaside, Caltrans, and Monterey County. Most of the study intersections are located on State Highways 68 and 218 and all the study road segments are located on State Highway 68. Therefore, the Caltrans level of service standard (i.e., the transition from LOS C to LOS D) is the level of service standard for these facilities. The only facilities in the study area that are not under the jurisdiction of Caltrans are the following intersections, which are under the jurisdiction of the City of Monterey. The City of Monterey level of service standard for these intersections is LOS D.

2. Garden Road/Olmsted Road
4. Airport Road/Euclid Avenue
5. N. Fremont Street/Airport Road

1.4 Modeling of Right Turn on Red (RTOR)

All the signalized study intersections allow right turns on red (RTOR), and these right turns can influence the intersection LOS calculations. There are several options to model right turns on red with different traffic analysis software packages, but the only method prescribed by the HCM for modeling RTOR is to reduce the input volumes to account for vehicles turning right on red. Where an exclusive right turn lane movement runs concurrent with a protected left turn phase from the cross street, the HCM allows for the right turn volume to be reduced by the number of shadowed left turners. However, the length of the right turn lane affects the number of vehicles that can turn right on red. This is because a short right turn lane can result in right turning vehicles being trapped in the queue with vehicles in the through lane. Due to the already-congested conditions on Highway 68, it will be assumed that no vehicles would be able to turn

right on red at the study intersections on Highway 68 between Josselyn Canyon Road and San Benancio Road.

1.5 SR 68 Scenic Highway Plan Study

In August 2017, the Transportation Agency for Monterey County (TAMC) completed the *SR 68 Scenic Highway Plan* study. The purpose of the study was to identify a Preferred Corridor Concept for Highway 68 to relieve congestion and improve safety and reliability along the corridor, with improvements phased in over a 20-year timeframe.

The study recommended the "Roundabout Corridor: Concept 1 – Modified" as the Preferred Corridor Concept. This alternative includes converting nine of the Highway 68 study intersections in this study to roundabout control.

Implementation of the Preferred Corridor Concept is expected to occur in the following four phases; Immediate-Term (0-3 years), Short-Term (4-6 years), Mid-Term (7-10 years), and Long-Term (11-20 years). The Immediate-Term phase includes refining the preliminary roundabout layouts, coordinating with Caltrans on a corridor-wide Project Initiation Document, and creating a Highway 68 Improvement Corridor Team with Caltrans, TAMC, the County of Monterey, the Monterey Peninsula Airport District, and the cities of Monterey, Del Rey Oaks, and Seaside.

The nine study intersections and the proposed phase for conversion to roundabout control are listed below.

Intersection #1 – Olmsted Road / Highway 68, Short-Term (4-6 years)
Intersection #11 – Josselyn Canyon Road / Highway 68, Mid-Term (7-10 years)
Intersection #12 – Highway 218 / Highway 68, Short-Term (4-6 years)
Intersection #14 – York Road / Highway 68, Mid-Term (7-10 years)
Intersection #15 – Pasadera Drive / Highway 68, Mid-Term (7-10 years)
Intersection #16 – Laureles Grade Road / Highway 68, Mid-Term (7-10 years)
Intersection #17 – Corral De Tierra Road / Highway 68, Short-Term (4-6 years)
Intersection #18 – San Benancio Road / Highway 68, Short-Term (4-6 years)
Intersection #19 – Torero Drive / Highway 68, Short-Term (4-6 years)

In addition, the Airport is proposing to convert the following study intersection to a roundabout:

Intersection #2 – Olmsted Road / Garden Road

As a result, in addition to being analyzed with their existing lane configurations and intersection controls, these intersections were also analyzed as roundabouts under all short-term project analysis scenarios. Graphical representations of the proposed roundabout layouts from the *SR 68 Scenic Highway Plan* study are included in **Appendix F**. These layouts were used as a starting point for the roundabout analyses in this report. When necessary, the proposed roundabout layouts were modified to achieve acceptable operations under each analysis scenario. The modified roundabout layouts are also included in **Appendix F**.

1.6 Highway 218 Corridor Study

The Transportation Agency for Monterey County (TAMC) is in the beginning stages of a Highway 218 corridor study. The study will engage the community, analyze existing conditions, identify bicycle and pedestrian improvements, and develop multimodal conceptual improvements along the corridor and at major intersections. The study will also analyze the potential of Caltrans relinquishing the corridor to local agencies.

The purpose of the study is to improve access to the land uses along the corridor and to create a more “complete” corridor that would serve a broad range of users and modes of transportation.

1.7 North Fremont Street Specific Plan

The *North Fremont Specific Plan* is a guide for future mixed-use development along North Fremont Street between Highway 1 and Canyon Del Rey Boulevard (Highway 218). In addition to establishing architectural design standards and guidelines, the plan encourages the implementation of bicycle, pedestrian, and transit improvements, which will be implemented as development occurs along the corridor.

The following improvements are envisioned for the North Fremont Street corridor:

- Expanded Sidewalks
- Improved / Shorter Crosswalks
- Pedestrian Plazas and Walkways
- Inter-Block Walkways
- Pedestrian Landscape Buffers
- Benches
- Pedestrian-Scale Sidewalk Lighting
- Parking Hidden from Street
- Enhanced Connections to Bus Transportation
- Improved Bus Headways
- Class II Bike Lanes
- Enhanced Bicycle Connections
- Bike Racks

The timing of these improvements is dependent on market conditions and the pace of future development.

1.8 Criteria for Project Impacts

Per current (2017) CEQA guidelines, a project may have a significant effect on the environment if it would cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system. In accordance with CEQA, impact criteria have been applied to the study intersections and road segments to determine if project-related increases in traffic are substantial in relation to the existing traffic load and capacity of the street system.

As described in Section 1.3, the study area falls within multiple jurisdictions. The impact criteria for the applicable jurisdictions are listed below and have been applied to the analysis results.

Caltrans Impact Criteria

Per the Caltrans *Guide for the Preparation of Traffic Impact Studies* (December 2002), Caltrans perceives an impact when there is any degradation in the performance measure below the

transition between LOS C/D. If a facility is currently operating at or below LOS D, then any trips added represent a potential impact, and the performance measure should be brought back to predevelopment conditions. While a single trip added to a degraded facility is not usually reflected in the performance measure, Caltrans reserves the ability to consider a single trip as an impact.

City of Monterey Impact Criteria

Per Program j.2.2 of the City of Monterey General Plan, project traffic impacts to City of Monterey roadway segments are considered significant if the project is expected to reduce a roadway segment to an unacceptable LOS or further degrade an already unacceptable LOS under cumulative traffic conditions during typical (i.e., non-summer) weekday traffic conditions.

The City of Monterey does not have impact criteria for intersections. Therefore, per consultation with the City of Monterey Traffic Engineer (in an email dated October 28, 2016), the Monterey County impact criteria were applied to City of Monterey intersections for determining traffic impacts from the Project.

Monterey County Impact Criteria

Per the Monterey County *Guide for the Preparation of Traffic Impact Studies* (March 2014), an impact at a signalized study intersection is defined to occur under the following conditions:

A significant impact would occur if an intersection operating at LOS A, B, C or D degrades to E or F. For intersections already operating at unacceptable level E, a significant impact would occur if a project adds 0.01 or more during peak hours to the critical movement's volume-to-capacity ratio. If the intersection is already operating at LOS F, any increase (one vehicle) in the critical movement's volume-to-capacity ratio is considered significant.

An impact at an unsignalized study intersection is defined to occur under the following conditions:

An impact would occur if an all-way stop controlled or roundabout controlled intersection, based on the average delay, operates at LOS F or any traffic signal warrant is met.

An impact would occur if a two-way stop controlled intersection, based on the worst approach delay, operates at LOS F or any traffic signal warrant is met.

1.9 Construction Impact Analysis Methodology

Caltrans and the Cities of Monterey, Seaside, and Del Rey Oaks do not assign specific thresholds for determining construction impacts to their transportation facilities. Presumably, this is because construction impacts are temporary and impacts associated with project construction are typically less than those caused by the daily operations of the project itself, and those impacts would be mitigated by the implementation of the proposed project's mitigation measures. The number of daily construction vehicle trips generated by the project were estimated and compared to existing traffic volumes to provide a sense of the magnitude of construction vehicle trips on the study road network in relation to existing traffic volumes.

2 Existing Traffic Conditions

This section describes the existing street network relevant to the Proposed Project and the existing operational traffic conditions.

2.1 Existing Roadway Network

The key roadways in the vicinity of the proposed project are described below. Highway 1, Highway 218, and Highway 68 provide regional access to the project site.

Del Monte Avenue – Del Monte Boulevard is a major four-lane arterial that runs through the cities of Monterey and Seaside. Del Monte Boulevard is a four-lane divided arterial in the vicinity of the project with a posted speed limit of 35 mph.

N. Fremont Street – Fremont Boulevard is a major four-lane divided arterial that runs through the cities of Monterey and Seaside. N. Fremont Street is a four-lane divided arterial in the vicinity of the project, and provides access to the north side of the Airport via the Casanova Oak Knoll neighborhood (referred to as CONA). The posted speed limit is 35 mph in the City of Monterey and 30 mph in the City of Seaside.

Highway 68 (SR 68) connects State Route 1 in Monterey and US 101 in Salinas. It is a 2-lane rural highway from east of Highway 1 to west of Highway 218 (where it provides access to the south side of the Airport, including the commercial terminal, via Olmsted Road), and a 4-lane highway from Highway 218 to Ragsdale Drive. Between Ragsdale Drive and the Portola Drive interchange, Highway 68 is a 2-lane highway. Highway 68 is a 4-lane freeway between the Portola Drive and Spreckels Boulevard interchanges, and a 4-lane divided highway from the Spreckels Boulevard interchange to Blanco Road in the City of Salinas. It serves as a commuter route between Salinas and the Monterey Peninsula, and functions as a scenic tourist route to the Monterey Peninsula. The posted speed limit on Highway 68 is 55 mph.

Highway 218 (SR 218) is a two-lane highway that connects Highway 68 and Highway 1. It provides access to Del Rey Oaks, Sand City and Seaside. It is designated as “Canyon Del Rey Road” in Del Rey Oaks and “Canyon Del Rey Boulevard” in Seaside. There is currently no access to the Airport via Highway 218. The posted speed limit on Highway 218 is 45 mph.

Olmsted Road is a two-lane collector running in a north-south direction. It provides access to the Monterey Regional Airport north of Highway 68, and residential development south of Highway 68. The speed limit on Olmsted Road is unsigned, except for a 25-mph school zone located about 1,200 feet south of Highway 68.

General Jim Moore Boulevard is a major arterial within the Cities of Marina, Seaside, and Del Rey Oaks. In the immediate project vicinity, General Jim Moore Boulevard is a two-lane, undivided roadway in the City of Del Rey Oaks. General Jim Moore Boulevard becomes a four-lane divided arterial in the City of Seaside, approximately 1,500 feet north of Highway 218. The speed limit is 35 mph in Del Rey Oaks and 45 mph in Seaside.

Airport Road is a two-lane collector road that provides access to the Monterey Regional Airport, the naval research and meteorological center, aviation and non-aviation light industrial land uses, and the Casanova Oak Knoll neighborhood. North of N. Fremont Street, Airport Road

becomes Dela Vina Avenue, a two-lane collector road that provides access to the residential neighborhoods on the north side of N. Fremont Street. The posted speed limit on Airport Road is 25 mph.

Del Rey Gardens Drive is a local access road that serves a small residential area as well as some light industrial land uses. The proposed North Side Road would connect to Highway 218 via Del Rey Gardens Drive.

Josselyn Canyon Road is a two-lane road that provides access to low-density residential development as well as a church and a convalescent hospital. The posted speed limit on Josselyn Canyon Road is 25 mph.

Ragsdale Drive is four lanes in the vicinity of the study area and provides access to the Ryan Ranch business park. The posted speed limit on Ragsdale Drive is 35 mph.

York Road provides access to single unit housing developments as well as the Laguna Seca and Ryan Ranch Business Parks and York School, all located north of Highway 68. The posted speed limit on York Road is 25 mph.

Pasadera Drive is a private road north of Highway 68. It provides access to the Nicklaus Club – Monterey (formerly Pasadera Country Club) and its associated single unit housing development. The posted speed limit on Pasadera Drive is 25 mph.

Boots Road provides access to a small number of residential developments south of Highway 68. The posted speed limit on Boots Road is 25 mph.

Laureles Grade Road is a two-lane north/south county road that connects Highway 68 with the Carmel Valley and provides access to several residential developments. The posted speed limit on Laureles Grade Road is 45 mph.

Corral de Tierra Road is a two-lane collector road with a speed limit of 35 mph. It provides access to residential developments.

San Benancio Road is a two-lane collector road with a speed limit of 35 mph. It provides access to residential developments.

Torero Drive is a two-lane road that provides access to the Toro Park neighborhood north of Highway 68. The speed limit on Torero Drive is unsigned.

2.2 Existing Traffic Volumes

Weekday AM and PM peak period turning movement counts were conducted at the study intersections during typical commute periods (i.e., from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM) in January 2015, June 2015, February 2016, and November 2016. The counts included cars, trucks, buses, bicyclists, and pedestrians. The weekday AM and PM peak hour volumes were derived from these counts. The turning movement count data is included in **Appendix G**.

The February 2016 counts were conducted by Kimley-Horn for TAMC for the *SR 68 Scenic Highway Plan* study. These counts were conducted at the study intersections along Highway 68 and were provided to Mott MacDonald for use in this study. Mott MacDonald conducted counts in the study area in January and June 2015 for the *Monterey Bay Operations and Maintenance Facility Project Traffic Impact Analysis* and the *Del Rey Oaks RV Park Traffic Impact Analysis* traffic studies and in November 2016 for this study. Peak hour segment volumes were derived from the peak hour intersection counts. Traffic counts conducted in the CONA neighborhood are discussed in Section 2.6.

The intersection turning movement counts along Highway 68 for the above studies were compared and, to present a more conservative analysis, the highest count at each intersection was used in the analysis. Traffic volumes in January and February tend to be lower than average. As a result, traffic volumes that were collected in January and February were increased by 4.9% to represent average conditions. The 4.9% seasonal adjustment factor is consistent with monthly adjustment factors in the project study area, which are included in the *Annual Average Daily Traffic 2016* booklet published by the Monterey County Department of Public Works Traffic Engineering division.

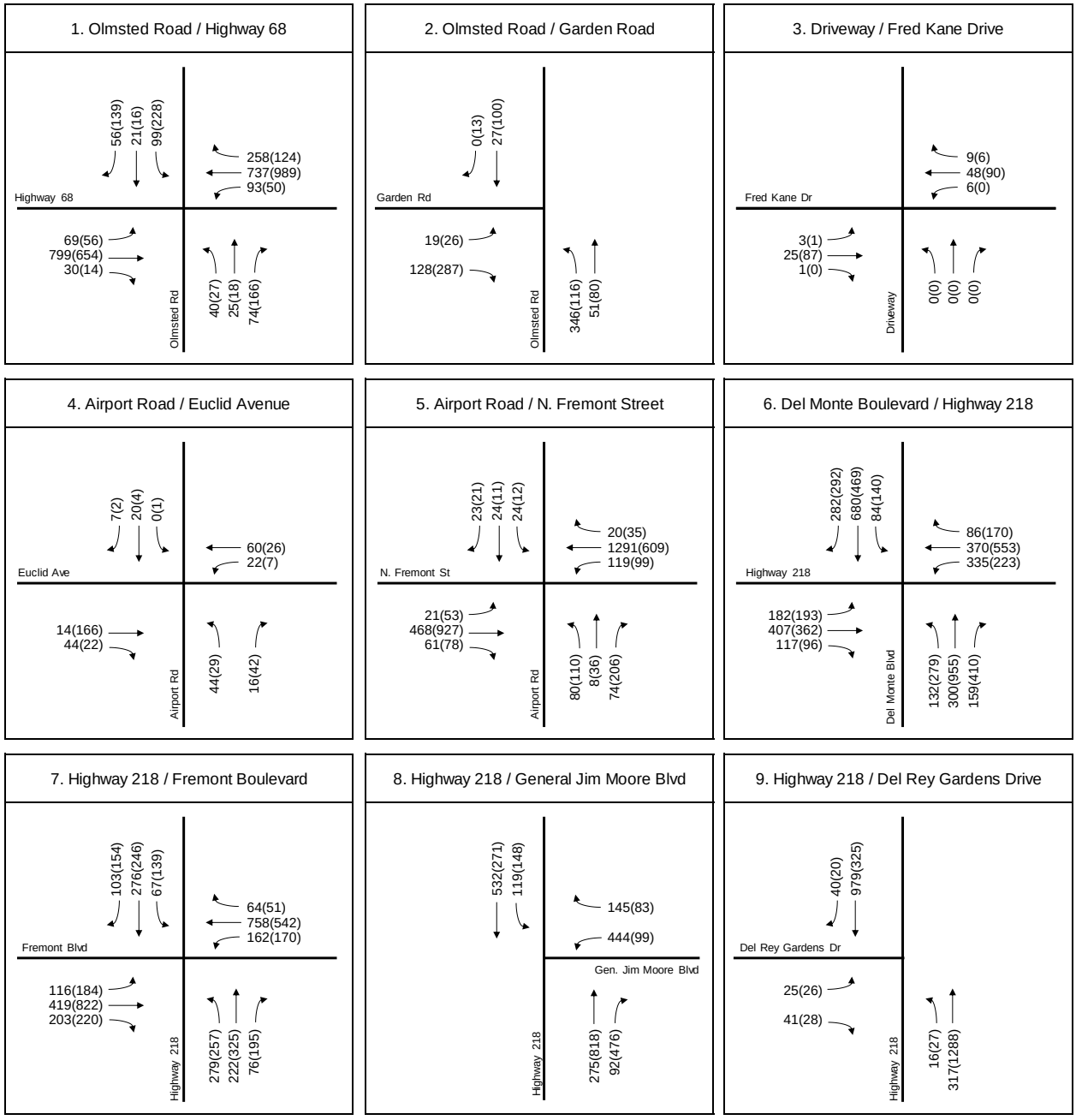
The Existing conditions weekday AM and PM peak hour traffic volumes at the study intersections are shown in **Figures 4** and **5**.

Turning movement counts were also conducted at other selected intersections around the Airport. These counts were used to develop traffic reassignments under Project conditions.

The Casanova Oak Knoll neighborhood is located northwest of the Airport. Twenty-four-hour roadway segment counts were conducted at various times of the year at selected locations around the Airport and within the CONA neighborhood to identify existing traffic circulation patterns, and to quantify the relative percentage of traffic on Airport Road that is attributable to the Airport, the naval research and meteorological center, and local neighborhood activities. Additional discussion regarding traffic conditions and data collection efforts in the CONA neighborhood is included in Section 2.6.

A map showing the approximate boundaries of the CONA neighborhood and its location relative to the Airport is shown in **Figure 6**.

Figure 4: Existing AM & PM Peak Hour Volumes (1 – 9)



XX (YY) = AM (PM)

Count Dates:

January 2015 - Intersections 7, 8, 10
June 2015 - Intersection 6
Februrary 2016 - Intersections 1, 11-19
November 2016 - Intersections 2-5, 9

Figure 5: Existing AM & PM Peak Hour Volumes (10 – 19)

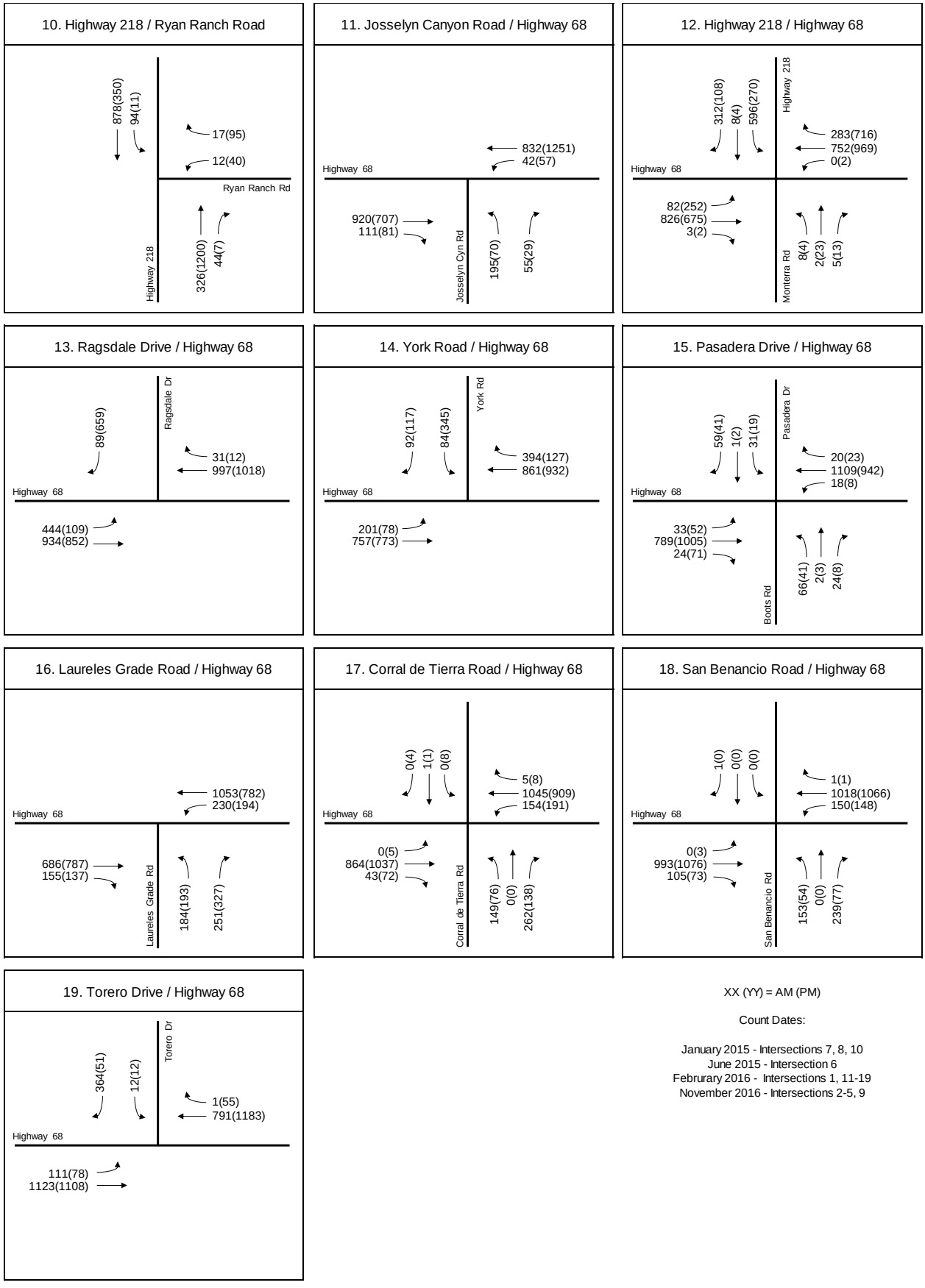
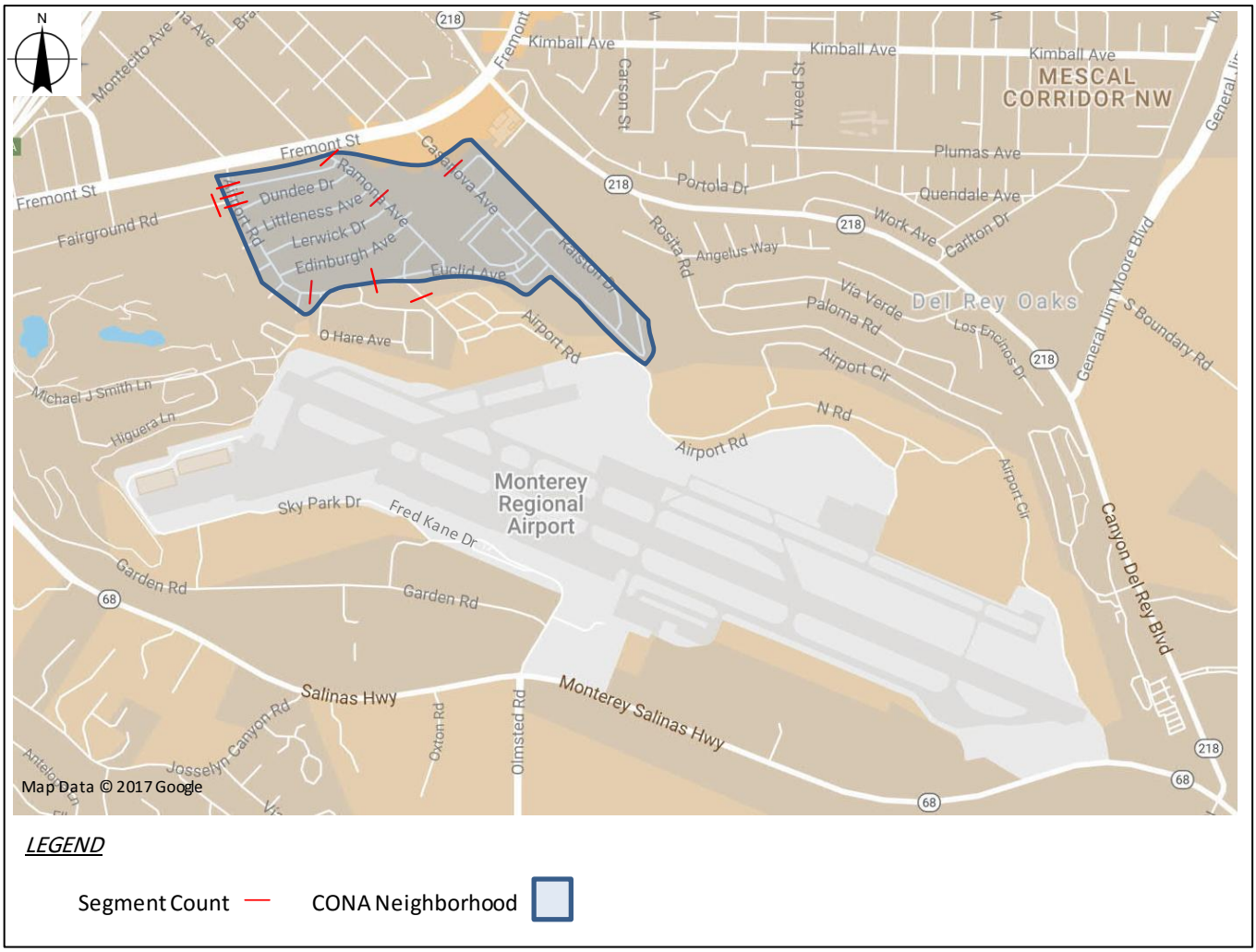


Figure 6: Location of CONA Neighborhood



2.3 Existing Intersection Operations

Based on the City of Monterey and Caltrans level of service standards, the following study intersections operate deficiently under Existing traffic conditions:

Intersection #1 – Olmsted Road / Highway 68

Intersection #6 – Del Monte Boulevard / Highway 218

Intersection #7 – Highway 218 / Fremont Boulevard

Intersection #11 – Josselyn Canyon Road / Highway 68

Intersection #14 – York Road / Highway 68

Intersection #15 – Pasadera Drive / Highway 68

Intersection #17 – Corral De Tierra Road / Highway 68

Intersection #18 – San Benancio Road / Highway 68

Intersection #19 – Torero Drive / Highway 68

Existing intersection LOS are summarized in **Tables 1** and **2**. LOS calculation worksheets are included in **Appendix H**. Vehicle queue estimates are included in **Appendix I**.

Table 1: Existing Conditions Intersection LOS (1 – 9)

Scenario # →						1	
	N-S Street	E-W Street	Int Control	LOS Std	Peak Hour	Existing	
						Delay	LOS
1	Olmsted Road	Highway 68	Signal	C/D	AM	51.0	D
					PM	126.0	F
2	Olmsted Road	Garden Road	One-Way Stop	D	AM	10.7	B
					PM	10.8	B
3	Olmsted Way	Fred Kane Drive	All-Way Stop	D	AM	7.6	A
					PM	8.2	A
4	Airport Road	Euclid Avenue	Two-Way Stop	D	AM	9.8	A
					PM	10.1	B
5	Airport Road	N. Fremont Street	Signal	D	AM	11.7	B
					PM	14.2	B
6	Del Monte Boulevard	Highway 218	Signal	C/D	AM	34.3	C
					PM	38.9	D
7	Highway 218	Fremont Boulevard	Signal	C/D	AM	31.3	C
					PM	46.1	D
8	Highway 218	General Jim Moore Blvd	Signal	C/D	AM	17.0	B
					PM	15.2	B
9	Highway 218	Del Rey Gardens Drive	One-Way Stop	C/D	AM	24.1	C
					PM	19.0	C

Notes:

1 Signal, roundabout and all-way stop delay is average overall delay in seconds per vehicle (sec/veh).

2 One- and two-way stop delay is worst approach delay in seconds per vehicle (sec/veh).

3 LOS highlighted in red indicates intersection operating below level of service standard.

4 * = delay greater than 300 seconds.

5 LOS in bold box indicates project impact.

Table 2: Existing Conditions Intersection LOS (10 – 19)

Scenario # →						1	
	N-S Street	E-W Street	Intersection Control	LOS Standard	Peak Hour	Existing	
						Delay	LOS
10	Highway 218	Ryan Ranch Road	Signal	C/D	AM	6.9	A
					PM	16.6	B
11	Josselyn Canyon Road	Highway 68	Signal	C/D	AM	44.5	D
					PM	19.8	B
12	Highway 218	Highway 68	Signal	C/D	AM	24.3	C
					PM	29.7	C
13	Ragsdale Drive	Highway 68	Signal	C/D	AM	12.3	B
					PM	4.2	A
14	York Road	Highway 68	Signal	C/D	AM	25.3	C
					PM	42.8	D
15	Pasadera Drive	Highway 68	Signal	C/D	AM	47.5	D
					PM	14.5	B
16	Laureles Grade Road	Highway 68	Signal	C/D	AM	27.2	C
					PM	31.7	C
17	Corral de Tierra Road	Highway 68	Signal	C/D	AM	35.2	D
					PM	57.8	E
18	San Benancio Road	Highway 68	Signal	C/D	AM	70.3	E
					PM	18.9	B
19	Torero Drive	Highway 68	One-Way Stop	C/D	AM	*	F
					PM	111.3	F

Notes:

1 Signal, roundabout and all-way stop delay is average overall delay in seconds per vehicle (sec/veh).

2 One- and two-way stop delay is worst approach delay in seconds per vehicle (sec/veh).

3 LOS highlighted in red indicates intersection operating below level of service standard.

4 * = delay greater than 300 seconds.

2.4 Existing Road Segment Operations

Existing conditions weekday AM and PM peak hour road segment traffic volumes were derived from the intersection traffic volumes discussed in Section 2.2.

Road segment levels of service are summarized in **Table 3**. LOS calculation worksheets are included in **Appendix J**. The road segment levels of service in Table 3 are consistent with the results of the *SR 68 Scenic Highway Plan* study.

Based on the level of service standards, the following study road segments operate deficiently under Existing traffic conditions:

Segment #2 – Highway 68, from Begin/End Freeway to Josselyn Canyon Road

Segment #3 – Highway 68, from Josselyn Canyon Road to Olmsted Road

Segment #4 – Highway 68, from Olmsted Road to Highway 218

Segment #6 – Highway 68, from Ragsdale Drive to Laureles Grade

Segment #7 – Highway 68, from Laureles Grade to Corral De Tierra Road

Segment #8 – Highway 68, from Corral De Tierra Road to Torero Drive

Segment #9 – Highway 68, from Torero Drive to Begin/End Freeway

Table 3: Existing Conditions Road Segment Levels of Service

	Roadway Segment From - To		Roadway Type	Direction	LOS Standard	Existing Conditions					
						AM Peak			PM Peak		
						Volume	Density / PTSF	LOS	Volume	Density / PTSF	LOS
1	Highway 68	Highway 1 - Begin/End Freeway	4-Lane Freeway	EB	C/D	983	10.5	A	794	7.7	A
				WB		979	10.5	A	1,217	11.8	B
2	Highway 68	Begin/End Freeway - Josselyn Cyn Rd	2-Lane Highway	EB	C/D	983	89.9	E	734	79.8	D
				WB		979	90.4	E	1,217	92.2	E
3	Highway 68	Josselyn Cyn Rd - Olmsted Rd	2-Lane Highway	EB	C/D	919	88.8	E	752	80.6	D
				WB		854	87.2	E	1,196	93.7	E
4	Highway 68	Olmsted Rd - Highway 218	2-Lane Highway	EB	C/D	874	87.2	E	1,162	92.1	E
				WB		1,049	91.1	E	1,066	90.2	E
5	Highway 68	Highway 218 - Ragsdale Dr	Multilane Highway	EB	C/D	1,368	13.6	B	975	9.9	A
				WB		1,006	10.0	A	1,639	16.7	B
6	Highway 68	Ragsdale Dr - Laureles Grade	2-Lane Highway	EB	C/D	875	87.0	E	1,114	91.8	E
				WB		1,256	94.1	E	1,009	89.8	E
7	Highway 68	Laureles Grade - Corral de Tierra Rd	2-Lane Highway	EB	C/D	1,223	93.7	E	1,181	91.4	E
				WB		937	88.5	E	971	87.4	E
8	Highway 68	Corral de Tierra Rd - Torero Dr	2-Lane Highway	EB	C/D	1,234	94.2	E	1,230	92.4	E
				WB		1,165	93.3	E	1,177	91.5	E
9	Highway 68	Torero Dr - Begin/End Freeway	2-Lane Highway	EB	C/D	1,197	94.5	E	1,167	91.5	E
				WB		676	80.5	D	1,180	91.5	E

Notes:
1. Freeway segment LOS based on density in passenger cars per mile per lane (pc/mi/ln).
2. Two-Lane Highway segment LOS based on Percent Time Spent Following (PTSF).
3. Multilane Highway segment LOS based on density in passenger cars per mile per lane (pc/mi/ln).
4. LOS = Level of Service
5. LOS highlighted in red indicates segment operating below level of service standard.

2.5 Existing Bicycle, Pedestrian, and Transit Facilities

Bicycle Facilities

There are three basic types of bicycle facilities. Each type is described below:

Bike path (Class I) - A separate right-of-way designed for the exclusive use of cyclists and pedestrians, with minimal crossings for motorists.

Bike lane (Class II) - A lane on a regular roadway, separated from the motorized vehicle right-of-way by paint striping, designated for the exclusive or semi exclusive use of bicycles. Bike lanes allow one-way bike travel. Through travel by motor vehicles or pedestrians is prohibited, but crossing by pedestrians and motorists is permitted.

Bike route (Class III) - Provides shared use of the roadway, designated by signs or permanent markings, and shared with motorists.

Highway 68 is classified as a Caltrans Bike Route in the TAMC Monterey County 2011 Bike Map. The segment of Highway 68 in the study area currently has paved shoulders of varying widths that accommodate bicycles. Highway 68 is classified in the TAMC Bicycle and Pedestrian Master Plan (December 2011) to be a Class II bike facility with bike lanes in the future. Bicycle Network Maps from the TAMC Bicycle and Pedestrian Master Plan are included in **Appendix K**.

Bicycle facilities are provided sporadically on the other study roadways. The only Class II bike lanes are provided on Garden Road (Fairground Road to Olmsted Road) and Canyon Del Rey Road (east of Fremont Street to Highway 68). Two bike storage containers are provided for public use at the Airport terminal's east second level entrance. No other bicycle facilities are present near the Airport.

Pedestrian Facilities

Pedestrian facilities generally include sidewalks, crosswalks, and pedestrian signals. There is not a significant amount of foot-traffic near the Project and therefore sidewalks are not provided along Highway 68. Sidewalks are provided along parts of Olmsted Road near the airport surface parking area opposite the current terminal building and on Fred Kane Drive along the frontage of the current terminal building. There are no continuous pedestrian sidewalks/pathways to the airport terminal area from outside of the airport. Sidewalks are not provided on Canyon Del Rey Boulevard (Highway 218) between Fremont Street and Highway 68 or along many of the other intersecting roadways on Highway 68 east of the airport. Further away from the project site, there are sidewalks along parts of Garden Road west of Olmsted Road, on Canyon Del Rey Boulevard (Highway 218) in Seaside, and along Fremont Street[9] and much of Airport Road in Monterey. Crosswalks and pedestrian signal phasing are provided at all the signalized study intersections.

Transit Facilities

Monterey-Salinas Transit (MST) provides fixed-route bus service in Monterey County and Peninsula cities. Lines 7, 56 and 93 provide service to the airport terminal via Highway 68 and Olmsted Road. Line 7 provides service between Monterey and Del Rey Oaks, Line 56 traverses between Salinas and Monterey, and Line 93 travels between downtown Monterey and the Ryan

[9] The *North Fremont Specific Plan* is a guide for future mixed-use development along North Fremont Street between Highway 1 and Canyon Del Rey Boulevard (Highway 218). In addition to establishing architectural design standards and guidelines, the plan encourages the implementation of bicycle, pedestrian, and transit improvements, which will be implemented as development occurs along the corridor.

Ranch Business Park. However, these three lines only operate during limited times of day. Line 7 operates only four times per day on weekends only, Line 56 operates only three times per day on weekdays only, and Line 93 provides hourly and bi-hourly service on weekdays only.

Various transit lines also service the area in the vicinity of Airport Road. Line 94 provides service between Carmel and Sand City via Airport Road, and has bus stops in each direction of Euclid Avenue between Airport Road and Casanova Avenue. However, this route only services the area during the late morning and mid-afternoon. Lines 11, 18, and three Jazz express buses (Lines Jazz A, Jazz B, and Jazz C) provide more regular transit service between Sand City/Marina and Monterey. All these lines traverse N. Fremont Street between Airport Road and Casanova Avenue and provide either limited weekday or daily hourly service. Bus stops for these routes are located near the N. Fremont Street intersections with Airport Road and Ramona Avenue. To encourage the use of alternative fuel vehicles, the airport has three Level 2 electric vehicle (EV) charging stations which are in the customer parking lots. One of these charging stations is free of charge.

2.6 Existing CONA Neighborhood Conditions

The Casanova Oak Knoll neighborhood in the City of Monterey (referred to as the CONA neighborhood) is located northwest of the Monterey Regional Airport and is bounded by N. Fremont Street to the north, Casanova Avenue to the east, and Airport Road-Euclid Avenue to the west and south. Access to the neighborhood is provided via Fairground Road, Airport Road, Ramona Avenue, and Casanova Avenue.

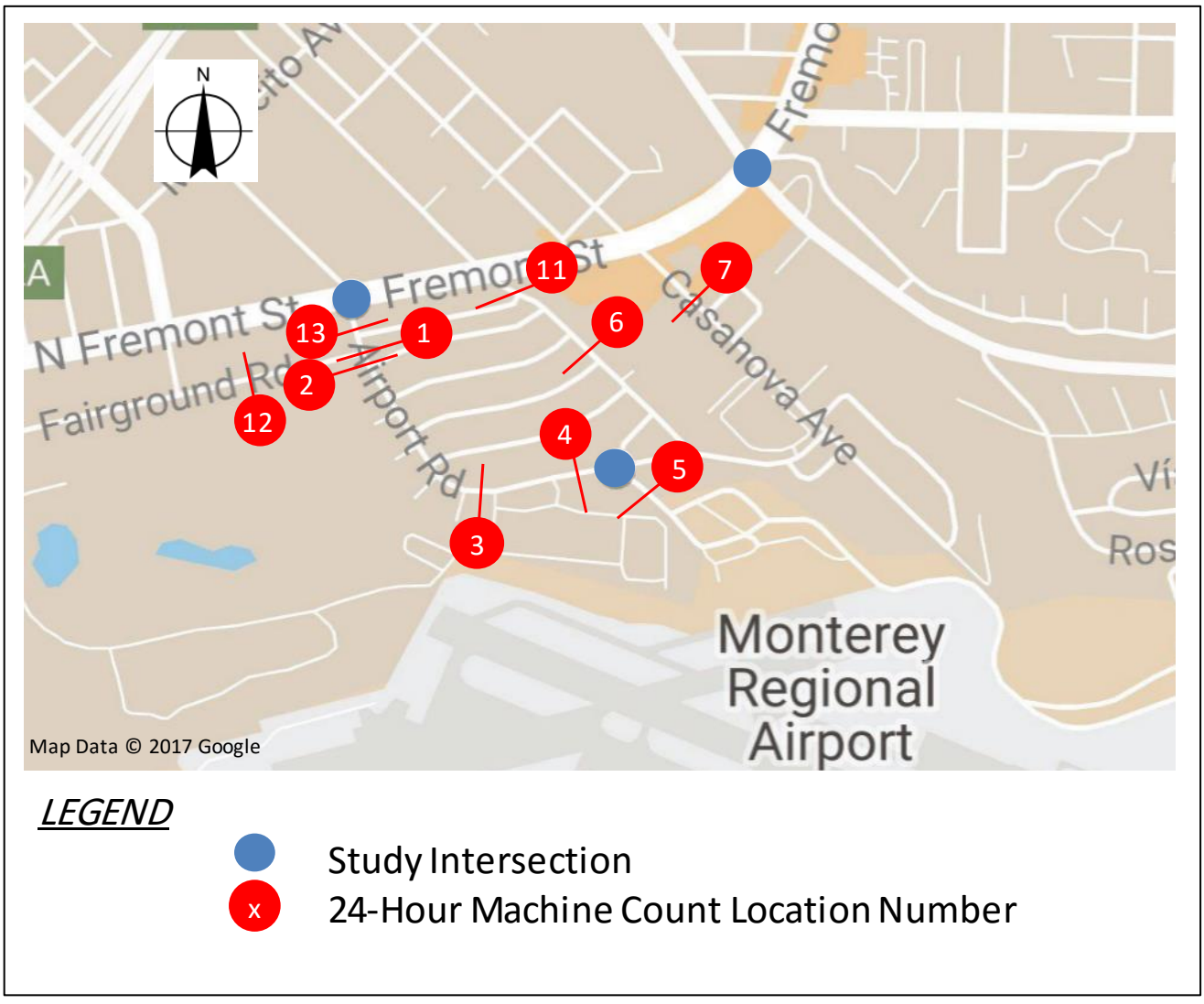
Although the CONA neighborhood is primarily residential, it is adjacent to various non-residential land uses that also generate traffic within the neighborhood. These land uses include the Monterey County fairgrounds, the naval research and meteorological center, and an industrial / commercial area in the northwest corner of the Airport. A map showing the neighborhood street system, the estimated number of residential units in the neighborhood, and the locations of primary adjacent land uses is included in **Figure 7**.

Figure 7: Casanova Oak Knoll Neighborhood Street System and Land Uses

Data Collection

Twenty-four-hour machine tube counts were conducted at selected locations in the CONA study area in November 2016 and February, May and June 2017. The 24-hour counts were conducted to identify various traffic characteristics within the neighborhood, including the degree of cut-through and commercial vehicle traffic, average vehicular speeds, and to assess the Project's potential impacts to the CONA neighborhood based on the Traffic Infusion on Residential Environment (TIRE) concept discussed in Section 4.1.7. A map showing the locations of the tube counts is shown in **Figure 8**. A summary of the 24-hour traffic count data is included in **Appendix L**. The 24-hour tube counts were used to determine the weekday (i.e., Tuesday, Wednesday, Thursday) average daily traffic (ADT) volumes in the CONA study area.

Figure 8: Twenty-Four-Hour Tube Count Locations



Daily Traffic Volumes

The general commute pattern in the CONA neighborhood tends to be heavier westbound in the morning and eastbound in the afternoon/evening. When motorists typically take the same route in the morning as they do in the afternoon/evening, the daily directional split is close to 50/50. The daily directional split of traffic on Fairground Road and Airport Road (north of Fairground Road) is approximately 60% eastbound/northbound and 40% westbound/southbound (see Locations #1, #12 and #13 in **Appendix L**). This is primarily due to higher eastbound/northbound traffic volumes between 12:00 p.m. and 5:00 p.m. The traffic pattern indicates that a considerable number of motorists take Fairground Road to Airport Road to N. Fremont Street in the afternoon/evening but do not use the same route in the morning. This could be due to motorists using Fairground Road and N. Fremont Street to avoid congestion on northbound Highway 1 in the afternoon/evening.

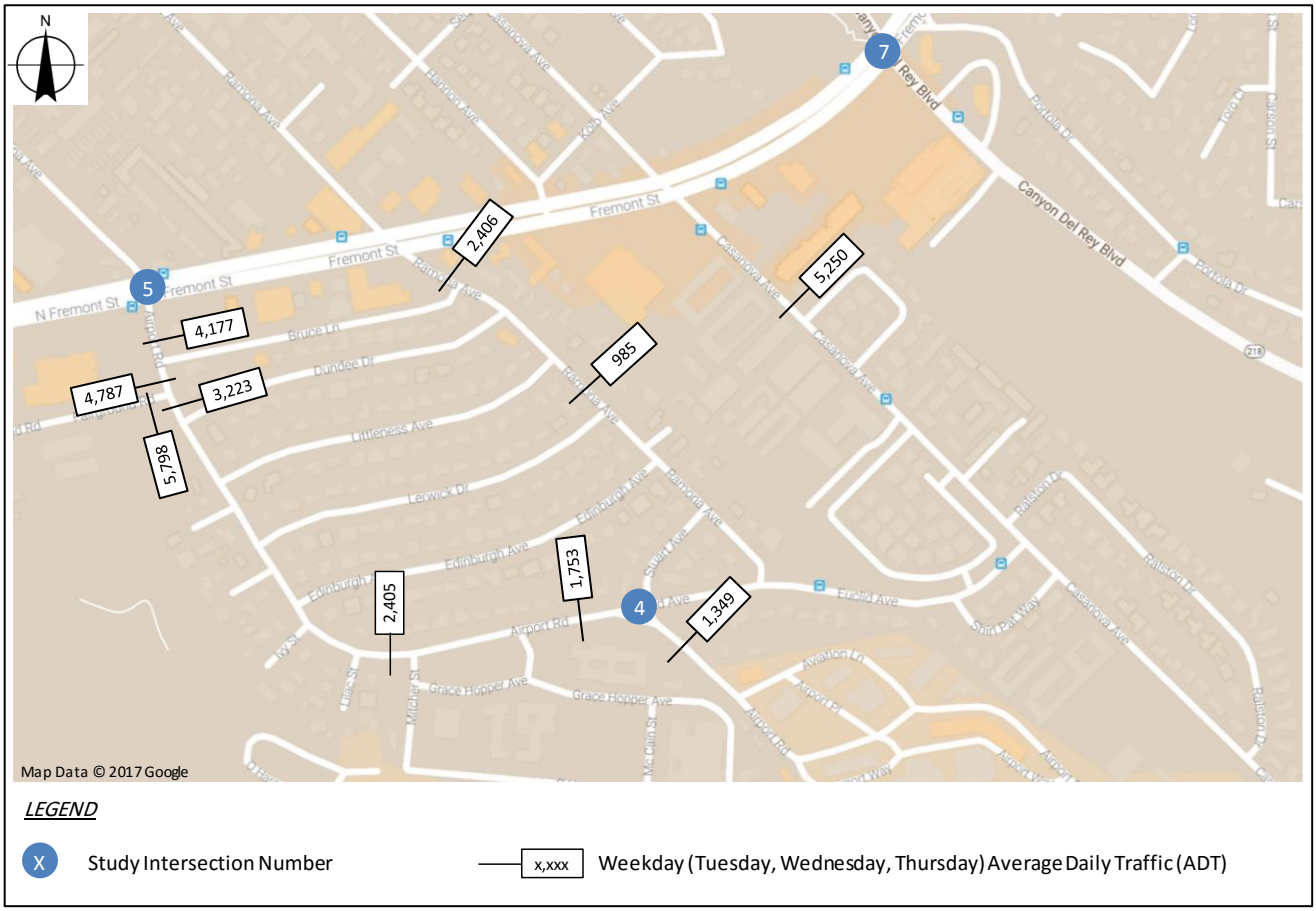
The daily traffic volumes collected in November 2016 on Casanova Avenue (Location #7) were significantly higher in the northbound direction than in the southbound direction (60% northbound, 40% southbound). In May 2017, to provide a check of the November 2016 data, the counts on Casanova Avenue (Location #7) were re-counted, and to provide additional information, supplemental counts were also collected at Airport Road south of Fairground Road (Location #2), Ramona Avenue north of Bruce Lane (Location #11), Fairground Road west of Airport Road (Location #12) and Airport Road north of Bruce Lane (Location #13).[10]

The daily directional split of the May 2017 counts on Casanova Avenue (Location #7) were significantly higher in the southbound direction than in the northbound direction (64% southbound, 36% southbound). Therefore, an additional 24-hour machine tube count was conducted on Casanova Avenue (Location #7) in June 2017. The June 2017 machine tube count on Casanova Avenue (Location #7) was verified with video data collection. The daily directional split of the June 2017 counts was 51/49.

The weekday (Tuesday, Wednesday, and Thursday) Average Daily Traffic (ADT) volumes in the CONA neighborhood are shown in **Figure 9**. For locations that were counted multiple times, the average of all the weekday (Tuesday, Wednesday, Thursday) counts are presented. The raw 24-hour segment count data is included in **Appendix M**.

[10] Prior counts (February 2017) were conducted on Casanova Avenue and Ramona Avenue, but due to ongoing construction activities at the time of the counts, they were determined to be not representative of actual conditions and, therefore, were not used as part of the analysis.

Figure 9: CONA Neighborhood Weekday Average Daily Traffic (ADT) Volumes



Cut-Through Traffic

At the request of the CONA community, the study considered cut-through traffic as part of the analysis. Cut-through traffic is traffic that does not have an origin or destination within the subject area. Residents in the CONA neighborhood have reported the occurrence of cut-through traffic, particularly on Bruce Lane and Dundee Drive, which ostensibly occurs due to drivers attempting to avoid congestion on N. Fremont Street. Based on the ADT counts, it does appear that some degree of cut-through traffic occurs in the neighborhood. Although it is difficult to quantify in a precise way, based on the ADTs and the land uses in the area, the amount of cut-through traffic in the neighborhood appears to be approximately 1,000 vehicles per day. It should be noted that the cut-through traffic is not a result of the businesses on the Airport property. Traffic going to and from the Airport property on Airport Road has its origin and/or destination within the subject area and is therefore not cut-through traffic. In addition, the volumes of cut-through traffic are included in the existing traffic counts. Therefore, the impacts associated with cut-through traffic have been considered as part of this analysis.

Percentage of Traffic Attributable to Airport Property

The Airport property on Airport Road south of Euclid Avenue is occupied by non-aviation facilities that provide a revenue stream to the Airport. The businesses in this area include self-storage, U-Haul and automotive services.

The weekday ADT on Airport Road south of Euclid Avenue was 1,349 vehicles per day. The distribution of traffic from the Airport property traveling to/from the north, east and west of the Airport Road / Euclid Avenue intersection was estimated based on the patterns of the peak hour traffic volumes. On average, about 23% of the traffic within the CONA neighborhood is attributable to the businesses on the Airport property. The ADTs at various locations within the CONA neighborhood and the relative percentage of traffic attributable to the Airport property is summarized in **Table 4**.

Table 4: Percentage of Traffic Attributable to Airport Property

	Road Segment	Weekday ADT	Airport Property Weekday ADT	Airport Property %
1	Airport Road North of Fairground Road	4,787	750	16%
2	Airport Road South of Fairground Road	3,223	750	23%
3	Airport Road West of Mitcher Street	2,405	750	31%
4	Airport Road West of Euclid Avenue	1,753	750	43%
6	Ramona Avenue South of Littleness Avenue	985	205	21%
7	Casanova Avenue North of Melway Circle	5,250	394	8%
13	Airport Road North of Bruce Lane	4,177	750	18%
	Average of All Segments			**23%**

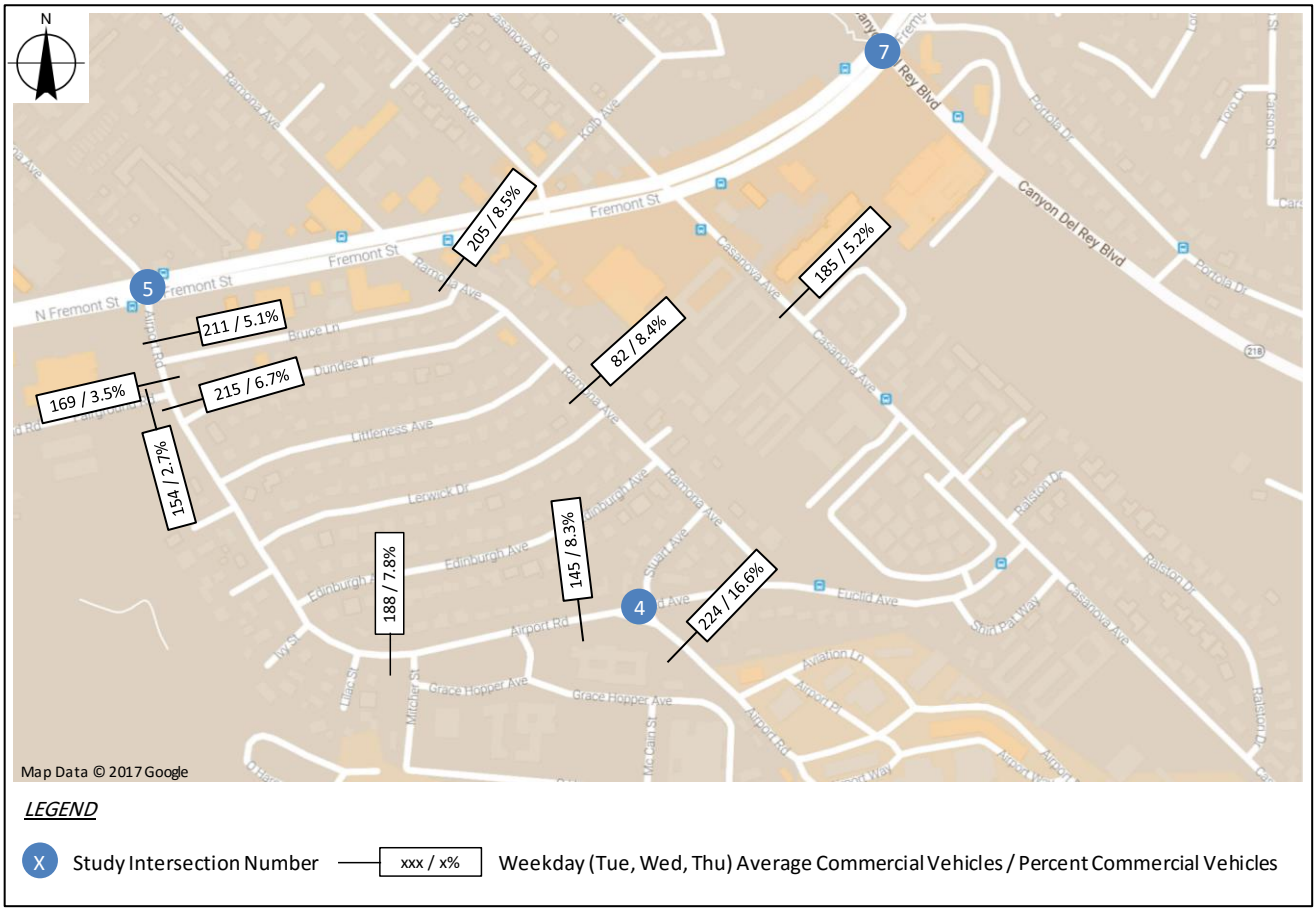
It should be noted that some traffic from the Airport property likely uses Fairground Road and does not reach Segments 1 and 13. Thus, the percentages for Segments 1 and 13 (i.e., 16% and 18%) can be considered conservatively high.

Commercial Vehicle Traffic

The traffic volume data collection also included vehicle classification counts. **Figure 10** depicts the average weekday commercial vehicle ADT volumes in the neighborhood. The term “commercial vehicles” refers to both vehicles with more than 3 axles (including larger trucks and vehicles pulling trailers) and larger two-axle trucks, such as delivery trucks and box trucks.

The number of commercial vehicles on Airport Road south of Euclid Avenue (224) is higher than on Airport Road west of Euclid Avenue (145). This indicates that commercial vehicles entering and exiting the industrial/commercial area on Airport Road south of Euclid Avenue are using Ramona Avenue and Casanova Avenue in addition to Airport Road. Based on the number of average daily commercial vehicles on Airport Road south of Euclid Avenue, Airport Road west of Euclid Avenue, Casanova Avenue north of Melway Circle, and Ramona Avenue between Littleness Avenue and Lerwick Drive, approximately half of the commercial vehicles in the neighborhood are attributable to the Airport property.

Figure 10: CONA Neighborhood Weekday Average Daily Commercial Vehicle Traffic



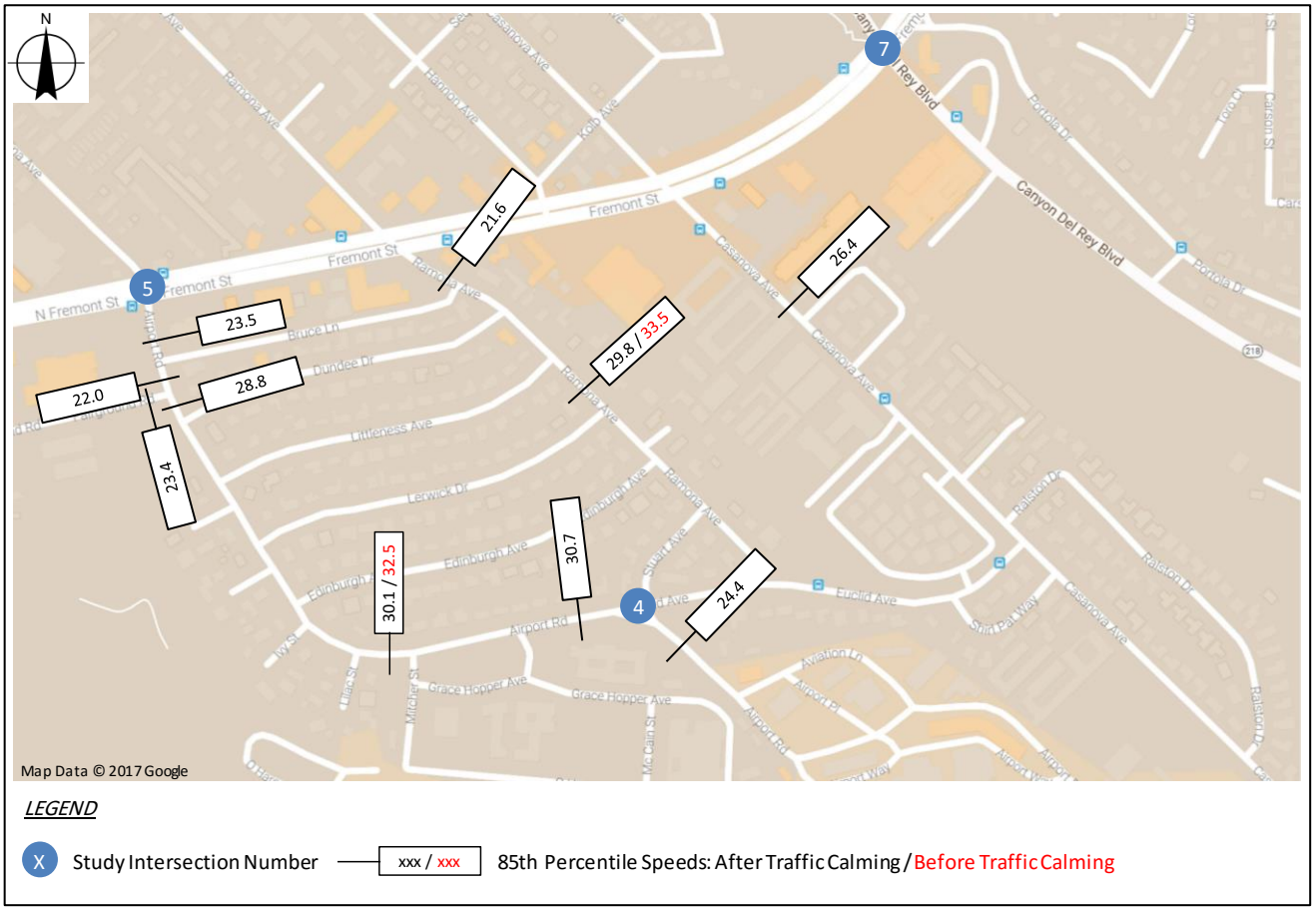
Vehicle Speeds

Residents in the CONA neighborhood have reported the occurrence of speeding, particularly on Casanova Avenue. In addition to the traffic volume and vehicle classification counts, the traffic counts also included a vehicle speed survey. **Figure 11** depicts the weekday average 85th percentile speeds (which are typically used to determine speed limits). The current posted speed limit in the neighborhood is 25 miles per hour (mph). Following the *Casanova Oak Knoll Neighborhood Traffic Calming Plan* (Pat Noyes & Associates, February 2002), the City of Monterey implemented a series of traffic calming measures in the CONA neighborhood. These measures included partial medians, curb extensions, a partial barrier and pavement treatments.

On average, the current 85th percentile speeds on Airport Road near Fairground Road and N. Fremont Street are just below the posted speed limit of 25 mph. The 85th percentile speeds on Airport Road west of Euclid Avenue and on Ramona Avenue south of Littleness Avenue are on average about 5 mph above the posted speed limit of 25 mph.

The current 85th percentile speeds were compared to those in the 2002 *Traffic Calming Plan*. At the two similar study locations, the 85th percentile speeds are on average 3 mph lower than when studied in 2002. This suggests that the traffic calming improvements have had a small but measurable effect on vehicle travel speeds in the CONA neighborhood.

Figure 11: CONA Neighborhood Weekday Average 85th Percentile Speeds



Traffic Calming

The City of Monterey has its own traffic calming policy, the *City of Monterey Neighborhood Traffic Calming Program,* adopted January 15, 2013. The goals of the policy are to improve resident "sense of well-being" about their neighborhood street, adopt traffic calming plans for all city neighborhoods, and be responsive to all neighborhood requests for traffic calming. The plan establishes a consistent process for evaluating the need for traffic calming across the city, including a review of the proposed plan to minimize its effect on emergency vehicles (e.g., fire, ambulance, etc.) and input and approval by the neighborhood residents through a collaborative public input process. All traffic calming plans must be approved and adopted by the City Council prior to implementation. Funding for traffic calming improvements are through the City's Neighborhood Improvement Program, grants, or other sources.

Types of traffic calming allowed in the plan include static signs, speed feedback signs, medians, street narrowing, textured pavement, turn restrictions, roundabouts, and full and partial street closures. Speed humps and stop signs are not allowed as traffic calming measures in the City of Monterey.

3 Project Timeframe and Alternatives

This section includes a description of the various Project alternatives and a discussion of Project access and internal circulation.

3.1 Project Timeframe

Project components include short-term and long-term actions and levels of development. Short-term Project components are expected to occur within approximately 10 years and long-term Project components are expected to occur within approximately 20 years.

3.2 Project Alternatives

The EIR addresses two road network alternatives, which are referred to as the "Proposed Project" and the "Alternative 1 Project". For the purposes of this analysis, this study focuses on the traffic that would be generated by the short-term and long-term actions and potential land development scenarios associated with the Airport Master Plan (AMP). Actions that would not generate additional traffic, such as increasing runway-taxiway separation and closing Taxiway K, redevelopment of the existing northwest commercial/industrial area with similar land intensity, and relocation of the commercial terminal building and apron, are only briefly described, as they would not cause potential traffic impacts.

The road network under Proposed Project Short-Term conditions is the existing road network, while the road network under Alternative 1 Project Short-Term conditions includes the construction of a new roadway, referred to as North Side Road, that would extend from Del Rey Gardens Drive in Del Rey Oaks (off Highway 218) to the northeast side of the Airport. The North Side Road would provide access to the north side of the Airport and would allow access through the CONA neighborhood from east of Gate 22 to be discontinued.

The Alternative 1 Project road network would avoid adding new trips, and reduce existing Airport-generated traffic, through the CONA neighborhood. Therefore, the Alternative 1 Project has the potential to improve the quality of life of the residents in the CONA neighborhood.

Trips generated by the Project are analyzed under the following Project scenarios:

3.2.1 Proposed Project Short-Term

This Project scenario includes the relocation of 44 General Aviation (GA) hangars from the southwest side of the Airport to the north side of the Airport and the construction of up to 7 new GA hangars on the north side of the Airport. Current access to the north side of the Airport is via Airport Road through the CONA neighborhood.[11] As a result, the relocation of the 44 GA hangars will result in a redistribution of traffic, reducing traffic on the south side of the Airport and increasing traffic on Airport Road through the CONA neighborhood. The construction of 7 new GA hangars would also increase traffic on Airport Road through the CONA neighborhood.

[11] Under the Proposed Project (short term) a temporary ARFF building would also be located on the north side for a period of up to six years until a new permanent ARFF building could be constructed in the location of the existing commercial terminal building. Although these temporary trips are not included in the traffic LOS analysis, related noise and other potential land use compatibility issues are addressed in the appropriate sections of the EIR.

3.2.2 Alternative 1 Project Short-Term

This scenario includes construction of the North Side Road. The north side of the Airport currently contains six Port-a-Port T-hangars and the Monterey Navy Flying Club hangar which are accessed via Airport Road through the CONA neighborhood. With the construction of the North Side Road, traffic would instead access the six Port-a-Port T-hangars and the Monterey Navy Flying Club via the North Side Road from Del Rey Gardens Drive and Highway 218.

This Project scenario also includes the relocation of the 44 GA hangars from the southwest side of the Airport to the north side of the Airport, the construction of 7 new GA hangars on the north side of the Airport, and the relocation of the Airport Rescue and Firefighting (ARFF) building from the south side of the Airport to the north side of the Airport. These actions would result in a redistribution of traffic, reducing traffic on the south side of the Airport and increasing traffic on Highway 218 and Del Rey Gardens Drive.

3.2.3 Proposed Project Long-Term

This scenario includes construction of the North Side Road, the redistribution of the six Port-a-Port T-hangars and Monterey Navy Flying Club traffic, the redistribution of the 44 GA hangars traffic, and the construction of up to 7 new GA hangars. In addition, this scenario evaluates the ultimate construction of 106 GA hangars, 400,000 square feet of General Light Industrial, and 325,000 square feet of Office Park development on the north side of the Airport; and 10,000 square feet of High-Turnover Restaurant, 45,000 square feet of Medical-Dental Office, and 94,000 square feet of General Office development on the south side of the Airport. Under this scenario, the permanent ARFF building would remain on the south side of the Airport.

3.2.4 Alternative 1 Project Long-Term

This scenario is the same as the Proposed Project Long-Term scenario with one exception. Under this scenario, the ARFF building would be permanently relocated to the north side of the Airport.

3.3 Project Access and Internal Circulation

Phases of the Project include the construction of a new terminal building, new parking facilities, and a new terminal loop road. Although these phases of the project are not expected to generate additional traffic, they will result in changes to access and circulation at the Airport.

The Airport is proposing to convert the Olmsted Road / Garden Road (#2) intersection to a roundabout. Currently a “T” intersection, a fourth (east) leg would be added to the intersection which would provide access to a new parking garage or surface parking lot and terminal loop road in front of the new Airport terminal. The two-lane terminal loop road would provide one-way counter-clockwise circulation around the surface parking lot, with dedicated turn pockets into the parking lot. The terminal loop road would also provide a 10-foot wide curbside pick-up/drop-off lane (390 feet), a curbside taxi lane (310 feet), and a bus turnout (65 feet).[12] Parking in front of the new terminal building would be provided in an approximate 720-space garage (Proposed Project) or an approximate 380 parking space surface lot (Alternative 1 Project).

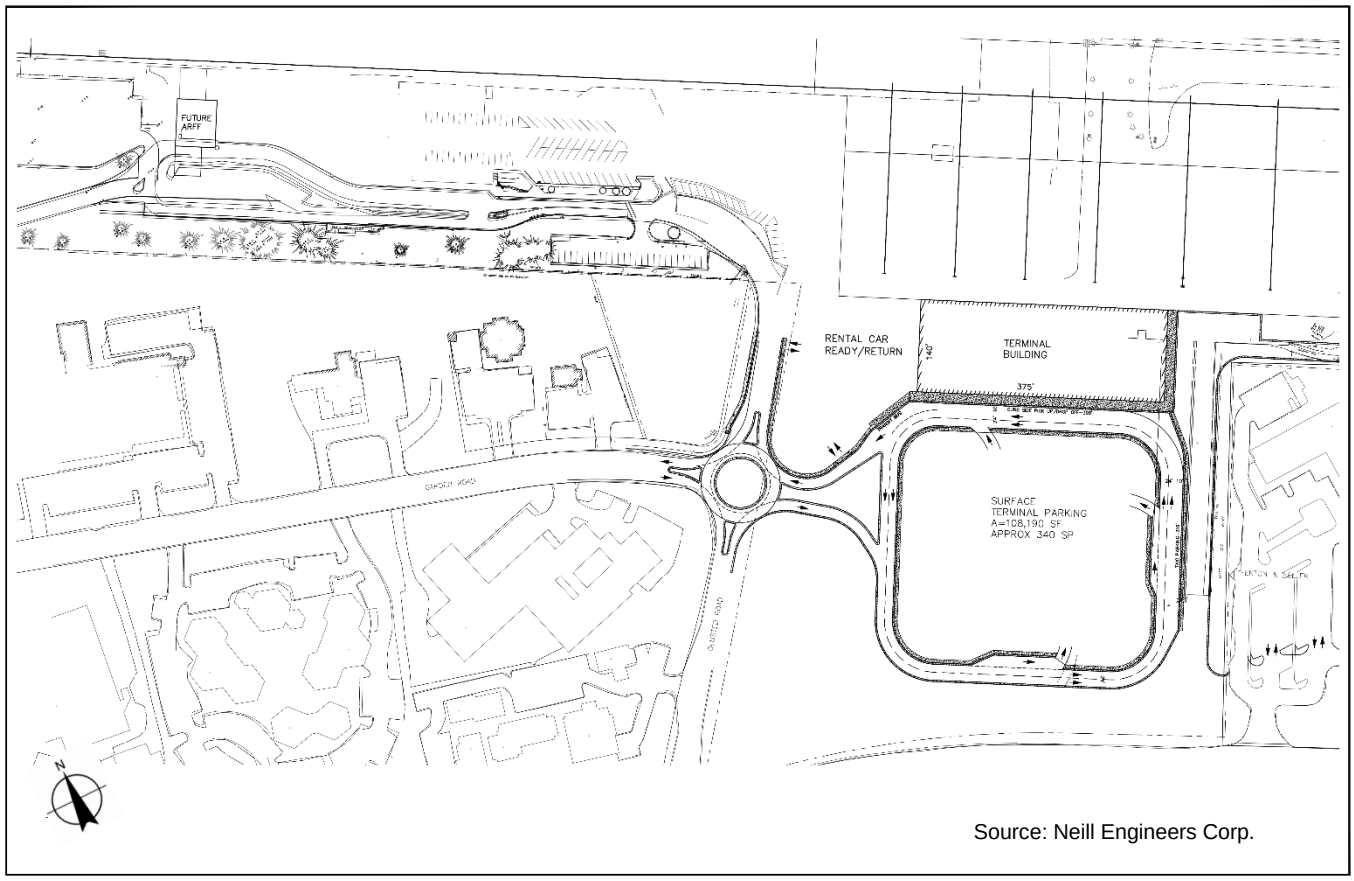
A rental car ready/return surface parking lot (approximately 110 parking spaces) is proposed just west of the new terminal building. Driveway access to the rental car ready/return lot would be north of the proposed Olmsted Road / Garden Road roundabout. This lot would supplement the existing rental car ready/return lot located west of the existing terminal building.

[12] Lengths of pick-up/drop-off, taxi and bus lanes are approximate.

Pedestrian facilities would be provided adjacent to the curbside bus, taxi, and drop-off/pick-up areas, as well as between the new terminal building and the rental car ready/return lot. Major pedestrian activities will occur between the terminal's surface parking lot and the new terminal building. A sidewalk around the perimeter of the terminal surface parking lot will enhance pedestrian safety between the surface parking lot and terminal building.

A conceptual layout of the proposed access and circulation is shown in **Figure 12**. Additional parking once the existing terminal building is removed would be provided along Fred Kane Drive, as needed, in surface lots and/or a parking garage. A Highway 68 frontage road is also planned east of Olmsted Road. This road would be either constructed as a loop road (Proposed Project) or as a cul-de-sac (Alternative 1 Project) (refer to **Figures 2** and **3**, respectively).

Figure 12: Conceptual Layout of Airport Terminal Access and Circulation



Source: Neill Engineers Corp.

4 Existing Plus Project Short-Term Traffic Conditions

This section describes traffic operations in the study area with the addition of Project traffic under the two short-term project alternatives, namely; Proposed Project Short-Term and Alternative 1 Project Short-Term traffic conditions.

4.1 Proposed Project Short-Term Traffic Conditions

4.1.1 Proposed Project Short-Term – Trip Generation, Distribution, and Assignment

The ITE *Trip Generation* manual does not contain appropriate trip generation rates for the General Aviation hangars. The trip generation rates for this land use were therefore developed based on actual gate counts at the Airport's existing hangar gates on the southeast ramp. The gate count data was collected between November 1 and December 31, 2016. The gate counts represent typical activity levels at the Airport and are therefore appropriate for use in developing the trip generation rates.

As discussed in Section 3.2.1, the Proposed Project Short-Term scenario includes a combination of actions and development that would reduce traffic at some locations and increase traffic at other locations within the study area. This scenario would result in a total net new trip generation of 10 daily trips, with 1 occurring during the AM peak hour (1 in, 0 out) and 2 occurring during the PM peak hour (1 in, 1 out). Details of the Proposed Project Short-Term trip generation are provided in **Table 5**.

The Project trips were assigned to the study intersections based on existing traffic and land use patterns in the study area. The Project trip distribution percentages are shown in **Figure 13**. The increases and reductions in trips from the relocated hangars were added to the new trips generated by the new hangars to obtain the Proposed Project Short-Term AM and PM peak hour trip assignments, which are shown in **Figures 14** and **15**.

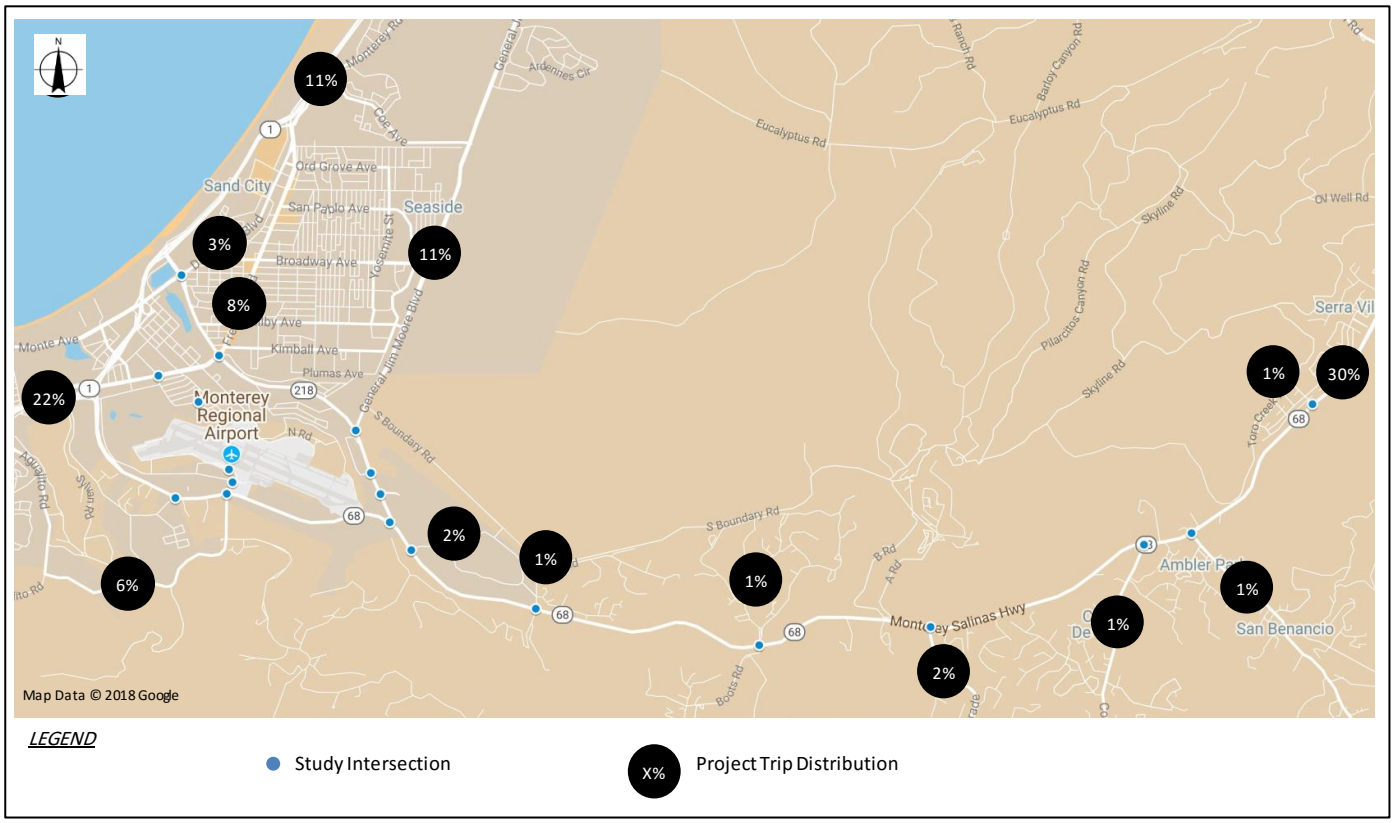
Table 5: Proposed Project Short-Term Trip Generation

Proposed Project Short-Term		WEEK DAY	WEEKDAY AM PK HR			WEEKDAY PM PK HR		
TRIP GENERATION RATES	ITE Code	DAILY RATE	PK HR RATE	% IN	% OUT	PK HR RATE	% IN	% OUT
Hangars (per unit)	N/A	1.41	0.17	83%	17%	0.32	45%	55%
TRIPS GENERATED BY AREA	Units / SF	DAILY TRIPS	PK HR TRIPS	TRIPS IN	TRIPS OUT	PK HR TRIPS	TRIPS IN	TRIPS OUT
North Side via CONA Neighborhood								
Relocated GA Hangars	44	62	7	6	1	14	6	8
New GA Hangars	7	10	1	1	0	2	1	1
South Side via Olmsted Road								
Relocated GA Hangars	-44	-62	-7	-6	-1	-14	-6	-8
Total Net New Generated Trips		**10**	**1**	**1**	**0**	**2**	**1**	**1**

Notes:

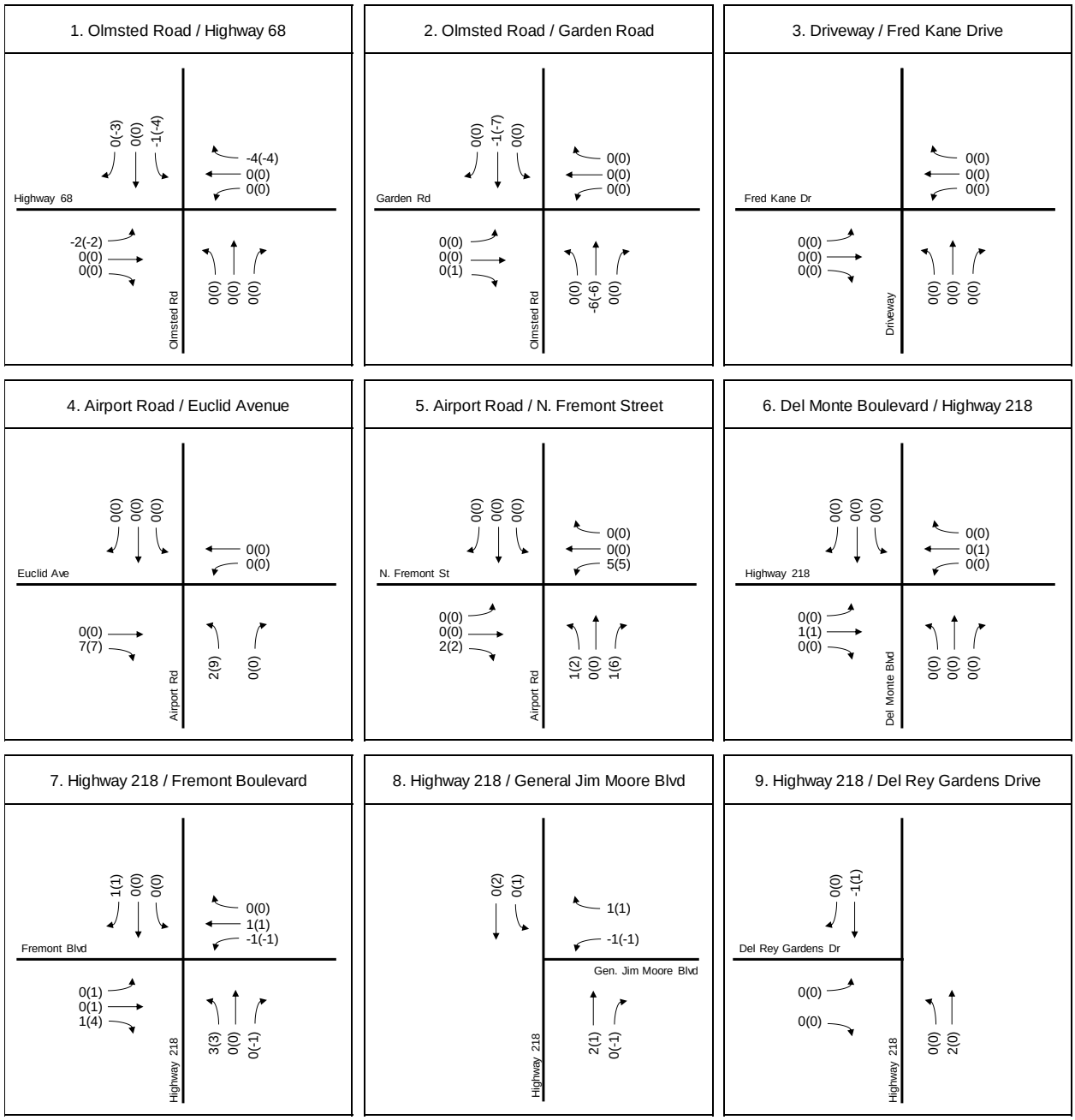
1. Trip generation rates for hangars based on gate counts at Monterey Regional Airport (November 1 - December 31, 2016).
2. Relocated trips in red are subtracted from their current access point and added to the north side via the CONA neighborhood.
3. The 44 hangars relocated from the south side are included in the 51 hangars on the north side.

Figure 13: Project Trip Distribution



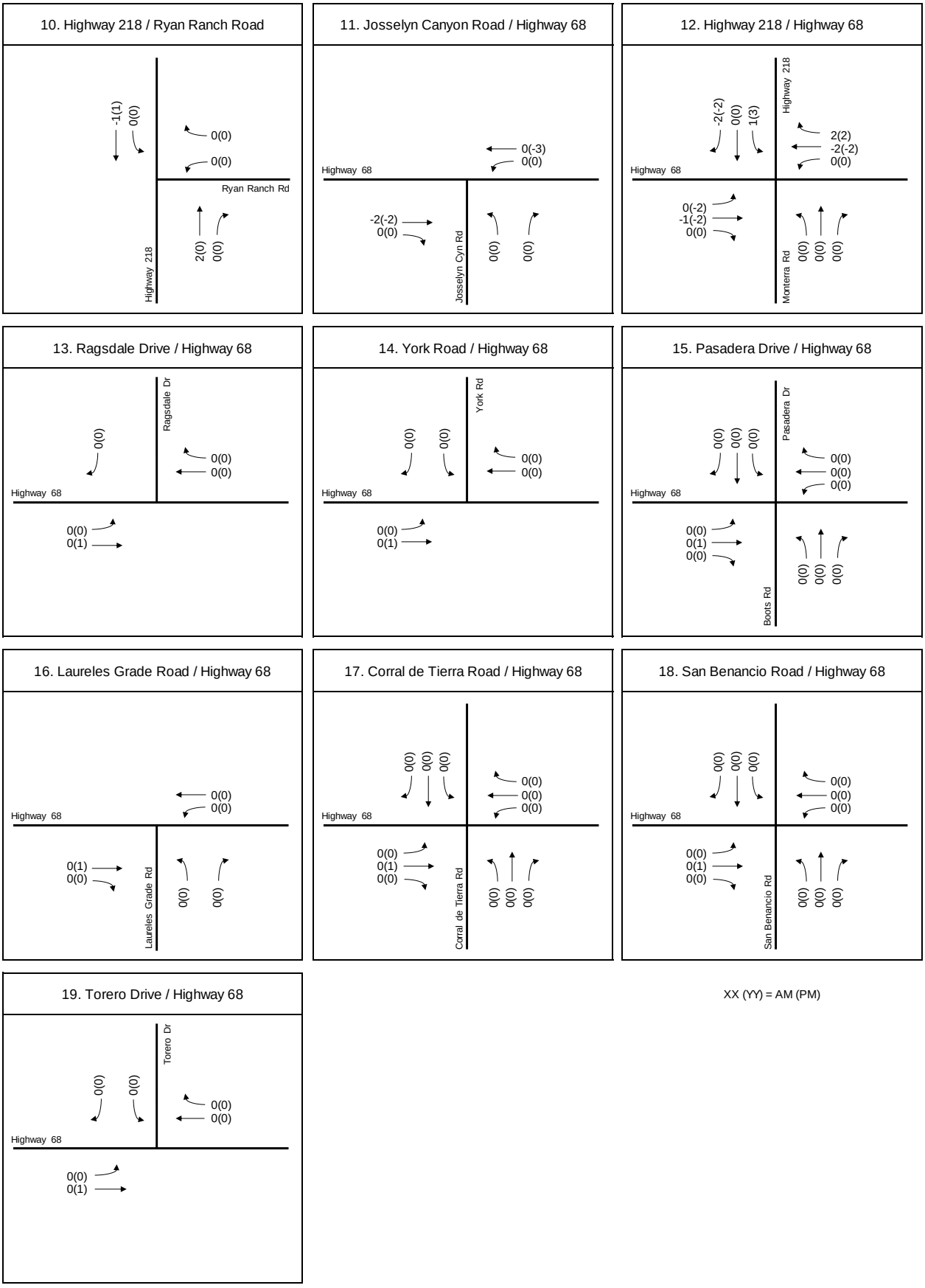
Note: As shown in **Figure 13**, approximately 39% of project trips are expected to travel from areas east of the Airport using Highway 68, 28% are expected to travel from the west or southwest (Monterey), and 33% are expected to travel from the north (Seaside, Sand City, or further north.)

Figure 14: Proposed Project Short-Term Trip Assignment (1 – 9)



XX (YY) = AM (PM)

Figure 15: Proposed Project Short-Term Trip Assignment (10 – 19)



4.1.2 Existing Plus Proposed Project Short-Term – Intersection Operations

The Proposed Project Short-Term trip assignments were combined with the Existing conditions traffic volumes to obtain Existing Plus Proposed Project Short-Term AM and PM peak hour traffic volumes, which are shown in **Figures 16** and **17**.

Based on the City of Monterey and Caltrans level of service standards, the following study intersections would operate deficiently under Existing Plus Proposed Project Short-Term traffic conditions (**Tables 6** and **7**):

Intersection #1 – Olmsted Road / Highway 68

Intersection #6 – Del Monte Boulevard / Highway 218

Intersection #7 – Highway 218 / Fremont Boulevard

Intersection #11 – Josselyn Canyon Road / Highway 68

Intersection #14 – York Road / Highway 68

Intersection #15 – Pasadera Drive / Highway 68

Intersection #17 – Corral De Tierra Road / Highway 68

Intersection #18 – San Benancio Road / Highway 68

Intersection #19 – Torero Drive / Highway 68

It should be noted that these intersections would also operate at deficient levels of service without the Project.

4.1.3 Existing Plus Proposed Project Short-Term – Road Segment Operations

As discussed in Section 2.4, the following road segments would operate deficiently under Existing traffic conditions. These segments would continue to operate deficiently under Existing Plus Proposed Project Short-Term conditions:

Segment #2 – Highway 68, from Begin/End Freeway to Josselyn Canyon Road

Segment #3 – Highway 68, from Josselyn Canyon Road to Olmsted Road

Segment #4 – Highway 68, from Olmsted Road to Highway 218

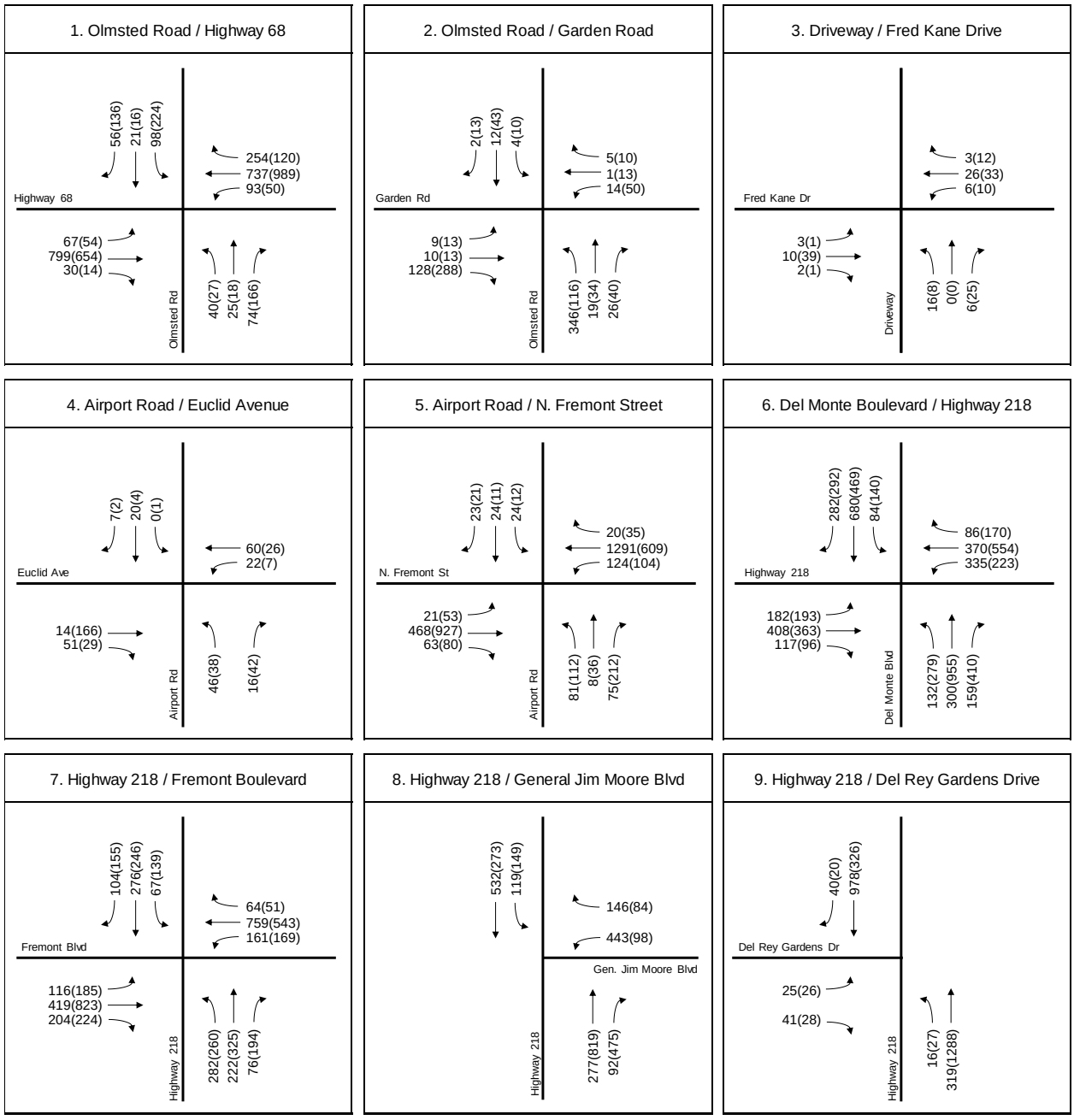
Segment #6 – Highway 68, from Ragsdale Drive to Laureles Grade

Segment #7 – Highway 68, from Laureles Grade to Corral De Tierra Road

Segment #8 – Highway 68, from Corral De Tierra Road to Torero Drive

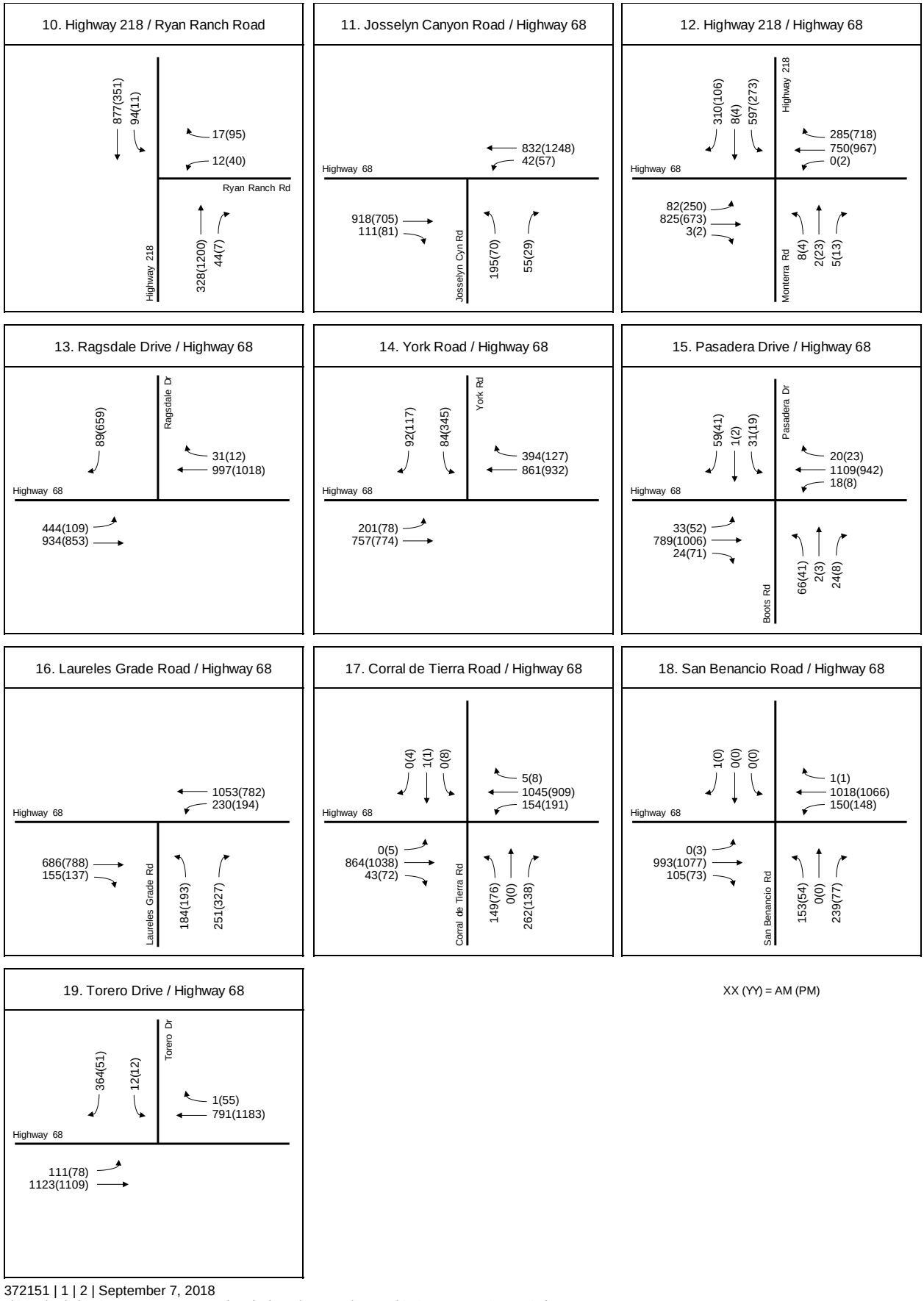
Segment #9 – Highway 68, from Torero Drive to Begin/End Freeway

Figure 16: Existing Plus Proposed Project Short-Term Volumes (1 – 9)



XX (YY) = AM (PM)

Figure 17: Existing Plus Proposed Project Short-Term Volumes (10 – 19)



4.1.4 Existing Plus Proposed Project Short-Term – Project Impacts

Based on the criteria for project impacts, the Project would have a significant impact at the following intersections under Existing Plus Proposed Project Short-Term conditions:

Intersection #6 – Del Monte Boulevard / Highway 218

Intersection #7 – Highway 218 / Fremont Boulevard

Intersection #14 – York Road / Highway 68

Intersection #17 – Corral De Tierra Road / Highway 68

Intersection #19 – Torero Drive / Highway 68

Based on the Caltrans impact criteria, the addition of a single project trip at an intersection that is operating deficiently can be considered an impact. Although intersections #1, #11, #15, and #18 (all Caltrans intersections) would also operate deficiently under Existing Plus Proposed Project Short-Term conditions (and under Existing conditions), the Project would not impact these intersections either because a) the redistribution of traffic that would occur with the relocation of the existing hangars would result in an overall reduction of traffic at the intersection or b) the Project is not expected to add traffic to the intersection during the peak hour that is operating deficiently. Under these circumstances, the Project would not trigger a significant impact under any of the applicable thresholds.

Based on the criteria for project impacts, the Project would have a significant impact on the following road segments under Existing Plus Proposed Project Short-Term conditions:

Segment #6 – Highway 68, from Ragsdale Drive to Laureles Grade

Segment #7 – Highway 68, from Laureles Grade to Corral De Tierra Road

Segment #8 – Highway 68, from Corral De Tierra Road to Torero Drive

Segment #9 – Highway 68, from Torero Drive to Begin/End Freeway

4.1.5 Existing Plus Proposed Project Short-Term – Mitigation Measures

The improvements listed below are recommended to mitigate the Project's impacts under Existing Plus Proposed Project Short-Term conditions. As discussed at Draft EIR sections 4.16. and 5.5.16, and at Draft EIR Appendix N, the improvements, however, may not be feasible if disallowed by federal law; federal law states that airport revenues and Federal Aviation Administration (FAA) grant funds may not be used for purposes other than the capital or operating costs of the airport, the local airport system, or other local facilities owned or operated by the airport owner or operator that are directly and substantially related to the air transportation of passengers and property. These restrictions impact the Airport's ability to fund and implement off-airport mitigation measures. Now that the Airport has identified specific mitigation measures for Proposed Project cumulative impacts, it can make specific requests to the FAA, where appropriate, for it to allow funding of off-airport mitigation measures.

At this time, however, because the Airport does not currently have a determination from the FAA that funding for any off-airport mitigation improvements will be allowed, the following mitigation measures are considered infeasible:

Intersection #6: Del Monte Boulevard / Highway 218 – Mitigation #1

1. Add 2nd Northbound Del Monte Boulevard Left-Turn Lane

Implementation of this improvement would reduce the Project's impact to a less than significant level. The project would be responsible for a fair-share contribution towards the total cost of this improvement, based on the relative number of project trips it would add to the intersection (1 AM and 2 PM peak hour trips).

However, this improvement would be to a Caltrans facility, and would have to be approved by Caltrans before implementation. It is not certain that Caltrans would agree to implement this improvement. In addition, even with the Project's fair-share contribution, there is no guarantee that there would be sufficient funding available to implement this improvement. This impact could be mitigated by constructing the left turn lane; however, the impact is considered significant and unavoidable at this time because the improvement necessary to reduce the significant impact is infeasible as it is within the jurisdiction and control of another agency (Caltrans) and implementation within the necessary timeframe cannot be assured.

Intersection # 7: Highway 218 / Fremont Boulevard – Mitigation #2

1. Add 2nd Northbound Highway 218 Left-Turn Lane

Implementation of this improvement would reduce the Project's impact to a less than significant level. The project would be responsible for a fair-share contribution towards the total cost of this improvement, based on the relative number of project trips it would add to the intersection (5 AM and 9 PM peak hour trips).

However, this improvement would be to a Caltrans facility, and would have to be approved by Caltrans before implementation. It is not certain that Caltrans would agree to implement this improvement. In addition, even with the Project's fair-share contribution, there is no guarantee that there would be sufficient funding available to implement this improvement. This impact could be mitigated by constructing the left turn lane; however, the impact is considered significant and unavoidable at this time because the improvement necessary to reduce the significant impact is infeasible as it is within the jurisdiction and control of another agency (Caltrans) and implementation within the necessary timeframe cannot be assured.

Intersection # 14: York Road / Highway 68 – Mitigation #3

1. Convert intersection to a roundabout

Conversion of this intersection to a roundabout, as proposed in TAMC's *SR 68 Scenic Highway Plan* study, would reduce the Project's impact (1 PM peak hour trip) to a less than significant level. Per the TAMC website, Measure X sales tax funds have been dedicated to the *SR 68 Scenic Highway Plan*, which is also a candidate for federal infrastructure funding and state funding from SB 1 programs. This impact could be mitigated by constructing the roundabout; however, the impact is considered significant and unavoidable at this time because the improvement necessary to reduce the significant impact is infeasible as it is within the jurisdiction and control of another agency (Caltrans) and implementation within the necessary timeframe cannot be assured.

Intersection #17: Corral De Tierra Road / Highway 68 – Mitigation #4

1. Convert intersection to a roundabout

Conversion of this intersection to a roundabout, as proposed in TAMC's *SR 68 Scenic Highway Plan* study, would reduce the Project's impact (1 PM peak hour trip) to a less than significant level. Per the TAMC website, Measure X sales tax funds have been dedicated to the SR 68 Scenic Highway Plan, which is also a candidate for federal infrastructure funding and state funding from SB 1 programs. This impact could be mitigated by constructing the roundabout;

however, the impact is considered significant and unavoidable at this time because the improvement necessary to reduce the significant impact is infeasible as it is within the jurisdiction and control of another agency (Caltrans) and implementation within the necessary timeframe cannot be assured.

Intersection #19: Torero Drive / Highway 68 – Mitigation #5

1. Convert intersection to a roundabout

Conversion of this intersection to a roundabout, as proposed in TAMC's *SR 68 Scenic Highway Plan* study, would reduce the Project's impact (1 PM peak hour trip) to a less than significant level. Per the TAMC website, Measure X sales tax funds have been dedicated to the SR 68 Scenic Highway Plan, which is also a candidate for federal infrastructure funding and state funding from SB 1 programs This impact could be mitigated by constructing the roundabout; however, the impact is considered significant and unavoidable at this time because the improvement necessary to reduce the significant impact is infeasible as it is within the jurisdiction and control of another agency (Caltrans) and implementation within the necessary timeframe cannot be assured.

Existing Plus Proposed Project Short-Term intersection levels of service (LOS) with mitigation are also summarized in **Tables 6** and **7**. Levels of service with the proposed roundabouts are identified by PI#1, PI#2, etc. (for Proposed Improvement #). The levels of service with the proposed roundabouts do not necessarily indicate the project has an impact at that location. Mitigated levels of service indicate locations where the project would have an impact, and are identified by M#1, M#2, etc. (for Mitigation #).

LOS calculation worksheets for signalized, stop-controlled, and roundabout-controlled intersections are included in **Appendix H**. Vehicle queue estimates are included as **Appendix I**.

Road Segments #6, #7, #8 and #9

The Proposed Project Short-Term is expected to add zero AM peak hour and one PM peak hour trip to segments #6 through #9. This will not be enough of an increase in traffic to affect traffic operations on these segments.

Table 6: Existing Plus Proposed Project Short-Term – Intersection LOS (1 – 9)

Scenario # →								1		2		
	N-S Street	E-W Street	Int Control	LOS Std	Peak Hour	Miti #	Prop Imp #	Existing		Proj Trips	Ex+Prop Short-Term	
								Delay	LOS		Delay	LOS
1	Olmsted Road	Highway 68	Signal	C/D	AM			51.0	D	-7	50.5	D
					PM			126.0	F	-13	123.7	F
				C/D	AM		*PI#1*	*12.5*	*B*		*12.5*	*B*
					PM			*17.6*	*C*		*17.3*	*C*
2	Olmsted Road	Garden Road	One-Way Stop	D	AM			10.7	B	-7	20.5	C
					PM			10.8	B	-12	15.7	C
					AM		*PI#2*	*6.7*	*A*		*6.7*	*A*
					PM			*6.2*	*A*		*6.2*	*A*
3	Olmsted Way	Fred Kane Drive	All-Way Stop	D	AM			7.6	A	0	7.4	A
					PM			8.2	A	0	7.5	A
4	Airport Road	Euclid Avenue	Two-Way Stop	D	AM			9.8	A	9	9.8	A
					PM			10.1	B	16	10.2	B
5	Airport Road	N. Fremont Street	Signal	D	AM			11.7	B	9	11.8	B
					PM			14.2	B	15	14.3	B
6	Del Monte Boulevard	Highway 218	Signal	C/D	AM			34.3	C	1	34.3	C
					PM			38.9	D	2	38.9	D
					AM	*M#1*		*33.0*	*C*		*33.0*	*C*
					PM			*33.7*	*C*		*33.7*	*C*
7	Highway 218	Fremont Boulevard	Signal	C/D	AM			31.3	C	5	31.5	C
					PM			46.1	D	9	46.7	D
					AM	*M#2*		*26.1*	*C*		*26.1*	*C*
					PM			*32.5*	*C*		*32.6*	*C*
8	Highway 218	General Jim Moore Blvd	Signal	C/D	AM			17.0	B	2	17.0	B
					PM			15.2	B	3	15.3	B
9	Highway 218	Del Rey Gardens Drive	One-Way Stop	C/D	AM			24.1	C	1	24.0	C
					PM			19.0	C	1	19.0	C

Notes:

1 Signal, roundabout and all-way stop delay is average overall delay in seconds per vehicle (sec/veh).

2 One- and two-way stop delay is worst approach delay in seconds per vehicle (sec/veh).

3 LOS highlighted in red indicates intersection operating below level of service standard.

4 * = delay greater than 300 seconds.

5 LOS in bold box indicates project impact.

Table 7: Existing Plus Proposed Project Short-Term – Intersection LOS (10 – 19)

Scenario # →								1		2		
	N-S Street	E-W Street	Intersection Control	LOS Standard	Peak Hour	MM #	Prop Imp #	Existing		Proj Trips	Ex+Prop Short-Term	
								Delay	LOS		Delay	LOS
10	Highway 218	Ryan Ranch Road	Signal	C/D	AM			6.9	A	1	6.9	A
					PM			16.6	B	1	16.6	B
11	Josselyn Canyon Road	Highway 68	Signal	C/D	AM			44.5	D	-2	44.2	D
					PM			19.8	B	-5	19.6	B
					AM		*PI#3*	*11.3*	*B*		*11.3*	*B*
					PM			*13.8*	*B*		*13.8*	*B*
12	Highway 218	Highway 68	Signal	C/D	AM			24.3	C	-2	24.2	C
					PM			29.7	C	-3	29.6	C
					AM		*PI#4*	*13.3*	*B*		*13.3*	*B*
					PM			*16.2*	*C*		*16.3*	*C*
13	Ragsdale Drive	Highway 68	Signal	C/D	AM			12.3	B	0	12.3	B
					PM			4.2	A	1	4.2	A
14	York Road	Highway 68	Signal	C/D	AM			25.3	C	0	25.3	C
					PM			42.8	D	1	42.8	D
					AM	*M#3*	*PI#5*	*15.8*	*C*		*15.8*	*C*
					PM			*21.3*	*C*		*21.3*	*C*
15	Pasadera Drive	Highway 68	Signal	C/D	AM			47.5	D	0	47.5	D
					PM			14.5	B	1	14.5	B
					AM		*PI#6*	*11.0*	*B*		*11.0*	*B*
					PM			*10.6*	*B*		*10.6*	*B*
16	Laureles Grade Road	Highway 68	Signal	C/D	AM			27.2	C	0	27.2	C
					PM			31.7	C	1	31.8	C
					AM		*PI#7*	*14.8*	*B*		*14.8*	*B*
					PM			*11.9*	*B*		*11.9*	*B*
17	Corral de Tierra Road	Highway 68	Signal	C/D	AM			35.2	D	0	35.2	D
					PM			57.8	E	1	57.9	E
					AM	*M#4*	*PI#8*	*16.9*	*C*		*16.9*	*C*
					PM			*14.2*	*B*		*14.3*	*B*
18	San Benancio Road	Highway 68	Signal	C/D	AM			70.3	E	0	70.3	E
					PM			18.9	B	1	18.9	B
					AM		*PI#9*	*17.9*	*C*		*17.9*	*C*
					PM			*13.0*	*B*		*13.0*	*B*
19	Torero Drive	Highway 68	One-Way Stop	C/D	AM			*	F	0	*	F
					PM			111.3	F	1	111.3	F
					AM	*M#5*	*PI#10*	*16.4*	*C*		*16.4*	*C*
					PM			*12.4*	*B*		*12.4*	*B*

Notes:

1 Signal, roundabout and all-way stop delay is average overall delay in seconds per vehicle (sec/veh).

2 One- and two-way stop delay is worst approach delay in seconds per vehicle (sec/veh).

3 LOS highlighted in red indicates intersection operating below level of service standard.

4 * = delay greater than 300 seconds.

5 LOS in bold box indicates project impact.

4.1.6 Existing Plus Proposed Project Short-Term – Bicycle, Pedestrian, and Transit Operations

The Airport supports bicycle use by Airport employees and the public by providing convenient, secure bicycle facilities on Airport premises. Two bike storage containers are currently available for public use at the terminal's east second level entrance.

As discussed in Section 3.3, the Project site plan includes pedestrian walkways adjacent to curbside bus, taxi, and drop-off/pick-up areas, as well as between the new terminal building and the rental car ready/return lot. A sidewalk around the perimeter of the terminal surface parking lot will enhance pedestrian safety between the surface parking lot and terminal building.

The Project site plan also includes a designated transit bus stop just west of the terminal building that is approximately 65 feet long.

The Proposed Project Short-Term is not expected to generate a significant amount of bicycle, pedestrian, or transit trips and will not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. Since the Project will not decrease the performance or safety of such facilities, the Project will not impact the bicycle, pedestrian, or transit facilities in the study area.

4.1.7 Existing Plus Proposed Project Short-Term – CONA Neighborhood Conditions

As described in Section 3.2.1, the Proposed Project Short-Term includes the relocation of 44 hangars from the Airport's existing southeast General Aviation (GA) area to the north side GA area, and the addition of up to 7 new hangars to the Airport's north side GA area. Access to the relocated and new hangars would be via Airport Road and would add trips within the Casanova Oak Knoll (CONA) neighborhood. Specifically, the proposed project has the potential of adding traffic to the following residential streets in the CONA neighborhood:

- Airport Road
- Ramona Avenue
- Casanova Avenue
- Euclid Avenue

Based on the analysis and levels of service shown in **Table 6**, the study intersections within the CONA neighborhood (#4 and #5) currently operate at acceptable levels of service (LOS A and LOS B) and would continue to operate at acceptable levels of service with the Proposed Project Short-Term.

Although not based on City impact thresholds, the City of Monterey has indicated that use of the Traffic Infusion on Residential Environment (TIRE) index could add value to qualitatively assessing potential impacts to the residential neighborhood. Therefore, the following discussion is provided for informational purposes only.

The TIRE index is a measure of residents' perceptions of the effect of increased traffic on residential streets. The TIRE index is derived from a theory by D.K. Goodrich based on work by Appleyard of the University of California at Berkeley, and by Buchanan of the Ministry of Transport, England. TIRE is based on the theory that a given increase in traffic volume has a greater impact on the residential environment along a residential street with a low traffic volume than along a street with a high pre-existing volume. TIRE effects are separate from noise and air pollution impacts. TIRE represents the effect of traffic on the safety and comfort of human activities such as walking, cycling, and playing on or near a street and on the freedom to maneuver personal autos in and out of residential driveways.

The effect of adding project related traffic to the streets listed above was evaluated using the TIRE index. TIRE index values range from 0.0 and 5.0, with 0.0 representing the least effect of traffic on a residential street and 5.0 representing the greatest effect. A TIRE index of 3.0 typically represents the threshold at which the character of a residential street changes from a residential street to a traffic-carrying street. A change in the TIRE index of less than 0.1 would not be noticed by a resident, whereas a change of 0.1 or more would be noticeable to residents. More information regarding the TIRE index is provided in **Appendix N**.

Table 8 provides a summary of existing daily traffic carried by the seven study street segments. The volume of daily traffic on all study segments is equal to or exceeds a TIRE index value of 3.0. As shown in **Table 8**, the Proposed Project Short-Term would have no impact on the TIRE index of the study street segments, except for Airport Road south of Euclid Avenue. The TIRE index on Airport Road south of Euclid Avenue is expected to increase by 0.1 with the Proposed Project Short-Term, which indicates that the increase in traffic generated by the Proposed Project Short-Term may be noticeable to residents of the one residential unit on that study segment.

Table 8: TIRE Index Summary

	Street Segment	Existing Conditions		Project	Existing + Proposed Project Short-Term		Change in TIRE Index
		ADT	TIRE Index	ADT	ADT	TIRE Index	
1	Airport Rd between Fairground Rd and Dundee Dr	3,223	3.5	35	3,258	3.5	0.0
2	Airport Rd between Lilac St and Mitcher St	2,405	3.4	35	2,440	3.4	0.0
3	Airport Rd between Mitcher St and Euclid Ave	1,753	3.2	35	1,788	3.2	0.0
4	Airport Rd south of Euclid Ave	1,349	3.1	78	1,427	3.2	0.1
5	Ramona Ave between Littleness Ave and Lerwick Dr	985	3.0	9	994	3.0	0.0
6	Casanova Ave between Melway Cir and Shopping Center Dwy	5,250	3.7	35	5,285	3.7	0.0
7	Euclid Ave between Airport Rd and Casanova Ave	3,139	3.5	39	3,178	3.5	0.0

Notes:
1. ADT = Average Daily Traffic Volume.
2. ADTs on Segments 1 - 6 based on counts conducted in November 2016, May 2017 and June 2017.
3. Existing daily volume on Segment 7 estimated from PM peak hour counts on east leg of Airport Road / Euclid Avenue intersection.
4. TIRE: Traffic Infusion of Residential Environment.
5. Change in TIRE index shaded in red indicates that increase in traffic may be noticeable to residents.

4.1.8 Existing Plus Proposed Project Short-Term – N. Fremont / Highway 1 / Highway 68 Merge Areas

Although outside the study area based on Program j.2.1 of the City of Monterey General Plan, the short weaving segments at the N. Fremont Street / Highway 1 / Highway 68 interchange were analyzed as they relate to the increase in trips from the Proposed Project Short-Term based on comments received from Caltrans District 5 staff.

These short weaving segments and their approximate weave lengths are described below and are shown graphically in **Appendix O**.

- WB Highway 68 to SB Highway 1 merge with SB Highway 1 – 1,530 feet
- NB Highway 1 to EB N. Fremont Street merge with NB Highway 1 – 1,420 feet
- SB Highway 1 to EB Highway 68 merge with SB Highway 1 – 1,100 feet
- WB Highway 68 to NB Highway 1 merge with NB Highway 1 – 410 feet

The redistribution of trips generated by the relocated 44 hangars from the southeast General Aviation (GA) area to the northern GA area would not change the number of trips on weaving

segments #1 and #2 as trips to and from the south would continue to use these weaving segments. The redistribution of trips generated by the relocated 44 hangars would reduce the number of peak hour trips on weaving segments #3 and #4 as trips to and from the north would no longer use the N. Fremont Street / Highway 1 / Highway 68 interchange.

As shown in **Table 5**, the Project is estimated to generate at most two new peak hour trips, one inbound and one outbound. The one inbound and one outbound trip generated by 7 new hangars would add on average less than one peak hour trip to weaving segments #1 and #2, and are not expected to add any trips to weaving segments #3 and #4. Therefore, the Proposed Project Short-Term would not have an impact on these weaving segments.

4.1.9 Proposed Project Short-Term – Construction Impacts

Proposed Project Short-Term construction is expected to occur in five phases. A description of the construction activities associated with each phase is included in **Table 9**. The project civil engineers provided estimates of the total number of construction-related round trips for each phase of construction, which are shown in **Table 10**. The trip estimates include trips by construction workers, the delivery of materials and equipment, the hauling of surplus earthwork, and the removal of construction debris from the project site to an off-site location. The number of daily construction vehicle trips generated by the project will vary depending on the phase and the specific construction activities taking place on any given day. The construction-related round trips per phase were converted to average daily trips, which are shown in **Table 11**. The average number of truck trips per hour were also estimated.

As a conservative estimate, construction trips were assumed to occur 5 days a week (i.e., Monday through Friday). If work is also conducted on the weekend, then the average number of construction trips per day could be reduced. An average of 240 working days per year was estimated. This assumes 20 working days per month for 12 months of each year.

Total Trips

For the Proposed Project, Phase 4 is expected to generate the highest number of total daily trips (passenger vehicles and trucks) with an average of 46 daily trips. Assuming each truck is the equivalent of 2 passenger vehicles, construction of the Proposed Project would have the potential traffic impacts of about 74 passenger vehicle trips per day.

Passenger Vehicle Trips

Passenger vehicle trips are anticipated for the construction workers. For the Proposed Project, Phase 5 is expected to generate the highest number of daily trips by construction workers, with an average of 22 daily trips. This is a conservative estimate. Again, if work is conducted on weekends, the number of daily trips would be reduced.

Truck Trips

Truck trips are anticipated for earth removal, the delivery of materials and equipment, and construction debris removal. Truck trips were assumed to occur 5 days a week between the hours of 9:00 a.m. and 4:00 p.m., for a total of 7 hours per day. This is a conservative estimate. If work is also conducted on weekends or during a longer workday, the average number of trips would be reduced.

Earth removal is expected to occur in Phases 2 and 4. It is estimated that a total of 34,700 cubic yards of earth will be hauled off-site during Phases 2 and 4 (16,450 cubic yards during Phase 2 and 18,250 cubic yards during Phase 4). No off-site earth removal from the site is expected during Phases 1, 3, and 5. Construction debris removal is expected to occur in Phases 2 and 3.

Table 9: Proposed Project Construction Activities

Construction Phase	Construction Activity on North or South Side of Airport	Years per Phase	Description of Construction Activity
Phase 1 (2019-2021)	North	3	General Aviation (GA) Prep/Install hangars; temporary Airport Rescue & Firefighting (ARFF) building
Phase 2 (2022-2026)	South	5	Demo South GA & ARFF; grade and construct terminal, apron, roads, rental car lot; construct terminal parking garage. Repair haul road.
Phase 3 (2027)	South	1	Demolish old terminal; construct new ARFF
Phase 4 (2028)	South	1	Restripe TW A & move hold lines; Construct surface lot/garage along Fred Kane Dr.
Phase 5 (2029)	North	1	Construct "north side" road
Phase 5 (2029)	South		Construct Highway 68 frontage loop road
Total		**11**	

Table 10: Proposed Project Construction Trips – Round Trips Per Phase

Construction Phase	Construction Activity on North or South Side of Airport	Years per Phase	Construction Workers	Deliveries of Materials & Equipment	On-Airport[4] Earth Removal	Off-Airport Earth Removal	Construction Debris Removal	Total[4] Round Trips
Phase 1 (2019-2021)	North	3	2,458	3,278	2,428	0	0	5,736
Phase 2 (2022-2026)	South	5	10,374	4,812	7,524	1,316	629	17,131
Phase 3 (2027)	South	1	1,043	87	0	0	120	1,250
Phase 4 (2028)	South	1	2,165	1,824	0	1,460	0	5,449
Phase 5 (2029)	North	1	2,601	788	0	0	0	3,389
Phase 5 (2029)	South		792	1,031	0	0	0	1,823
Total		**11**	**19,433**	**11,820**	**9,952**	**2,776**	**749**	**34,778**

Notes:
1. Assumes 25 cubic yards (cy) of earth removal per haul trip. Each truckload has a return trip with an empty truck. This equates to a total of 34,700 cubic yards of earth removal: 2,776 earth removal round trips / 2 = 1,388 outbound hauls. 1,388 hauls x 25 cy/haul = 34,700 cy
2. Construction workers assumed to arrive/depart site in passenger vehicles (cars & pickup trucks).
3. Assumes earth removal, construction debris removal, and deliveries of materials and equipment are all made by trucks.
4. "On-Airport" earth removal trips are assumed to have both trip ends on-site and are therefore excluded from construction vehicle trip totals.
5. Phase duration assumed to include 12 calendar months for each year of each phase.
6. One round trip = two total trips (i.e., one inbound, one outbound).

Table 11: Proposed Project Construction Trips – Average Trips per Day / Hour

Construction Phase	Construction Activity on North or South Side of Airport	Years per Phase	Passenger Vehicle Trips per Day	Truck Trips per Day	Total Trips per Day	Total Trips per Day in PCE	Truck Trips per Hour	Truck Trips per Hour in PCE
Phase 1 (2019-2021)	North	3	6	10	16	26	1	2
Phase 2 (2022-2026)	South	5	16	12	28	40	2	4
Phase 3 (2027)	South	1	8	2	10	12	1	2
Phase 4 (2028)	South	1	18	28	46	74	4	8
Phase 5 (2029)	North	1	22	6	28	34	1	2
Phase 5 (2029)	South		8	8	16	24	1	2
Total		**11**						

Notes:
1. Assumes 240 working days per year (20 working days per month x 12 months per year).
2. Truck trips assume a conservative 7-hour workday, outside of peak hours (e.g, 9:00 a.m to 4:00 p.m.)
3. Passenger Car Equivalents (PCE): 1 truck = 2 passenger vehicles (per HCM 2010 Exhibit 21-10).
4. The highest number of trips generated by each phase are shaded in red.
5. Average trips represent total trips (i.e, inbound and outbound).

No construction debris removal is expected during Phases 1, 4, and 5. Delivery of materials and equipment is expected to occur during all construction phases.

Daily truck trips associated with earth removal, deliveries of materials and equipment, and the removal of construction debris were combined and estimated for each construction phase. Phase 4 is expected to generate the highest number of daily truck trips, with an average of 28 daily truck trips. Assuming each truck is the equivalent of 2 passenger vehicles, construction of the Proposed Project would have the potential traffic impacts of about 74 passenger vehicle trips per day.

Truck trips were also combined and estimated on an hourly basis for each construction phase. The highest number of hourly truck trips is estimated to occur during Phase 4, with an average of 4 truck trips per hour. Assuming each truck is the equivalent of 2 passenger vehicles, the Proposed Project would have the potential traffic impacts of about 8 passenger vehicle trips per hour.

Analysis

A map showing the proposed construction vehicle haul routes is included in **Figure 18**. A comparison of the amount of construction vehicle trips in relation to the existing traffic volumes on the roads near the project site is provided in **Table 12**. The total daily construction vehicle trips, including passenger vehicles and trucks, were converted to passenger car equivalents (PCE) and assigned to the available haul routes. The haul routes and construction phases where construction-related trips would represent more than 1% of existing daily traffic are highlighted in **Table 12**.

Proposed Project haul routes for construction activities on the south side of the Airport include Olmsted Road and Highway 68. Construction activities for the Proposed Project on the south side of the Airport would represent about 1.3% (Phase 4) of the existing traffic on Olmsted Road and 0.4% (Phase 4) of the existing traffic on Highway 68.

Proposed Project construction haul routes for construction activities on the north side of the Airport include Airport Road and N. Fremont Street. Construction activities for the Proposed Project on the north side of the Airport would represent about 1.4% (Phase 5) of the existing traffic on Airport Road and 0.2% (Phase 5) of the existing traffic on N. Fremont Street.

Impacts and Recommendations

Construction vehicle trips associated with the Proposed Project would represent a small fraction (1.4% or less) of the existing daily volumes on the study road network. However, construction-related trips will be added to intersections and road segments that have been identified as operating deficiently during the peak commute hours under existing conditions, as described in Sections 2.3 and 2.4. As a result, project construction traffic impacts would be significant and unavoidable. Construction-related impacts would be temporary. To reduce construction impacts, truck hauling operations should not occur during the hours of 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m., Monday through Friday.

Figure 18: Proposed Project Construction Vehicle Haul Routes

Table 12: Proposed Project Construction Trips as a Percentage of Existing ADT

Construction Phase	Total Daily Construction Trips (PCE)	Construction Activity Area	Proposed Project Haul Routes	Existing ADT	Construction Trips % of ADT
1	26	North	Airport Rd	2,400	1.1%
1	26	North	Fremont St	19,000	0.1%
2	40	South	Olmsted Rd	5,800	0.7%
2	40	South	Highway 68	18,800	0.2%
3	12	South	Olmsted Rd	5,800	0.2%
3	12	South	Highway 68	18,800	0.1%
4	74	South	Olmsted Rd	5,800	1.3%
4	74	South	Highway 68	18,800	0.4%
5	34	North	Airport Rd	2,400	1.4%
5	34	North	Fremont St	19,000	0.2%
5	24	South	Olmsted Rd	5,800	0.4%
5	24	South	Highway 68	18,800	0.1%

Notes:
1. Total Daily Construction Trips (PCE) includes trips by construction workers and truck trips, with truck trips converted to Passenger Car Equivalents (PCE).
2. Construction Activity Area refers to construction activities on the north and south sides of the Airport.
3. Haul routes include roads closest to the project site that would be most affected by construction vehicle trips. Construction vehicles trips would disperse onto other roads as they move farther from the project site, reducing the potential for construction traffic impacts.
4. The haul routes and construction phases where construction-related trips would represent more than 1% of existing daily traffic are shaded in red.
5. ADT = Average Daily Traffic Volume

4.2 Alternative 1 Project Short-Term Traffic Conditions

4.2.1 Alt. 1 Project Short-Term – Trip Generation, Distribution, and Assignment

The ITE *Trip Generation* manual does not contain appropriate trip generation rates for the Port-a-Port T-hangars, the Monterey Navy Flying Club, the Airport Rescue and Firefighting (ARFF) building, or the General Aviation hangars. The trip generation rates for these land uses were therefore developed based on actual gate counts at the Airport's existing hangar gates on the southeast ramp, and the staffing schedule and incident reports for the ARFF building. The gate counts and ARFF data were both collected between November 1 and December 31, 2016. The gate counts represent typical activity levels at the Airport and are therefore appropriate for use in developing the trip generation rates.

As discussed in Section 3.2.2, the Alternative 1 Project Short-Term scenario includes a combination of actions and development that would reduce traffic at some locations and increase traffic at other locations within the study area. This scenario would result in a total net new trip generation of 10 daily trips, with 1 occurring during the AM peak hour (1 in, 0 out) and 2 occurring during the PM peak hour (1 in, 1 out). Details of the Alternative 1 Project Short-Term trip generation are provided in **Table 13**.

The Project trips were assigned to the study intersections using the same distribution percentages used for the Proposed Project Short-Term scenario. The increases and reductions in trips from the relocated hangars and ARFF building were added to the new trips generated by the new hangars to obtain the Alternative 1 Project Short-Term AM and PM peak hour trip assignments, which are shown in **Figures 19** and **20**.

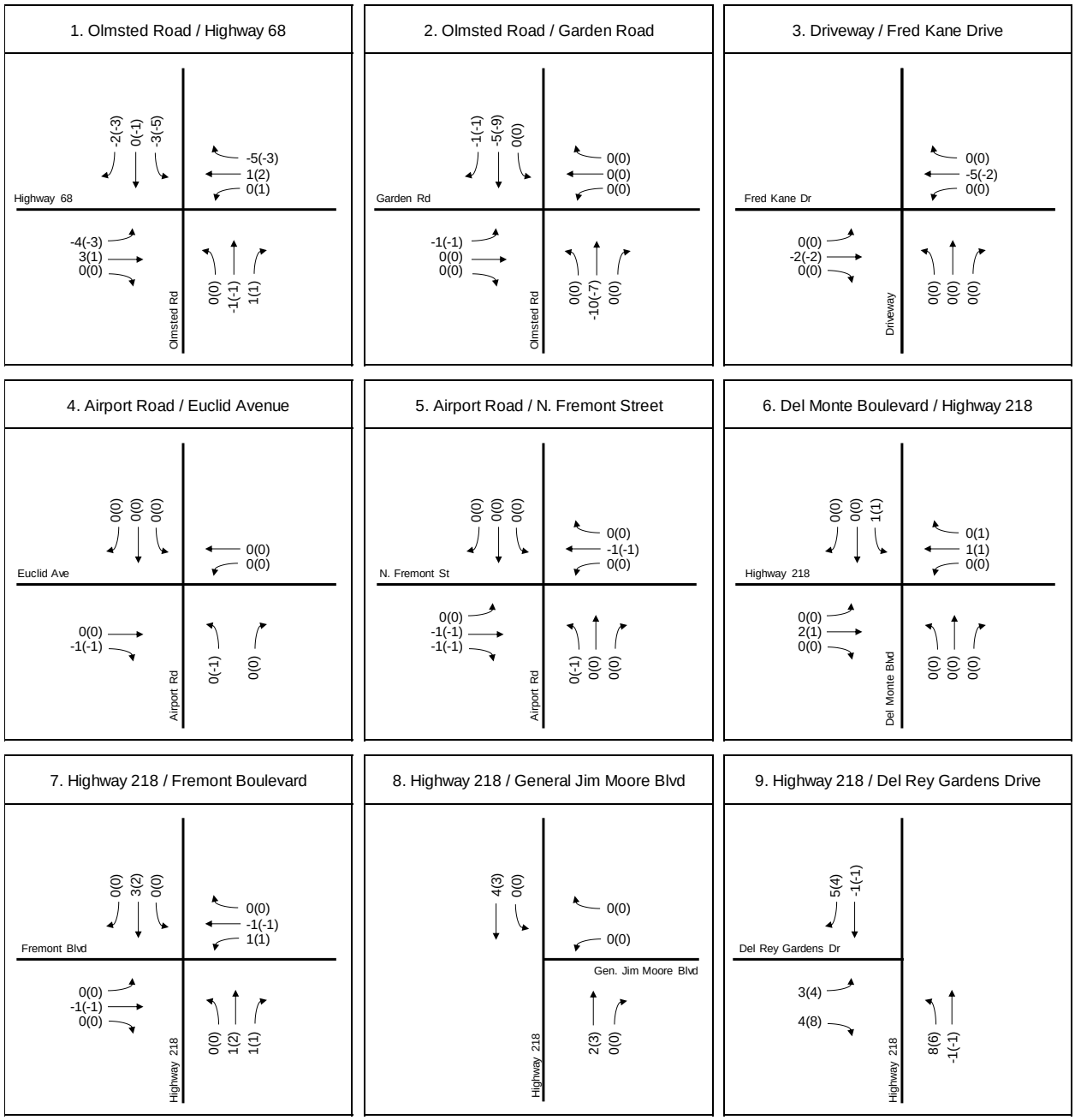
Table 13: Alternative 1 Project Short-Term Trip Generation

Alternative 1 Project Short-Term		WEEK DAY	WEEKDAY AM PK HR			WEEKDAY PM PK HR		
TRIP GENERATION RATES	ITE Code	DAILY RATE	PK HR RATE	% IN	% OUT	PK HR RATE	% IN	% OUT
Hangars (per unit)	N/A	1.41	0.17	83%	17%	0.32	45%	55%
TRIPS GENERATED BY AREA	Units / SF	DAILY TRIPS	PK HR TRIPS	TRIPS IN	TRIPS OUT	PK HR TRIPS	TRIPS IN	TRIPS OUT
North Side via CONA Neighborhood								
Relocated Port-a-Port & Navy Flying Club Hangars	-7	-10	-1	-1	0	-2	-1	-1
North Side via North Side Road								
Relocated GA Hangars	44	62	7	6	1	14	6	8
New GA Hangars	7	10	1	1	0	2	1	1
Relocated Port-a-Port & Navy Flying Club Hangars	7	10	1	1	0	2	1	1
Relocated ARFF Building	1	20	10	5	5	4	2	2
South Side via Olmsted Road								
Relocated GA Hangars	-44	-62	-7	-6	-1	-14	-6	-8
Relocated ARFF Building	-1	-20	-10	-5	-5	-4	-2	-2
Total Net New Generated Trips		**10**	**1**	**1**	**0**	**2**	**1**	**1**

Notes:

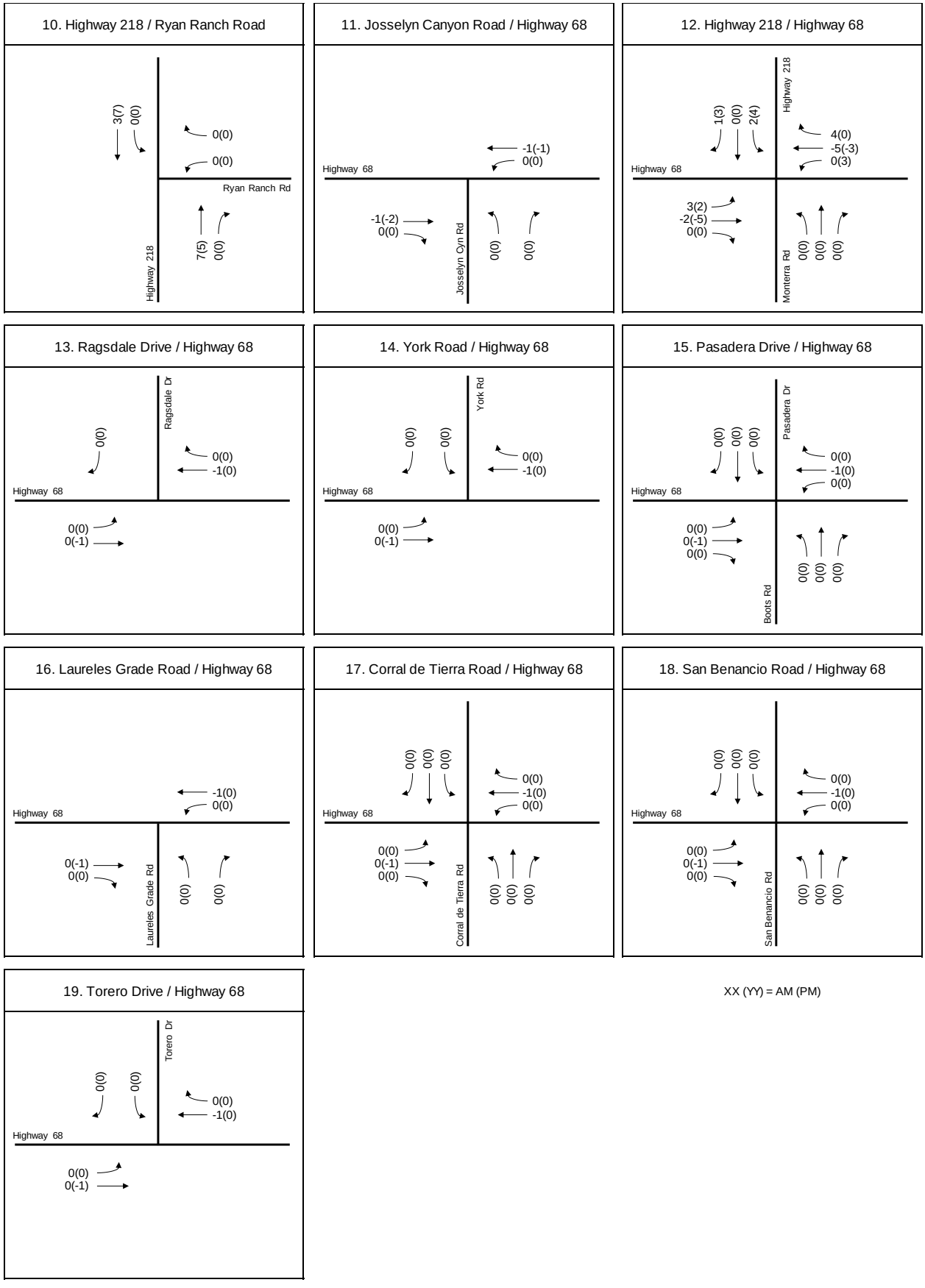
1. Trip generation rates for hangars based on gate counts at Monterey Regional Airport (November 1 - December 31, 2016).
2. Relocated trips in red are subtracted from their current access point and added to the north side via the North Side Road.
3. Trips generated by ARFF building based on Monterey Fire Department staffing, schedule, and incident reports (November 1 - December 31, 2016).

Figure 19: Alt. 1 Project Short-Term Trip Assignment (1 – 9)



XX (YY) = AM (PM)

Figure 20: Alt. 1 Project Short-Term Trip Assignment (10 – 19)



4.2.2 Existing Plus Alt. 1 Project Short-Term – Intersection Operations

The Alternative 1 Project Short-Term trip assignments were combined with the Existing conditions traffic volumes to obtain Existing Plus Alternative 1 Project Short-Term AM and PM peak hour traffic volumes, which are shown in **Figures 21** and **22**.

Based on the City of Monterey and Caltrans level of service standards, the following study intersections would operate deficiently under Existing Plus Alternative 1 Project Short-Term traffic conditions:

Intersection #1 – Olmsted Road / Highway 68

Intersection #6 – Del Monte Boulevard / Highway 218

Intersection #7 – Highway 218 / Fremont Boulevard

Intersection #11 – Josselyn Canyon Road / Highway 68

Intersection #14 – York Road / Highway 68

Intersection #15 – Pasadera Drive / Highway 68

Intersection #17 – Corral De Tierra Road / Highway 68

Intersection #18 – San Benancio Road / Highway 68

Intersection #19 – Torero Drive / Highway 68

It should be noted that these intersections would also operate at deficient levels of service without the Project.

4.2.3 Existing Plus Alt. 1 Project Short-Term – Road Segment Operations

As discussed in Section 2.4, the following road segments would operate deficiently under Existing traffic conditions. These segments would continue to operate deficiently under Existing Plus Proposed Project Short-Term conditions.

Segment #2 – Highway 68, from Begin/End Freeway to Josselyn Canyon Road

Segment #3 – Highway 68, from Josselyn Canyon Road to Olmsted Road

Segment #4 – Highway 68, from Olmsted Road to Highway 218

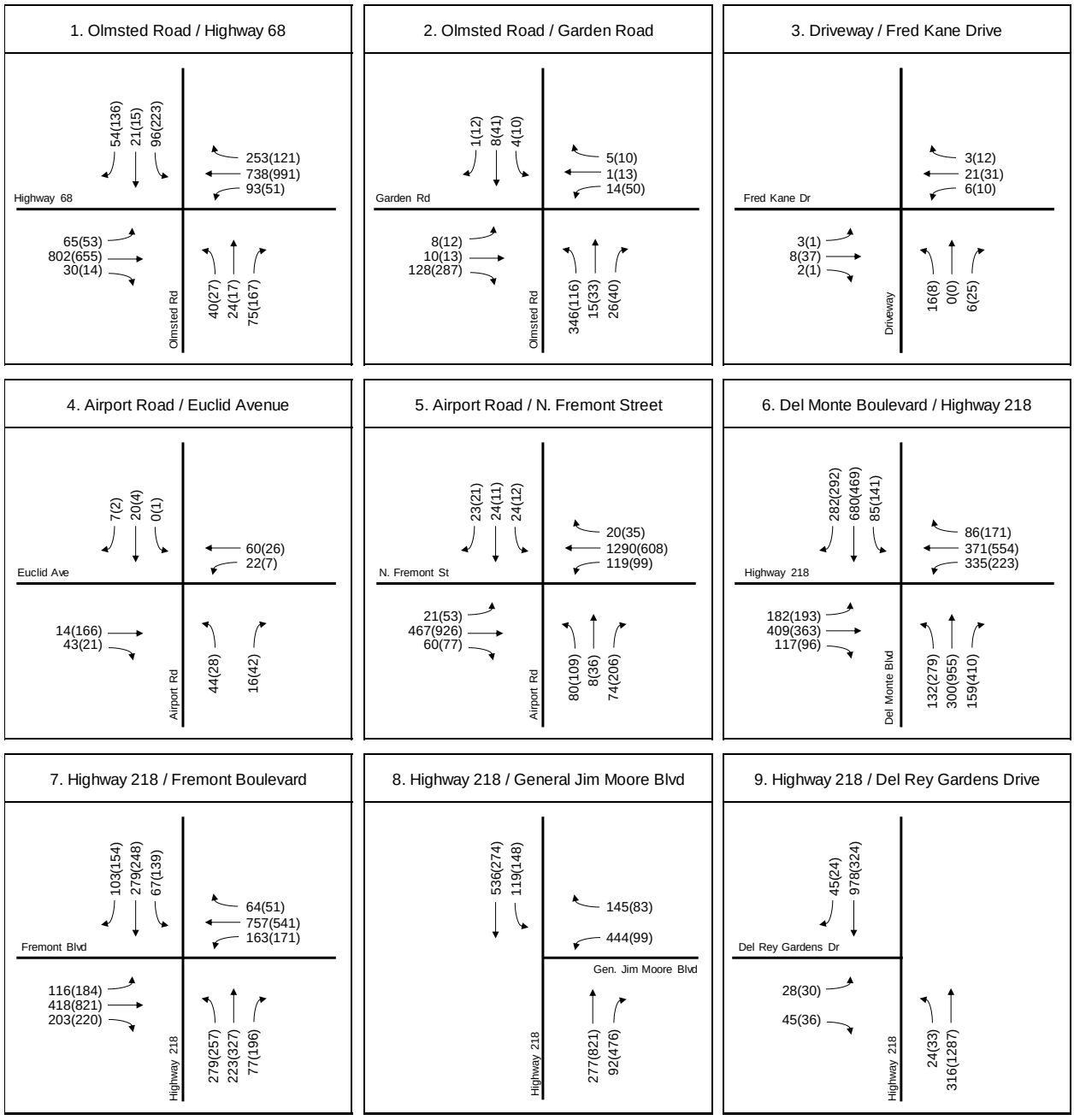
Segment #6 – Highway 68, from Ragsdale Drive to Laureles Grade

Segment #7 – Highway 68, from Laureles Grade to Corral De Tierra Road

Segment #8 – Highway 68, from Corral De Tierra Road to Torero Drive

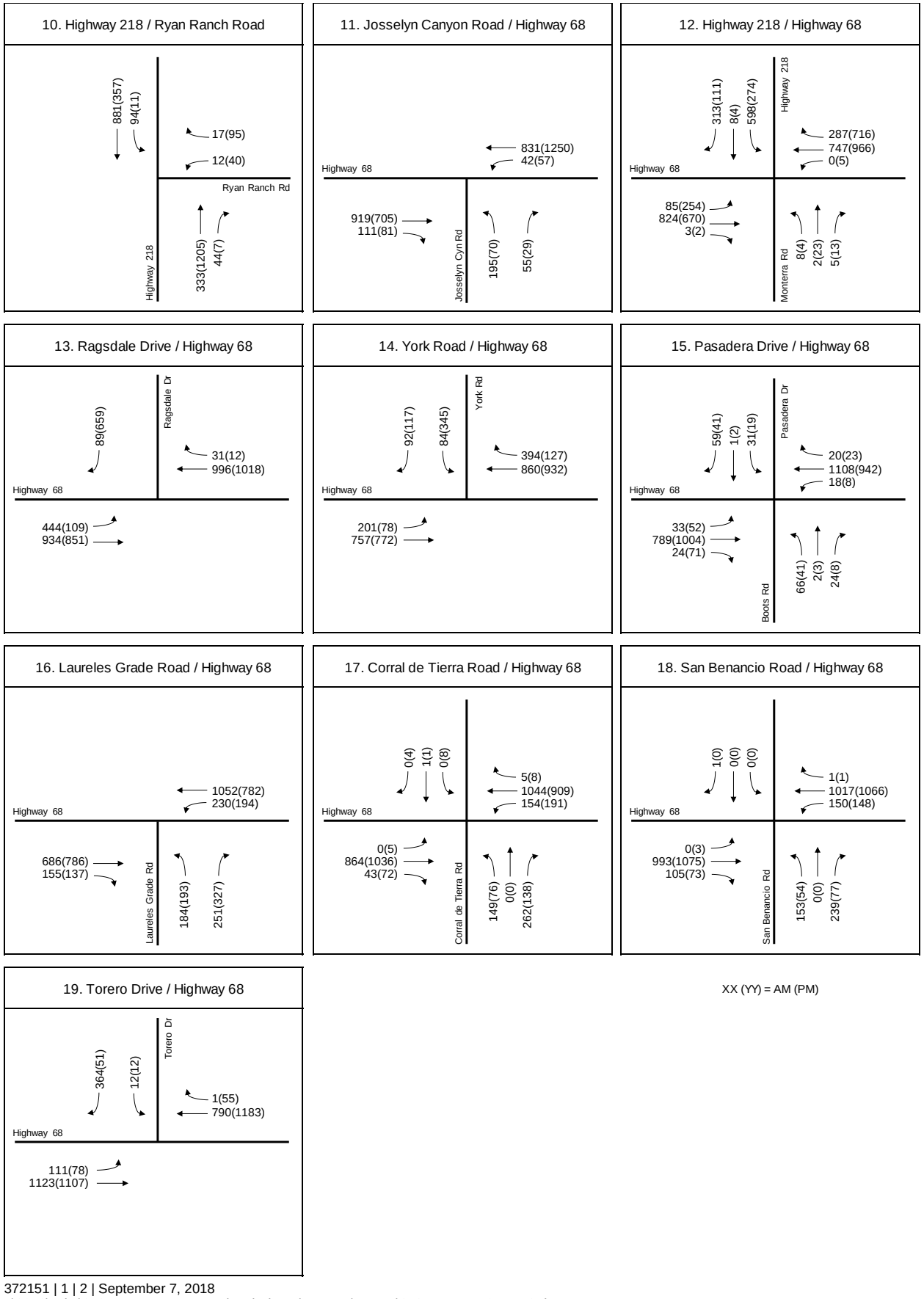
Segment #9 – Highway 68, from Torero Drive to Begin/End Freeway

Figure 21: Existing Plus Alt. 1 Project Short-Term Volumes (1 – 9)



XX (YY) = AM (PM)

Figure 22: Existing Plus Alt. 1 Project Short-Term Volumes (10 – 19)



4.2.4 Existing Plus Alt. 1 Project Short-Term – Project Impacts

Based on the criteria for project impacts, the Alternative 1 Project would have a significant impact at the following intersections under Existing Plus Alternative 1 Project Short-Term conditions (**Tables 14** and **15**):

Intersection #6 – Del Monte Boulevard / Highway 218

Intersection #7 – Highway 218 / Fremont Boulevard

Based on the Caltrans impact criteria, the addition of a single project trip at an intersection that is operating deficiently can be considered an impact. Although intersections #1, #11, #14, #15, #17, #18, and #19 (all Caltrans intersections) would operate deficiently under Existing Plus Alternative 1 Project Short-Term conditions (and under Existing conditions), the Alternative 1 Project would not impact these intersections either because a) the redistribution of traffic that would occur with the relocation of the existing hangars would result in an overall reduction of traffic at the intersection or b) the Project is not expected to add traffic to the intersection during the peak hour that is operating deficiently. Under these circumstances, the Project would not trigger a significant impact under any of the applicable thresholds.

Based on the criteria for project impacts, the Project would have a significant impact on the following road segments under Existing Plus Alternative 1 Project Short-Term conditions:

Segment #4 – Highway 68, from Olmsted Road to Highway 218

4.2.5 Existing Plus Alt. 1 Project Short-Term – Mitigation Measures

The improvements listed below are recommended to mitigate the Project's impacts under Existing Plus Proposed Alternative 1 Project Short-Term conditions. As discussed at Draft EIR sections 4.16. and 5.5.16, and at Draft EIR Appendix N, the improvements, however, may not be feasible if disallowed by federal law; federal law states that airport revenues and Federal Aviation Administration (FAA) grant funds may not be used for purposes other than the capital or operating costs of the airport, the local airport system, or other local facilities owned or operated by the airport owner or operator that are directly and substantially related to the air transportation of passengers and property. These restrictions impact the Airport's ability to fund and implement off-airport mitigation measures. Now that the Airport has identified specific mitigation measures for Proposed Project cumulative impacts, it can make specific requests to the FAA, where appropriate, for it to allow funding of off-airport mitigation measures.

At this time, however, because the Airport does not currently have a determination from the FAA that funding for any off-airport mitigation improvements will be allowed, the following mitigation measures are considered infeasible:

Intersection #6: Del Monte Boulevard / Highway 218 – Mitigation #1

1. Add 2nd Northbound Del Monte Boulevard Left-Turn Lane

Implementation of this improvement would reduce the Project's impact to a less than significant level. The project would be responsible for a fair-share contribution towards the total cost of this improvement, based on the relative number of project trips it would add to the intersection (4 AM and 4 PM peak hour trips).

However, this improvement would be to a Caltrans facility, and would have to be approved by Caltrans before implementation. It is not certain that Caltrans would agree to implement this improvement. In addition, even with the Project's fair-share contribution, there is no guarantee

that there would be sufficient funding available to implement this improvement. This impact could be mitigated by constructing the left turn lane; however, the impact is considered significant and unavoidable at this time because the improvement necessary to reduce the significant impact is infeasible as it is within the jurisdiction and control of another agency (Caltrans) and implementation within the necessary timeframe cannot be assured.

Intersection #7: Highway 218 / Fremont Boulevard – Mitigation #2

1. Add 2nd Northbound Highway 218 Left-Turn Lane

Implementation of this improvement would reduce the Project's impact to a less than significant level. The project would be responsible for a fair-share contribution towards the total cost of this improvement, based on the relative number of project trips it would add to the intersection (4 AM and 4 PM peak hour trips).

However, this improvement would be to a Caltrans facility, and would have to be approved by Caltrans before implementation. It is not certain that Caltrans would agree to implement this improvement. In addition, even with the Project's fair-share contribution, there is no guarantee that there would be sufficient funding available to implement this improvement. This impact could be mitigated by constructing the left turn lane; however, the impact is considered significant and unavoidable at this time because the improvement necessary to reduce the significant impact is infeasible as it is within the jurisdiction and control of another agency (Caltrans) and implementation within the necessary timeframe cannot be assured.

Existing Plus Alternative 1 Project Short-Term intersection levels of service (LOS) with mitigation are also summarized in **Tables 14**and **15**. Levels of service with the proposed roundabouts are identified by PI#1, PI#2, etc. (for Proposed Improvement #). The levels of service with the proposed roundabouts do not necessarily indicate the project has an impact at that location. Mitigated levels of service indicate locations where the project would have an impact, and are identified by M#1, M#2, etc. (for Mitigation #).

LOS calculation worksheets for signalized, stop-controlled, and roundabout-controlled intersections are included in **Appendix H**. Vehicle queue estimates are included as **Appendix I**.

Road Segment #4

The Alternative 1 Project Short-Term is expected to add only 3 AM peak hour 4 PM peak hour trips to segment #4. This will not be enough of an increase in traffic to affect traffic operations on these segments.

Table 14: Existing Plus Alt. 1 Project Short-Term – Intersection LOS (1 – 9)

Scenario # →								1		3		
	N-S Street	E-W Street	Int Control	LOS Std	Peak Hour	Miti #	Prop Imp #	Existing		Proj Trips	Ex+Alt 1 Short-Term	
								Delay	LOS		Delay	LOS
1	Olmsted Road	Highway 68	Signal	C/D	AM			51.0	D	-10	50.2	D
					PM			126.0	F	-11	123.1	F
				C/D	AM		*PI#1*	*12.5*	*B*		*12.4*	*B*
					PM			*17.6*	*C*		*17.2*	*C*
2	Olmsted Road	Garden Road	One-Way Stop	D	AM			10.7	B	-17	20.2	C
					PM			10.8	B	-18	15.6	C
					AM		*PI#2*	*6.7*	*A*		*6.6*	*A*
					PM			*6.2*	*A*		*6.1*	*A*
3	Olmsted Way	Fred Kane Drive	All-Way Stop	D	AM			7.6	A	0	7.4	A
					PM			8.2	A	0	7.5	A
4	Airport Road	Euclid Avenue	Two-Way Stop	D	AM			9.8	A	-1	9.8	A
					PM			10.1	B	-2	10.1	B
5	Airport Road	N. Fremont Street	Signal	D	AM			11.7	B	-3	11.7	B
					PM			14.2	B	-4	14.2	B
6	Del Monte Boulevard	Highway 218	Signal	C/D	AM			34.3	C	4	34.3	C
					PM			38.9	D	4	39.0	**D**
					AM	*M#1*		*33.0*	*C*		*33.0*	*C*
					PM			*33.7*	*C*		*33.7*	*C*
7	Highway 218	Fremont Boulevard	Signal	C/D	AM			31.3	C	4	31.4	C
					PM			46.1	D	4	46.3	**D**
					AM	*M#2*		*26.1*	*C*		*26.1*	*C*
					PM			*32.5*	*C*		*32.6*	*C*
8	Highway 218	General Jim Moore Blvd	Signal	C/D	AM			17.0	B	6	17.0	B
					PM			15.2	B	6	15.3	B
9	Highway 218	Del Rey Gardens Drive	One-Way Stop	C/D	AM			24.1	C	18	24.5	C
					PM			19.0	C	20	19.0	C

Notes:

1 Signal, roundabout and all-way stop delay is average overall delay in seconds per vehicle (sec/veh).

2 One- and two-way stop delay is worst approach delay in seconds per vehicle (sec/veh).

3 LOS highlighted in red indicates intersection operating below level of service standard.

4 * = delay greater than 300 seconds.

5 LOS in bold box indicates project impact.

Table 15: Existing Plus Alt. 1 Project Short-Term – Intersection LOS (10 – 19)

Scenario # →								1		3		
	N-S Street	E-W Street	Intersection Control	LOS Standard	Peak Hour	MM #	Prop Imp #	Existing		Proj Trips	Ex+Alt 1 Short-Term	
								Delay	LOS		Delay	LOS
10	Highway 218	Ryan Ranch Road	Signal	C/D	AM			6.9	A	10	6.9	A
					PM			16.6	B	12	16.8	B
11	Josselyn Canyon Road	Highway 68	Signal	C/D	AM			44.5	D	-2	44.4	D
					PM			19.8	B	-3	19.7	B
					AM		*PI#3*	*11.3*	*B*		*11.3*	*B*
					PM			*13.8*	*B*		*12.1*	*B*
12	Highway 218	Highway 68	Signal	C/D	AM			24.3	C	3	24.4	C
					PM			29.7	C	4	30.0	C
					AM		*PI#4*	*13.3*	*B*		*13.3*	*B*
					PM			*16.2*	*C*		*16.3*	*C*
13	Ragsdale Drive	Highway 68	Signal	C/D	AM			12.3	B	-1	12.3	B
					PM			4.2	A	-1	4.2	A
14	York Road	Highway 68	Signal	C/D	AM			25.3	C	-1	25.3	C
					PM			42.8	D	-1	42.8	D
					AM		*PI#5*	*15.8*	*C*		*15.8*	*C*
					PM			*21.3*	*C*		*21.3*	*C*
15	Pasadera Drive	Highway 68	Signal	C/D	AM			47.5	D	-1	47.1	D
					PM			14.5	B	-1	14.5	B
					AM		*PI#6*	*11.0*	*B*		*11.0*	*B*
					PM			*10.6*	*B*		*10.6*	*B*
16	Laureles Grade Road	Highway 68	Signal	C/D	AM			27.2	C	-1	27.2	C
					PM			31.7	C	-1	31.6	C
					AM		*PI#7*	*14.8*	*B*		*14.8*	*B*
					PM			*11.9*	*B*		*11.9*	*B*
17	Corral de Tierra Road	Highway 68	Signal	C/D	AM			35.2	D	-1	35.1	D
					PM			57.8	E	-1	57.6	E
					AM		*PI#8*	*16.9*	*C*		*16.9*	*C*
					PM			*14.2*	*B*		*14.2*	*B*
18	San Benancio Road	Highway 68	Signal	C/D	AM			70.3	E	-1	70.2	E
					PM			18.9	B	-1	18.9	B
					AM		*PI#9*	*17.9*	*C*		*17.9*	*C*
					PM			*13.0*	*B*		*13.0*	*B*
19	Torero Drive	Highway 68	One-Way Stop	C/D	AM			*	F	-1	*	F
					PM			111.3	F	-1	111.3	F
					AM		*PI#10*	*16.4*	*C*		*16.4*	*C*
					PM			*12.4*	*B*		*21.6*	*C*

Notes:

1 Signal, roundabout and all-way stop delay is average overall delay in seconds per vehicle (sec/veh).
2 One- and two-way stop delay is worst approach delay in seconds per vehicle (sec/veh).
3 LOS highlighted in red indicates intersection operating below level of service standard.
4 * = delay greater than 300 seconds.
5 LOS in bold box indicates project impact.

4.2.6 Existing Plus Alt. 1 Project Short-Term – Bicycle, Pedestrian, and Transit Operations

The Airport supports bicycle use by Airport employees and the public by providing convenient, secure bicycle facilities on Airport premises. Two bike storage containers are currently available for public use at the terminal's east second level entrance.

As discussed in Section 3.3, the Project site plan includes pedestrian walkways adjacent to curbside bus, taxi, and drop-off/pick-up areas, as well as between the new terminal building and the rental car ready/return lot. A sidewalk around the perimeter of the terminal surface parking lot will enhance pedestrian safety between the surface parking lot and terminal building. These features are also included in the Proposed Project.

The Project site plan also includes a designated transit bus stop just west of the terminal building that is approximately 65 feet long.

The Alternative 1 Project Short-Term is not expected to generate a significant amount of bicycle, pedestrian, or transit trips and will not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. Since the Alternative 1 Project will not decrease the performance or safety of such facilities, it will not impact the bicycle, pedestrian, or transit facilities in the study area.

4.2.7 Existing Plus Alt. 1 Project Short-Term – CONA Neighborhood Conditions

As described in Section 3.2.2, the Alternative 1 Project Short-Term includes the relocation of 44 hangars and the ARFF building from the south side of the Airport to the north side of the Airport and the addition of up to 7 new hangars to the north side of the Airport, as well as construction of the North Side Road.

With the construction of the North Side Road, access to the relocated and new hangars would be via Highway 218 and Del Rey Gardens Drive instead of Airport Road through the Casanova Oak Knoll (CONA) neighborhood. In addition, existing traffic generated by six Port-a-Port T-hangars and the Monterey Navy Flying Club hangar that currently use Airport Road through the CONA neighborhood would be re-routed to the north side of the Airport via Highway 218 and Del Rey Gardens Drive.

Therefore, the Alternative 1 Project Short-Term alternative would benefit the CONA neighborhood by not adding any new traffic to Airport Road through the CONA neighborhood and by reducing the current volume of traffic in the neighborhood.

4.2.8 Existing Plus Alt. 1 Project Short-Term – N. Fremont / Highway 1 / Highway 68 Merge Areas

Although outside the study area based on Program j.2.1 of the City of Monterey General Plan, the short weaving segments at the N. Fremont Street / Highway 1 / Highway 68 interchange were analyzed as they relate to the increase in trips from the Alternative 1 Project Short-Term based on comments received from Caltrans District 5 staff.

These short weaving segments and their approximate weave lengths are described below and are shown graphically in **Appendix O**.

- WB Highway 68 to SB Highway 1 merge with SB Highway 1 – 1,530 feet
- NB Highway 1 to EB N. Fremont Street merge with NB Highway 1 – 1,420 feet
- SB Highway 1 to EB Highway 68 merge with SB Highway 1 – 1,100 feet

- WB Highway 68 to NB Highway 1 merge with NB Highway 1 – 410 feet

The redistribution of trips generated by the relocated 44 hangars from the southeast General Aviation (GA) area to the northern GA area would not change the number of trips on weaving segments #1 and #2 as trips to and from the south would continue to use these weaving segments. The redistribution of trips generated by the relocated 44 hangars would reduce the number of peak hour trips on weaving segments #3 and #4 as trips to and from the north would no longer use the N. Fremont Street / Highway 1 / Highway 68 interchange.

As shown in **Table 13**, the Alternative 1 Project Short-Term is estimated to generate at most two new peak hour trips, one inbound and one outbound. The one inbound and one outbound trip generated by 7 new hangars would add on average less than one peak hour trip to weaving segments #1 and #2, and are not expected to add any trips to weaving segments #3 and #4. Therefore, the Alternative 1 Project Short-Term would not have an impact on these weaving segments.

4.2.9 Alternative 1 Project Short-Term – Construction Impacts

Alternative 1 Project Short-Term construction is expected to occur in five phases. A description of the construction activities associated with each phase is included in **Table 16**. The project civil engineers provided estimates of the total number of construction-related round trips for each phase of construction, which are shown in **Table 17**. The trip estimates include trips by construction workers, the delivery of materials and equipment, the hauling of surplus earthwork, and the removal of construction debris from the project site to an off-site location. The number of daily construction vehicle trips generated by the project will vary depending on the phase and the specific construction activities taking place on any given day. The construction-related round trips per phase were converted to average daily trips, which are shown in **Table 18**. The average number of truck trips per hour were also estimated.

As a conservative estimate, construction trips were assumed to occur 5 days a week (i.e., Monday through Friday). If work is also conducted on the weekend, then the average number of construction trips per day could be reduced. An average of 240 working days per year was estimated. This assumes 20 working days per month for 12 months of each year.

Total Trips

For the Alternative 1 Project, Phase 2 is expected to generate the highest number of total daily trips (passenger vehicles and trucks) with an average of 36 daily trips. Assuming each truck is the equivalent of 2 passenger vehicles, construction of the Alternative 1 Project would have the potential traffic impacts of about 58 passenger vehicle trips per day, which would occur during Phase 4.

Passenger Vehicle Trips

Passenger vehicle trips are anticipated for the construction workers. For the Alternative 1 Project, Phase 2 is expected to generate the highest number of daily trips by construction workers, with an average of 22 daily trips. This is a conservative estimate. Again, if work is conducted on weekends, the number of daily trips would be reduced.

Truck Trips

Truck trips are anticipated for earth removal, the delivery of materials and equipment, and construction debris removal. Truck trips were assumed to occur 5 days a week between the hours of 9:00 a.m. and 4:00 p.m., for a total of 7 hours per day. This is a conservative estimate.

Table 16: Alternative 1 Project Construction Activities

Construction Phase	Construction Activity on North or South Side of Airport	Years per Phase	Description of Construction Activity
Phase 1 (2019-2021)	North	3	General Aviation (GA) Prep/Install hangars; Construct new Airport Rescue & Firefighting (ARFF) building; Construct "north side" road
Phase 2 (2022-2025)	South	4	Demo South GA & ARFF; grade and construct terminal, apron, roads, rental car & terminal surface lots. Repair haul road.
Phase 3 (2026)	South	1	Restripe TW A & move hold lines; Demolish old terminal
Phase 4 (2027)	South	1	Construct surface parking along Fred Kane Dr.
Phase 5 (2028)	South	1	Construct Highway 68 frontage cul-de-sac
Total		**10**	

Table 17: Alternative 1 Project Construction Trips – Round Trips per Phase

Construction Phase	Construction Activity on North or South Side of Airport	Years per Phase	Construction Workers	Deliveries of Materials & Equipment	On-Airport[4] Earth Removal	Off-Airport Earth Removal	Construction Debris Removal	Total[4] Round Trips
Phase 1 (2019-2021)	North	3	5,439	4,066	2,428	0	0	9,505
Phase 2 (2022-2025)	South	4	9,934	4,969	7,524	1,316	629	16,848
Phase 3 (2026)	South	1	663	87	0	0	120	870
Phase 4 (2027)	South	1	1,167	1,501	0	1,460	0	4,128
Phase 5 (2028)	South	1	694	288	0	0	0	982
Total		**10**	**17,897**	**10,911**	**9,952**	**2,776**	**749**	**32,333**

Notes:
1. Assumes 25 cubic yards (cy) of earth removal per haul trip. Each truckload has a return trip with an empty truck. This equates to a total of 34,700 cubic yards of earth removal: 2,776 earth removal round trips / 2 = 1,388 outbound hauls. 1,388 hauls x 25 cy/haul = 34,700 cy
2. Construction workers assumed to arrive/depart site in passenger vehicles (cars & pickup trucks).
3. Assumes earth removal, construction debris removal, and deliveries of materials and equipment are all made by trucks.
4. "On-Airport" earth removal trips are assumed to have both trip ends on-site and are therefore excluded from construction vehicle trip totals.
5. Phase duration assumed to include 12 calendar months for each year of each phase.
6. One round trip = two total trips (i.e., one inbound, one outbound).

Table 18: Alternative 1 Project Construction Trips – Average Trips per Day / Hour

Construction Phase	Construction Activity on North or South Side of Airport	Years per Phase	Passenger Vehicle Trips per Day	Truck Trips per Day	Total Trips per Day	Total Trips per Day in PCE	Truck Trips per Hour	Truck Trips per Hour in PCE
Phase 1 (2019-2021)	North	3	14	12	26	38	2	4
Phase 2 (2022-2025)	South	4	22	14	36	50	2	4
Phase 3 (2026)	South	1	6	2	8	10	1	2
Phase 4 (2027)	South	1	10	24	34	58	3	6
Phase 5 (2028)	South	1	6	2	8	10	1	2
Total		**10**						

Notes:
1. Assumes 240 working days per year (20 working days per month x 12 months per year).
2. Truck trips assume a conservative 7-hour workday, outside of peak hours (e.g, 9:00 a.m to 4:00 p.m.)
3. Passenger Car Equivalents (PCE): 1 truck = 2 passenger vehicles (per HCM 2010 Exhibit 21-10).
4. The highest number of trips generated by each phase are shaded in red.
5. Average trips represent total trips (i.e, inbound and outbound).

If work is also conducted on weekends or during a longer workday, the average number of trips would be reduced.

Earth removal is expected to occur in Phases 2 and 4. It is estimated that a total of 34,700 cubic yards of earth will be hauled off-site during Phases 2 and 4 (16,450 cubic yards during Phase 2 and 18,250 cubic yards during Phase 4). No off-site earth removal from the site is expected

during Phases 1, 3, and 5. Construction debris removal is expected to occur in Phases 2 and 3. No construction debris removal is expected during Phases 1, 4, and 5. Delivery of materials and equipment is expected to occur during all construction phases.

Daily truck trips associated with earth removal, deliveries of materials and equipment, and the removal of construction debris were combined and estimated for each construction phase. Phase 4 is expected to generate the highest number of daily truck trips, with an average of 24 daily truck trips. Assuming each truck is the equivalent of 2 passenger vehicles, construction of the Alternative 1 Project would have the potential traffic impacts of about 58 passenger vehicle trips per day.

Truck trips were also combined and estimated on an hourly basis for each construction phase. The highest number of hourly truck trips is estimated to occur during Phase 4, with an average of 3 truck trips per hour. Assuming each truck is the equivalent of 2 passenger vehicles, the Alternative 1 Project would have the potential traffic impacts of about 6 passenger vehicle trips per hour.

Analysis

A map showing the proposed construction vehicle haul routes is included in **Figure 23**. A comparison of the amount of construction vehicle trips in relation to the existing traffic volumes on the roads near the project site is provided in **Table 19**. The total daily construction vehicle trips, including passenger vehicles and trucks, were converted to passenger car equivalents (PCE) and assigned to the available haul routes. The haul routes and construction phases where construction-related trips would represent more than 1% of existing daily traffic are highlighted in **Table 19**.

Alternative 1 Project haul routes for construction activities on the south side of the Airport include Olmsted Road and Highway 68. Construction activities for the Alternative 1 Project on the south side of the Airport would represent about 1% (Phase 4) of the existing traffic on Olmsted Road and 0.3% (Phases 2 and 4) of the existing traffic on Highway 68.

Alternative 1 Project construction haul routes for construction activities on the north side of the Airport include Del Rey Gardens Drive and Highway 218. Construction activities for the Alternative 1 Project on the north side of the Airport would represent about 3.8% (Phase 1) of the existing traffic on Del Rey Gardens Drive and 0.3% (Phase 1) of the existing traffic on Highway 218.

Impacts and Recommendations

Construction vehicle trips associated with the Alternative 1 Project would represent a small fraction (3.8% or less) of the existing daily volumes on the study road network. However, construction-related trips will be added to intersections and road segments that have been identified as operating deficiently during the peak commute hours under existing conditions, as described in Sections 2.3 and 2.4. As a result, project construction traffic impacts would be significant and unavoidable. Construction-related impacts would be temporary. To reduce construction impacts, truck hauling operations should not occur during the hours of 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m., Monday through Friday.

Figure 23: Alternative 1 Project Construction Vehicle Haul Routes

Table 19: Alternative 1 Project Construction Trips as a Percentage of ADT

Construction Phase	Total Daily Construction Trips (PCE)	Construction Activity Area	Alternative 1 Project Haul Routes	Existing ADT	Construction Trips % of ADT
1	38	North	Del Rey Gardens Dr	1,000	3.8%
1	38	North	Highway 218	13,200	0.3%
2	50	South	Olmsted Rd	5,800	0.9%
2	50	South	Highway 68	18,800	0.3%
3	10	South	Olmsted Rd	5,800	0.2%
3	10	South	Highway 68	18,800	0.1%
4	58	South	Olmsted Rd	5,800	1.0%
4	58	South	Highway 68	18,800	0.3%
5	10	South	Olmsted Rd	5,800	0.2%
5	10	South	Highway 68	18,800	0.1%

Notes:
1. Total Daily Construction Trips (PCE) includes trips by construction workers and truck trips, with truck trips converted to Passenger Car Equivalents (PCE).
2. Construction Activity Area refers to construction activities on the north and south sides of the Airport.
3. Haul routes include roads closest to the project site that would be most affected by construction vehicle trips. Construction vehicles trips would disperse onto other roads as they move farther from the project site, reducing the potential for construction traffic impacts.
4. The haul routes and construction phases where construction-related trips would represent more than 1% of existing daily traffic are shaded in red.
5. ADT = Average Daily Traffic Volume

5 Background Traffic Conditions

This section describes traffic operations in the study area under Background conditions, within a timeframe of approximately 10 years. This scenario does not include trips generated by the Project, but does include trips generated by increased enplanements at the Airport unrelated to the proposed Project, as well as other development projects in the study area.

5.1 Background Traffic Volumes

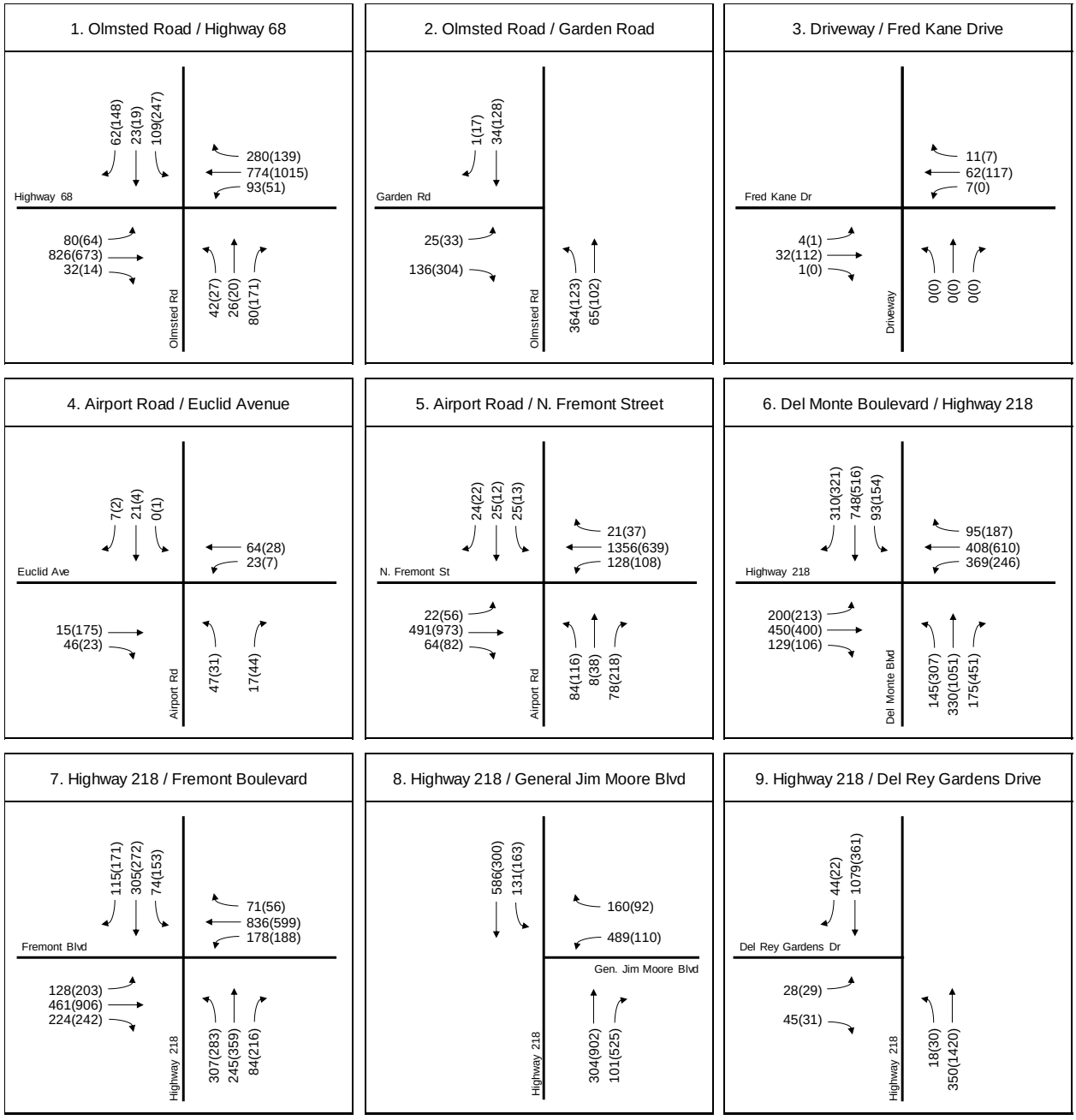
Anticipated growth in the boarding of passengers (i.e., enplanements) is expected to occur with or without the implementation of the Project. As discussed in Chapter 2 of the Proposed Airport Master Plan (AMP), which is attached to the Draft EIR as Appendix B, the aviation activity forecast for the Airport was prepared based on projections of regional and national economic performance, and on overall aviation trends. Further, the forecast was approved by the FAA separate from the AMP and is not based on airport improvement projects. Trips generated by increased enplanements at the Airport under Background conditions were estimated based on aviation forecast projections in the Airport's updated draft Final Airport Master Plan (AMP), which represent projected aviation demand for a ten-year planning horizon. The aviation forecast projections are based on anticipated regional and national growth in aviation demand and are not due to changes in capacity at the Airport. The FAA approval letter for these forecasts, as well as a summary of the forecasts, is included in **Appendix Q**.

The Airport's enplanements, which were 197,322 in 2016, are projected to reach 245,000 in the ten-year planning horizon, representing an increase of approximately 24%. To account for this projected increase, trips generated by the Airport in 2016 (based on traffic counts at the Airport's access points) were increased by 24% to estimate the trips generated by increased enplanements in the ten-year planning horizon. As is the case with the existing trips generated by the Airport, the trips associated with the increased enplanements include trips made by employees, support services, etc.

In addition, trips from development external to the Airport were estimated based on approved projects in the study area that have not yet been constructed, and future traffic volume forecasts developed for the *SR 68 Scenic Highway Plan* study (August 2017). The *SR 68 Scenic Highway Plan* study utilized the 2014 Association of Monterey Bay Area Governments (AMBAG) Regional Travel Demand Model to project future traffic volumes along the SR 68 corridor. For the purposes of this analysis, future traffic volume projections from the *SR 68 Scenic Highway Plan* were used as the basis for future traffic volumes along the SR 68 corridor, and future traffic volumes for the remainder of the study area were developed based on the list of approved projects. A list of the approved projects, their trip generation estimates, and a map of their locations are included in **Appendix P**. Trips from increased enplanements were also added to these projected traffic volumes.

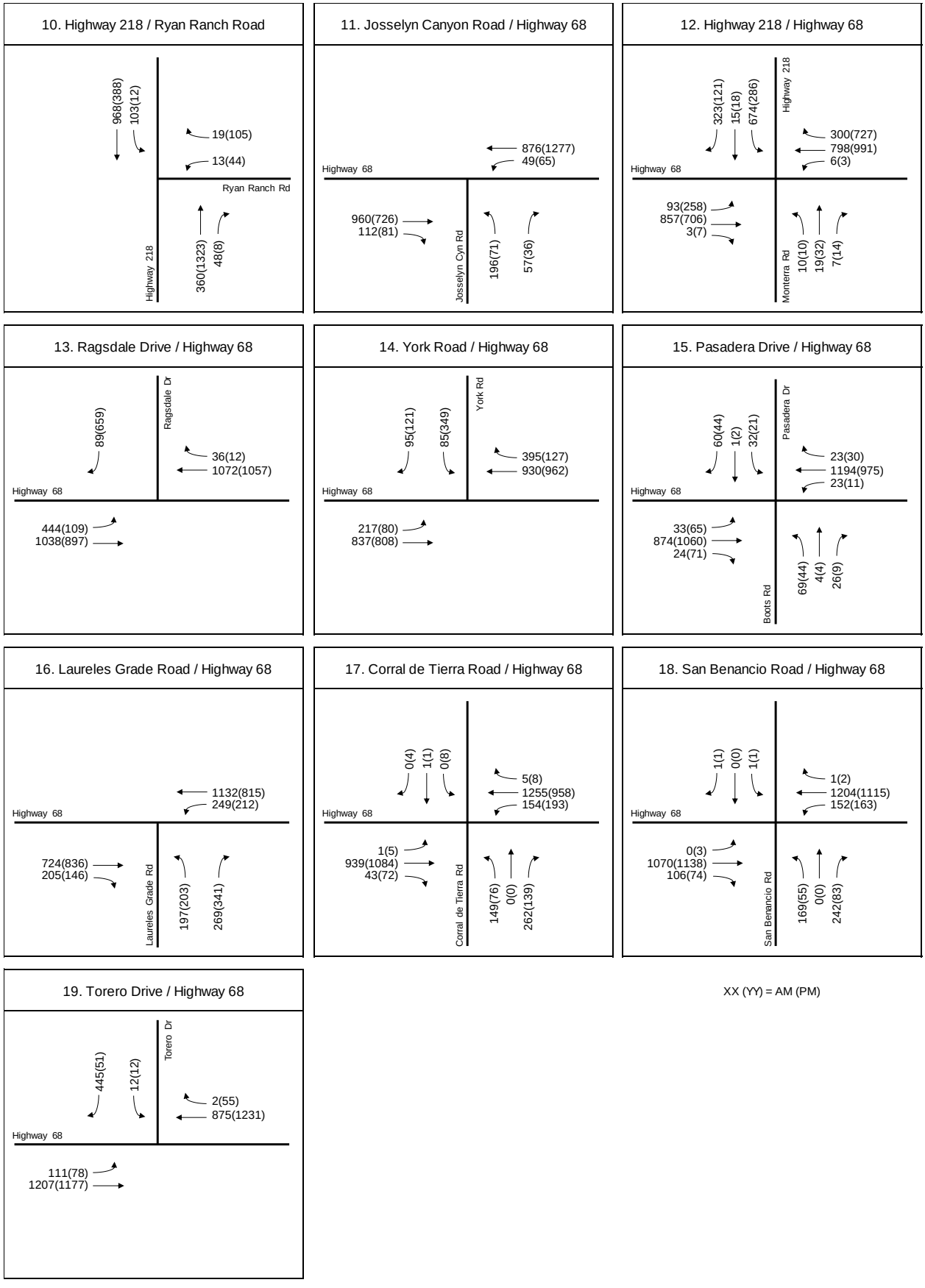
In assessing Background traffic conditions, trips from increased enplanements and from development external to the Airport were combined and added to the Existing conditions traffic volumes to obtain Background conditions traffic volumes. Background weekday AM and PM peak hour traffic volumes are shown in **Figures 24** and **25**.

Figure 24: Background Volumes (1 – 9)



XX (YY) = AM (PM)

Figure 25: Background Volumes (10 – 19)



5.2 Background Intersection Operations

Based on the City of Monterey and Caltrans level of service standards, the following study intersections are projected to operate deficiently under Background traffic conditions:

Intersection #1 – Olmsted Road / Highway 68
Intersection #6 – Del Monte Boulevard / Highway 218
Intersection #7 – Highway 218 / Fremont Boulevard
Intersection #9 – Highway 218 / Del Rey Gardens Drive
Intersection #11 – Josselyn Canyon Road / Highway 68
Intersection #14 – York Road / Highway 68
Intersection #15 – Pasadera Drive / Highway 68
Intersection #16 – Laureles Grade Road / Highway 68
Intersection #17 – Corral De Tierra Road / Highway 68
Intersection #18 – San Benancio Road / Highway 68
Intersection #19 – Torero Drive / Highway 68

Background conditions intersection levels of service are summarized in **Tables 20** and **21**. LOS calculation worksheets are included in **Appendix H**. Vehicle queue estimates are included in **Appendix I**.

5.3 Background Road Segment Operations

Road segment operations under Background traffic conditions are discussed here qualitatively. The following road segments operate deficiently under Existing conditions and would continue to operate deficiently with the added traffic under Background traffic conditions:

Segment #2 – Highway 68, from Begin/End Freeway to Josselyn Canyon Road
Segment #3 – Highway 68, from Josselyn Canyon Road to Olmsted Road
Segment #4 – Highway 68, from Olmsted Road to Highway 218
Segment #6 – Highway 68, from Ragsdale Drive to Laureles Grade
Segment #7 – Highway 68, from Laureles Grade to Corral De Tierra Road
Segment #8 – Highway 68, from Corral De Tierra Road to Torero Drive
Segment #9 – Highway 68, from Torero Drive to Begin/End Freeway

Table 20: Background – Intersection LOS (1 – 9)

Scenario # →								4	
	N-S Street	E-W Street	Int Control	LOS Std	Peak Hour	Miti #	Prop Imp #	Background	
								Delay	LOS
1	Olmsted Road	Highway 68	Signal	C/D	AM			64.2	E
					PM			145.2	F
				C/D	AM		*PI#1*	*13.9*	*B*
					PM			*21.8*	*C*
2	Olmsted Road	Garden Road	One-Way Stop	D	AM			11.5	B
					PM			11.5	B
					AM		*PI#2*	*7.2*	*A*
					PM			*6.7*	*A*
3	Olmsted Way	Fred Kane Drive	All-Way Stop	D	AM			7.7	A
					PM			8.6	A
4	Airport Road	Euclid Avenue	Two-Way Stop	D	AM			9.9	A
					PM			10.2	B
5	Airport Road	N. Fremont Street	Signal	D	AM			12.6	B
					PM			14.8	B
6	Del Monte Boulevard	Highway 218	Signal	C/D	AM			38.5	D
					PM			45.0	D
					AM	*M#6*		*34.3*	*C*
					PM			*34.9*	*C*
7	Highway 218	Fremont Boulevard	Signal	C/D	AM			38.0	D
					PM			58.7	E
					AM	*M#2*		*29.3*	*C*
					PM			*34.0*	*C*
8	Highway 218	General Jim Moore Blvd	Signal	C/D	AM			19.5	B
					PM			18.5	B
9	Highway 218	Del Rey Gardens Drive	One-Way Stop	C/D	AM			28.5	D
					PM			22.0	C
					AM	*M#7*		*3.5*	*A*
					PM			*3.3*	*A*

Notes:

1 Signal, roundabout and all-way stop delay is average overall delay in seconds per vehicle (sec/veh).

2 One- and two-way stop delay is worst approach delay in seconds per vehicle (sec/veh).

3 LOS highlighted in red indicates intersection operating below level of service standard.

4 * = delay greater than 300 seconds.

5 LOS in bold box indicates project impact.

Table 21: Background – Intersection LOS (10 – 19)

Scenario # →								4	
	N-S Street	E-W Street	Intersection Control	LOS Standard	Peak Hour	MM #	Prop Imp #	Background	
								Delay	LOS
10	Highway 218	Ryan Ranch Road	Signal	C/D	AM			7.4	A
					PM			25.7	C
11	Josselyn Canyon Road	Highway 68	Signal	C/D	AM			51.4	D
					PM			22.7	C
					AM		*PI#3*	*12.0*	*B*
					PM			*12.7*	*B*
12	Highway 218	Highway 68	Signal	C/D	AM			32.2	C
					PM			33.1	C
					AM		*PI#4*	*17.5*	*C*
					PM			*17.7*	*C*
13	Ragsdale Drive	Highway 68	Signal	C/D	AM			12.1	B
					PM			4.2	A
14	York Road	Highway 68	Signal	C/D	AM			32.6	C
					PM			46.8	D
					AM	*M#3*	*PI#5*	*18.8*	*C*
					PM			*23.7*	*C*
15	Pasadera Drive	Highway 68	Signal	C/D	AM			67.4	E
					PM			17.7	B
					AM		*PI#6*	*12.4*	*B*
					PM			*11.5*	*B*
16	Laureles Grade Road	Highway 68	Signal	C/D	AM			36.6	D
					PM			39.5	D
					AM	*M#8*	*PI#7*	*18.2*	*C*
					PM			*13.2*	*B*
17	Corral de Tierra Road	Highway 68	Signal	C/D	AM			91.4	F
					PM			64.3	E
					AM	*M#4*	*PI#8*	*21.9*	*C*
					PM			*15.3*	*C*
18	San Benancio Road	Highway 68	Signal	C/D	AM			106.6	F
					PM			36.6	D
					AM	*M#9*	*PI#9*	*24.2*	*C*
					PM			*14.4*	*B*
19	Torero Drive	Highway 68	One-Way Stop	C/D	AM			*	F
					PM			156.5	F
					AM	*M#5*	*PI#10*	*12.0*	*B*
					PM			*24.1*	*C*

Notes:

1 Signal, roundabout and all-way stop delay is average overall delay in seconds per vehicle (sec/veh).

2 One- and two-way stop delay is worst approach delay in seconds per vehicle (sec/veh).

3 LOS highlighted in red indicates intersection operating below level of service standard.

4 * = delay greater than 300 seconds.

5 LOS in bold box indicates project impact.

6 Background Plus Project Short-Term Traffic Conditions

This section describes traffic operations in the study area under Background traffic conditions with the addition of Project traffic under the two short-term project alternatives, namely; Proposed Project Short-Term and Alternative 1 Project Short-Term traffic conditions.

6.1 Background Plus Proposed Project Short-Term Traffic Conditions

6.1.1 Background Plus Proposed Project Short-Term – Intersection Operations

The Proposed Project Short-Term trip assignments described in Section 4.1.1 were combined with the Background conditions traffic volumes to obtain Background Plus Proposed Project Short-Term AM and PM peak hour traffic volumes, which are shown in **Figures 26** and **27**.

Based on the City of Monterey and Caltrans level of service standards, the following study intersections are projected to operate deficiently under Background Plus Proposed Project Short-Term traffic conditions:

Intersection #1 – Olmsted Road / Highway 68
Intersection #6 – Del Monte Boulevard / Highway 218
Intersection #7 – Highway 218 / Fremont Boulevard
Intersection #9 – Highway 218 / Del Rey Gardens Drive
Intersection #11 – Josselyn Canyon Road / Highway 68
Intersection #14 – York Road / Highway 68
Intersection #15 – Pasadera Drive / Highway 68
Intersection #16 – Laureles Grade Road / Highway 68
Intersection #17 – Corral De Tierra Road / Highway 68
Intersection #18 – San Benancio Road / Highway 68
Intersection #19 – Torero Drive / Highway 68

It should be noted that these intersections would also operate at deficient levels of service under Background without Project conditions.

6.2 Background Plus Proposed Project Short-Term – Road Segment Operations

Road segment operations under Background Plus Project Short-Term traffic conditions are based on the analysis contained in the SR 68 Scenic Highway Plan study conducted by Kimley-Horn (August 2017). That study included a detailed analysis of the road segment operations along the SR 68 corridor under existing and future traffic conditions. As discussed in Section 4.1.1, the Proposed Project Short-Term is estimated to generate 10 net new daily trips, with 1 occurring during the AM peak hour (1 in, 0 out) and 2 occurring during the PM peak hour (1 in, 1 out). The effects of project traffic on the operations of the study segments would be negligible. As a result, study segment operations under Background Plus Project Short-Term conditions

are discussed here qualitatively. The following road segments operate deficiently under Existing conditions and would continue to operate deficiently with the added traffic under Background Plus Proposed Project Short-Term traffic conditions:

Segment #2 – Highway 68, from Begin/End Freeway to Josselyn Canyon Road

Segment #3 – Highway 68, from Josselyn Canyon Road to Olmsted Road

Segment #4 – Highway 68, from Olmsted Road to Highway 218

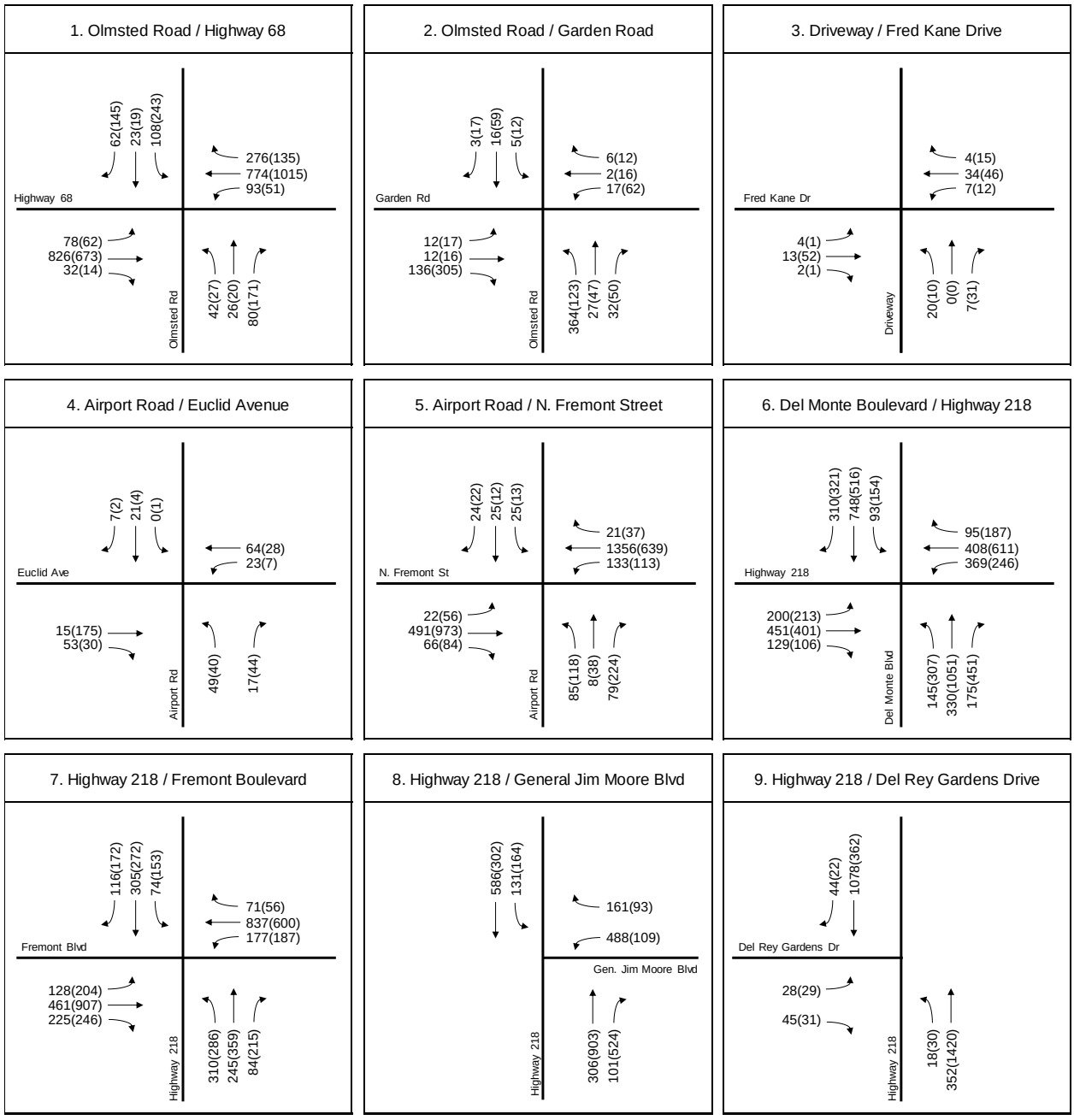
Segment #6 – Highway 68, from Ragsdale Drive to Laureles Grade

Segment #7 – Highway 68, from Laureles Grade to Corral De Tierra Road

Segment #8 – Highway 68, from Corral De Tierra Road to Torero Drive

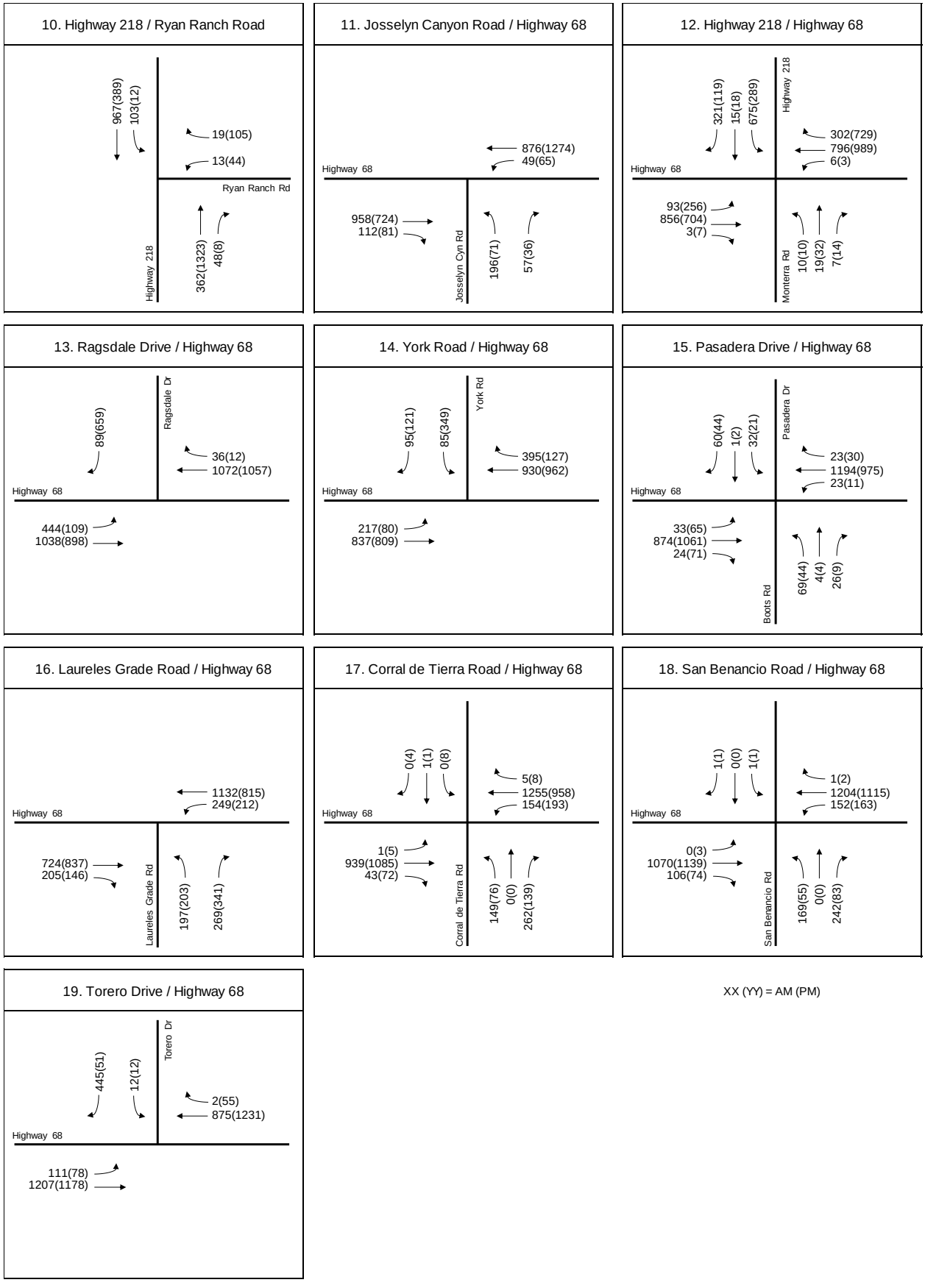
Segment #9 – Highway 68, from Torero Drive to Begin/End Freeway

Figure 26: Background Plus Proposed Project Short-Term Volumes (1 – 9)



XX (YY) = AM (PM)

Figure 27: Background Plus Proposed Project Short-Term Volumes (10 – 19)



6.2.1 Background Plus Proposed Project Short-Term – Project Impacts

Based on the criteria for project impacts, the Proposed Project would have a significant impact at the following intersections under Background Plus Proposed Project Short-Term conditions (**Tables 22** and **23**):

Intersection #6 – Del Monte Boulevard / Highway 218

Intersection #7 – Highway 218 / Fremont Boulevard

Intersection #9 – Highway 218 / Del Rey Gardens Drive

Intersection #14 – York Road / Highway 68

Intersection #16 – Laureles Grade Road / Highway 68

Intersection #17 – Corral De Tierra Road / Highway 68

Intersection #18 – San Benancio Road / Highway 68

Intersection #19 – Torero Drive / Highway 68

Based on the Caltrans impact criteria, the addition of a single project trip at an intersection that is operating deficiently can be considered an impact. Although intersections #1, #11, and #15 (all Caltrans intersections) would operate deficiently under Background Plus Proposed Project Short-Term conditions (and under Background without project conditions), the Project would not impact these intersections either because a) the redistribution of traffic that would occur with the relocation of the existing hangars would result in an overall reduction of traffic at the intersection or b) the Project is not expected to add traffic to the intersection during the peak hour that is operating deficiently. Under these circumstances, the Project would not trigger a significant impact under any of the applicable thresholds.

Based on the criteria for project impacts, the Project would have a significant impact on the following road segments under Background Plus Proposed Project Short-Term conditions:

Segment #6 – Highway 68, from Ragsdale Drive to Laureles Grade

Segment #7 – Highway 68, from Laureles Grade to Corral De Tierra Road

Segment #8 – Highway 68, from Corral De Tierra Road to Torero Drive

Segment #9 – Highway 68, from Torero Drive to Begin/End Freeway

6.2.2 Background Plus Proposed Project Short-Term – Mitigation Measures

The improvements listed below are recommended to mitigate the Project's impacts under Background Plus Proposed Project Short-Term conditions. As discussed at Draft EIR sections 4.16. and 5.5.16, and at Draft EIR Appendix N, the improvements, however, may not be feasible if disallowed by federal law; federal law states that airport revenues and Federal Aviation Administration (FAA) grant funds may not be used for purposes other than the capital or operating costs of the airport, the local airport system, or other local facilities owned or operated by the airport owner or operator that are directly and substantially related to the air transportation of passengers and property. These restrictions impact the Airport's ability to fund and implement off-airport mitigation measures. Now that the Airport has identified specific mitigation measures for Proposed Project cumulative impacts, it can make specific requests to the FAA, where appropriate, for it to allow funding of off-airport mitigation measures.

At this time, however, because the Airport does not currently have a determination from the FAA that funding for any off-airport mitigation improvements will be allowed, the following mitigation measures are considered infeasible:

Intersection #6: Del Monte Boulevard / Highway 218 – Mitigation #6

1. Add 2nd Northbound Del Monte Blvd Left-Turn Lane
2. Add Northbound Del Monte Blvd Right-Turn Overlap Phasing
3. Add Southbound Del Monte Blvd Right-Turn Overlap Phasing

Implementation of these improvements would reduce the Project's impact to a less than significant level. The project would be responsible for a fair-share contribution towards the total cost of these improvements, based on the relative number of project trips it would add to the intersection (1 AM and 2 PM peak hour trips).

However, these improvements would be to a Caltrans facility, and would have to be approved by Caltrans before implementation. It is not certain that Caltrans would agree to implement these improvements. In addition, even with the Project's fair-share contribution, there is no guarantee that there would be sufficient funding available to implement these improvements. This impact could be mitigated by constructing the left-turn lane and implementing overlap phasing; however, the impact is considered significant and unavoidable at this time because the improvement necessary to reduce the significant impact is infeasible as it is within the jurisdiction and control of another agency (Caltrans) and implementation within the necessary timeframe cannot be assured.

Intersection #7: Highway 218 / Fremont Boulevard – Mitigation #2

1. Add 2nd Northbound Highway 218 Left-Turn Lane

Implementation of this improvement would reduce the Project's impact to a less than significant level. The project would be responsible for a fair-share contribution towards the total cost of this improvement, based on the relative number of project trips it would add to the intersection (5 AM and 9 PM peak hour trips).

However, this improvement would be to a Caltrans facility, and would have to be approved by Caltrans before implementation. It is not certain that Caltrans would agree to implement this improvement. In addition, even with the Project's fair-share contribution, there is no guarantee that there would be sufficient funding available to implement this improvement. This impact could be mitigated by constructing the left-turn lane; however, the impact is considered significant and unavoidable at this time because the improvement necessary to reduce the significant impact is infeasible as it is within the jurisdiction and control of another agency (Caltrans) and implementation within the necessary timeframe cannot be assured.

Intersection #9: Highway 218 / Del Rey Gardens Drive – Mitigation #7

1. Signalize Intersection
2. Add 2nd Northbound Highway 218 Through Lane
3. Add 2nd Southbound Highway 218 Through Lane

Implementation of these improvements would reduce the Project's impact to a less than significant level. The project would be responsible for a fair-share contribution towards the total cost of these improvements, based on the relative number of project trips it would add to the intersection (1 AM and 1 PM peak hour trip).

However, these improvements would be to a Caltrans facility, and would have to be approved by Caltrans before implementation. It is not certain that Caltrans would agree to implement these improvements. In addition, even with the Project's fair-share contribution, there is no

guarantee that there would be sufficient funding available to implement these improvements. This impact could be mitigated by signalizing the intersection and constructing the through lanes; however, the impact is considered significant and unavoidable at this time because the improvement necessary to reduce the significant impact is infeasible as it is within the jurisdiction and control of another agency (Caltrans) and implementation within the necessary timeframe cannot be assured.

Intersection #14: York Road / Highway 68 – Mitigation #3

1. Convert intersection to a roundabout

Conversion of this intersection to a roundabout, as proposed in TAMC's *SR 68 Scenic Highway Plan* study, would reduce the Project's impact (1 PM peak hour trip) to a less than significant level. Per the TAMC website, Measure X sales tax funds have been dedicated to the *SR 68 Scenic Highway Plan*, which is also a candidate for federal infrastructure funding and state funding from SB 1 programs. This impact could be mitigated by constructing the roundabout; however, the impact is considered significant and unavoidable at this time because the improvement necessary to reduce the significant impact is infeasible as it is within the jurisdiction and control of another agency (Caltrans) and implementation within the necessary timeframe cannot be assured.

Intersection #16: Laureles Grade Road / Highway 68 – Mitigation #8

1. Convert intersection to a roundabout

Conversion of this intersection to a roundabout, as proposed in TAMC's *SR 68 Scenic Highway Plan* study, would reduce the Project's impact (1 PM peak hour trip) to a less than significant level. Per the TAMC website, Measure X sales tax funds have been dedicated to the *SR 68 Scenic Highway Plan*, which is also a candidate for federal infrastructure funding and state funding from SB 1 programs. This impact could be mitigated by constructing the roundabout; however, the impact is considered significant and unavoidable at this time because the improvement necessary to reduce the significant impact is infeasible as it is within the jurisdiction and control of another agency (Caltrans) and implementation within the necessary timeframe cannot be assured.

Intersection #17: Corral De Tierra Road / Highway 68 – Mitigation #4

1. Convert intersection to a roundabout

Conversion of this intersection to a roundabout, as proposed in TAMC's *SR 68 Scenic Highway Plan* study, would reduce the Project's impact (1 PM peak hour trip) to a less than significant level. Per the TAMC website, Measure X sales tax funds have been dedicated to the SR 68 Scenic Highway Plan, which is also a candidate for federal infrastructure funding and state funding from SB 1 programs. This impact could be mitigated by constructing the roundabout; however, the impact is considered significant and unavoidable at this time because the improvement necessary to reduce the significant impact is infeasible as it is within the jurisdiction and control of another agency (Caltrans) and implementation within the necessary timeframe cannot be assured.

Intersection #18: San Benancio Road / Highway 68 – Mitigation #9

1. Convert intersection to a roundabout

Conversion of this intersection to a roundabout, as proposed in TAMC's *SR 68 Scenic Highway Plan* study, would reduce the Project's impact (1 PM peak hour trip) to a less than significant

level. Per the TAMC website, Measure X sales tax funds have been dedicated to the *SR 68 Scenic Highway Plan*, which is also a candidate for federal infrastructure funding and state funding from SB 1 programs. This impact could be mitigated by constructing the roundabout; however, the impact is considered significant and unavoidable at this time because the improvement necessary to reduce the significant impact is infeasible as it is within the jurisdiction and control of another agency (Caltrans) and implementation within the necessary timeframe cannot be assured.

Intersection #19: Torero Drive / Highway 68 – Mitigation #5

1. Convert intersection to a roundabout

Conversion of this intersection to a roundabout, as proposed in TAMC's *SR 68 Scenic Highway Plan* study, would reduce the Project's impact (1 PM peak hour trip) to a less than significant level. Per the TAMC website, Measure X sales tax funds have been dedicated to the SR 68 Scenic Highway Plan, which is also a candidate for federal infrastructure funding and state funding from SB 1 programs. This impact could be mitigated by constructing the roundabout; however, the impact is considered significant and unavoidable at this time because the improvement necessary to reduce the significant impact is infeasible as it is within the jurisdiction and control of another agency (Caltrans) and implementation within the necessary timeframe cannot be assured.

Road Segments #6, #7, #8 and #9

The Proposed Project Short-Term is expected to add zero AM peak hour and one PM peak hour trip to segments #6 through #9. This will not be enough of an increase in traffic to affect traffic operations on these segments. Background Plus Proposed Project Short-Term intersection levels of service (LOS) with mitigation are also summarized in **Tables 22** and **23**. Levels of service with the proposed roundabouts are identified by PI#1, PI#2, etc. (for Proposed Improvement #). The levels of service with the proposed roundabouts do not necessarily indicate the project has an impact at that location. Mitigated levels of service indicate locations where the project would have an impact, and are identified by M#1, M#2, etc. (for Mitigation #).

LOS calculation worksheets for signalized, stop-controlled, and roundabout-controlled intersections are included in **Appendix H**. Vehicle queue estimates are included as **Appendix I**.

Table 22: Background Plus Proposed Project Short-Term – Intersection LOS (1 – 9)

Scenario # →								1		4		5		
	N-S Street	E-W Street	Int Control	LOS Std	Peak Hour	Miti #	Prop Imp #	Existing		Background		Proj Trips	Back+Prop Short-Term	
								Delay	LOS	Delay	LOS		Delay	LOS
1	Olmsted Road	Highway 68	Signal	C/D	AM			51.0	D	64.2	E	-7	64.1	E
					PM			126.0	F	145.2	F	-13	143.4	F
				C/D	AM		*PI#1*	*12.5*	*B*	*13.9*	*B*		*13.8*	*B*
					PM			*17.6*	*C*	*21.8*	*C*		*21.0*	*C*
2	Olmsted Road	Garden Road	One-Way Stop	D	AM			10.7	B	11.5	B	-7	23.5	C
					PM			10.8	B	11.5	B	-12	17.5	C
					AM		*PI#2*	*6.7*	*A*	*7.2*	*A*		*7.1*	*A*
					PM			*6.2*	*A*	*6.7*	*A*		*6.7*	*A*
3	Olmsted Way	Fred Kane Drive	All-Way Stop	D	AM			7.6	A	7.7	A	0	7.7	A
					PM			8.2	A	8.6	A	0	8.4	A
4	Airport Road	Euclid Avenue	Two-Way Stop	D	AM			9.8	A	9.9	A	9	9.9	A
					PM			10.1	B	10.2	B	16	10.4	B
5	Airport Road	N. Fremont Street	Signal	D	AM			11.7	B	12.6	B	9	12.6	B
					PM			14.2	B	14.8	B	15	14.9	B
6	Del Monte Boulevard	Highway 218	Signal	C/D	AM			34.3	C	38.5	D	1	38.5	D
					PM			38.9	D	45.0	D	2	45.0	D
					AM	*M#6*				*34.3*	*C*		*34.3*	*C*
					PM					*34.9*	*C*		*34.9*	*C*
7	Highway 218	Fremont Boulevard	Signal	C/D	AM			31.3	C	38.0	D	5	38.2	D
					PM			46.1	D	58.7	E	9	59.3	E
					AM	*M#2*		*26.1*	*C*	*29.3*	*C*		*28.6*	*C*
					PM			*32.5*	*C*	*34.0*	*C*		*34.0*	*C*
8	Highway 218	General Jim Moore Blvd	Signal	C/D	AM			17.0	B	19.5	B	2	19.5	B
					PM			15.2	B	18.5	B	3	18.6	B
9	Highway 218	Del Rey Gardens Drive	One-Way Stop	C/D	AM			24.1	C	28.5	D	1	28.5	D
					PM			19.0	C	22.0	C	1	22.0	C
					AM	*M#7*				*3.5*	*A*		*3.5*	*A*
					PM					*3.3*	*A*		*3.3*	*A*

Notes:

1 Signal, roundabout and all-way stop delay is average overall delay in seconds per vehicle (sec/veh).

2 One- and two-way stop delay is worst approach delay in seconds per vehicle (sec/veh).

3 LOS highlighted in red indicates intersection operating below level of service standard.

4 * = delay greater than 300 seconds.

5 LOS in bold box indicates project impact.

Table 23: Background Plus Proposed Project Short-Term – Intersection LOS (10 – 19)

Scenario # →								1		4		5		
	N-S Street	E-W Street	Intersection Control	LOS Standard	Peak Hour	MM #	Prop Imp #	Existing		Background		Proj Trips	Back+Prop Short-Term	
								Delay	LOS	Delay	LOS		Delay	LOS
10	Highway 218	Ryan Ranch Road	Signal	C/D	AM			6.9	A	7.4	A	1	7.4	A
					PM			16.6	B	25.7	C	1	25.7	C
11	Josselyn Canyon Road	Highway 68	Signal	C/D	AM			44.5	D	51.4	D	-2	51.1	D
					PM			19.8	B	22.7	C	-5	22.4	C
					AM		*PI#3*	*11.3*	*B*	*12.0*	*B*		*12.0*	*B*
					PM			*13.8*	*B*	*12.7*	*B*		*12.6*	*B*
12	Highway 218	Highway 68	Signal	C/D	AM			24.3	C	32.2	C	-2	32.1	C
					PM			29.7	C	33.1	C	-3	33.0	C
					AM		*PI#4*	*13.3*	*B*	*17.5*	*C*		*17.5*	*C*
					PM			*16.2*	*C*	*17.7*	*C*		*17.7*	*C*
13	Ragsdale Drive	Highway 68	Signal	C/D	AM			12.3	B	12.1	B	0	12.1	B
					PM			4.2	A	4.2	A	1	4.2	A
14	York Road	Highway 68	Signal	C/D	AM			25.3	C	32.6	C	0	32.6	C
					PM			42.8	D	46.8	D	1	46.8	**D**
					AM	*M#3*	*PI#5*	*15.8*	*C*	*18.8*	*C*		*18.8*	*C*
					PM			*21.3*	*C*	*23.7*	*C*		*23.8*	*C*
15	Pasadera Drive	Highway 68	Signal	C/D	AM			47.5	D	67.4	E	0	67.4	E
					PM			14.5	B	17.7	B	1	17.7	B
					AM		*PI#6*	*11.0*	*B*	*12.4*	*B*		*12.4*	*B*
					PM			*10.6*	*B*	*11.5*	*B*		*11.5*	*B*
16	Laureles Grade Road	Highway 68	Signal	C/D	AM			27.2	C	36.6	D	0	36.6	D
					PM			31.7	C	39.5	D	1	39.6	**D**
					AM	*M#8*	*PI#7*	*14.8*	*B*	*18.2*	*C*		*18.2*	*C*
					PM			*11.9*	*B*	*13.2*	*B*		*13.2*	*B*
17	Corral de Tierra Road	Highway 68	Signal	C/D	AM			35.2	D	91.4	F	0	91.4	F
					PM			57.8	E	64.3	E	1	64.5	**E**
					AM	*M#4*	*PI#8*	*16.9*	*C*	*21.9*	*C*		*21.9*	*C*
					PM			*14.2*	*B*	*15.3*	*C*		*15.3*	*C*
18	San Benancio Road	Highway 68	Signal	C/D	AM			70.3	E	106.6	F	0	106.6	F
					PM			18.9	B	36.6	D	1	36.8	**D**
					AM	*M#9*	*PI#9*	*17.9*	*C*	*24.2*	*C*		*24.2*	*C*
					PM			*13.0*	*B*	*14.4*	*B*		*14.4*	*B*
19	Torero Drive	Highway 68	One-Way Stop	C/D	AM			*	F	*	F	0	*	F
					PM			111.3	F	156.5	F	1	156.5	**F**
					AM	*M#5*	*PI#10*	*16.4*	*C*	*12.0*	*B*		*12.0*	*B*
					PM			*12.4*	*B*	*24.1*	*C*		*24.1*	*C*

Notes:

1 Signal, roundabout and all-way stop delay is average overall delay in seconds per vehicle (sec/veh).

2 One- and two-way stop delay is worst approach delay in seconds per vehicle (sec/veh).

3 LOS highlighted in red indicates intersection operating below level of service standard.

4 * = delay greater than 300 seconds.

5 LOS in bold box indicates project impact.

6.3 Background Plus Alternative 1 Project Short-Term Traffic Conditions

6.3.1 Background Plus Alt. 1 Project Short-Term – Intersection Operations

The Alternative 1 Project Short-Term trip assignments described in Section 4.2.1 were combined with the Background conditions traffic volumes to obtain Background Plus Alternative 1 Project Short-Term AM and PM peak hour traffic volumes, which are shown in **Figures 28** and **29**.

Based on the City of Monterey and Caltrans level of service standards, the following study intersections are projected to operate deficiently under Background Plus Alternative 1 Project Short-Term traffic conditions:

Intersection #1 – Olmsted Road / Highway 68
Intersection #6 – Del Monte Boulevard / Highway 218
Intersection #7 – Highway 218 / Fremont Boulevard
Intersection #9 – Highway 218 / Del Rey Gardens Drive
Intersection #11 – Josselyn Canyon Road / Highway 68
Intersection #14 – York Road / Highway 68
Intersection #15 – Pasadera Drive / Highway 68
Intersection #16 – Laureles Grade Road / Highway 68
Intersection #17 – Corral De Tierra Road / Highway 68
Intersection #18 – San Benancio Road / Highway 68
Intersection #19 – Torero Drive / Highway 68

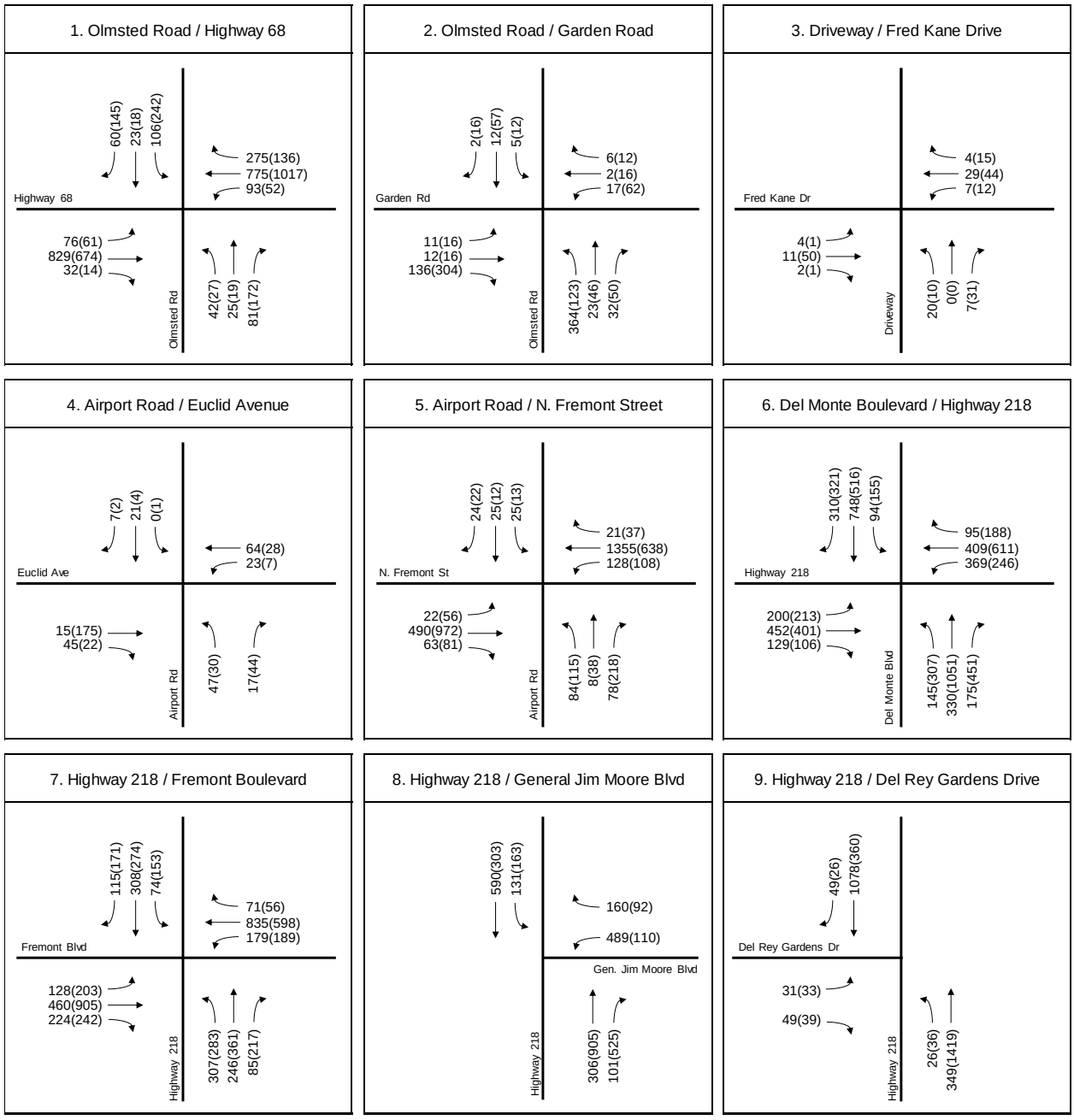
It should be noted that these intersections would also operate at deficient levels of service without the Alternative 1 Project.

6.3.2 Background Plus Alt. 1 Project Short-Term – Road Segment Operations

Road segment operations under Background Plus Alternative 1 traffic conditions are discussed here qualitatively. The following road segments operate deficiently under Existing conditions and would continue to operate deficiently with the added traffic under Background Plus Alternative 1 traffic conditions:

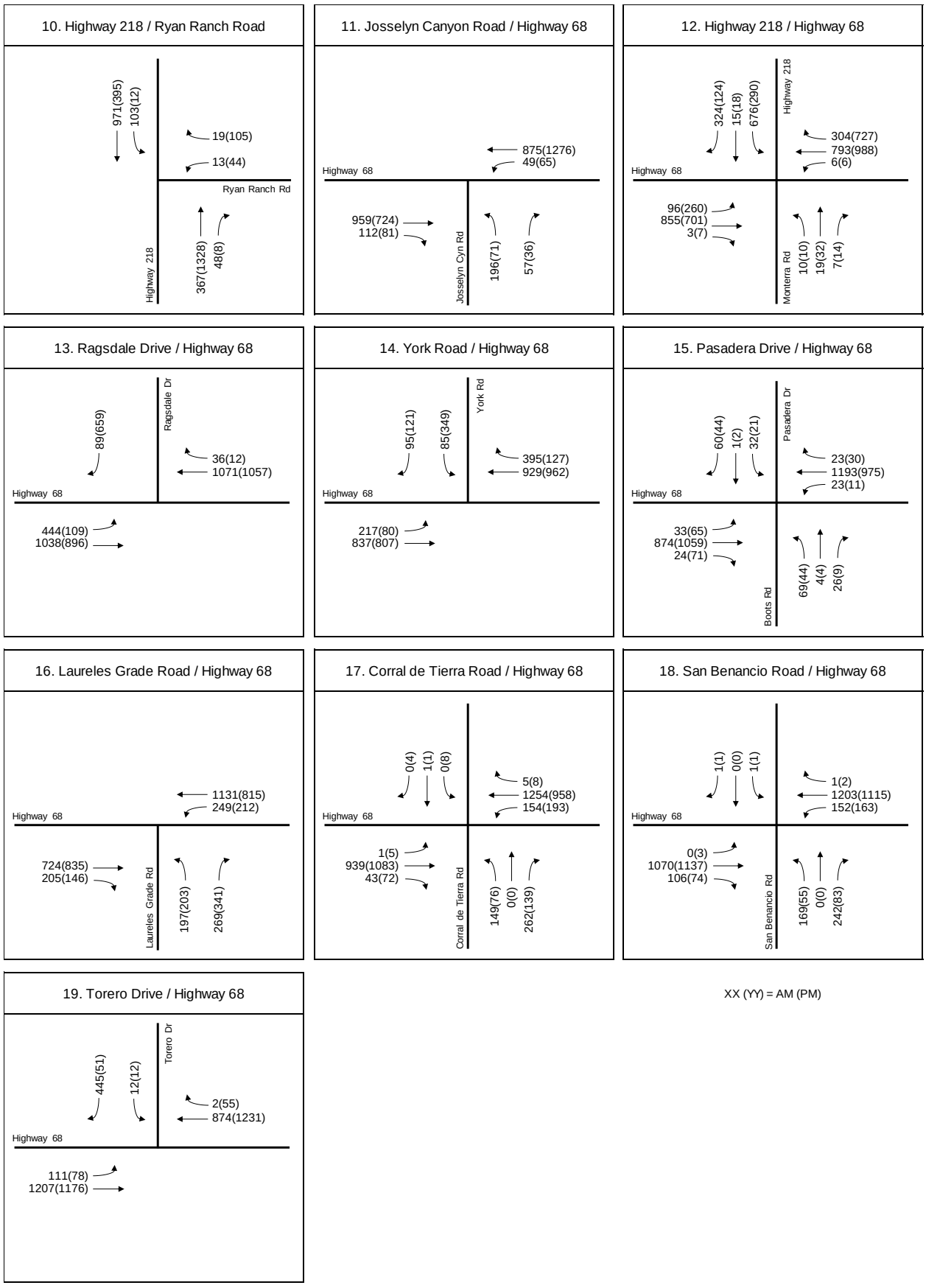
Segment #2 – Highway 68, from Begin/End Freeway to Josselyn Canyon Road
Segment #3 – Highway 68, from Josselyn Canyon Road to Olmsted Road
Segment #4 – Highway 68, from Olmsted Road to Highway 218
Segment #6 – Highway 68, from Ragsdale Drive to Laureles Grade
Segment #7 – Highway 68, from Laureles Grade to Corral De Tierra Road
Segment #8 – Highway 68, from Corral De Tierra Road to Torero Drive
Segment #9 – Highway 68, from Torero Drive to Begin/End Freeway

Figure 28: Background Plus Alt. 1 Project Short-Term Volumes (1 – 9)



XX (YY) = AM (PM)

Figure 29: Background Plus Alt. 1 Project Short-Term Volumes (10 – 19)



6.3.3 Background Plus Alt. 1 Project Short-Term – Project Impacts

Based on the criteria for project impacts, the Project would have a significant impact at the following intersections under Background Plus Alternative 1 Project Short-Term conditions (**Tables 24** and **25**):

Intersection #6 – Del Monte Boulevard / Highway 218

Intersection #7 – Highway 218 / Fremont Boulevard

Intersection #9 – Highway 218 / Del Rey Gardens Drive

Based on the Caltrans impact criteria, the addition of a single project trip at an intersection that is operating deficiently can be considered an impact. Although intersections #1, #11, #14, #15, #16, #17, #18, and #19 (all Caltrans intersections) would operate deficiently under Background Plus Alternative 1 Project Short-Term conditions (and under Background without project traffic conditions), the Project would not impact these intersections either because a) the redistribution of traffic that would occur with the relocation of the existing hangars would result in an overall reduction of traffic at the intersection or b) the Project is not expected to add traffic to the intersection during the peak hour that is operating deficiently. Under these circumstances, the Project would not trigger a significant impact under any of the applicable thresholds.

Based on the criteria for project impacts, the Project would have a significant impact on the following road segments under Background Plus Alternative 1 Project Short-Term conditions:

Segment #4 – Highway 68, from Olmsted Road to Highway 218

6.3.4 Background Plus Alt. 1 Project Short-Term – Mitigation Measures

The improvements listed below are recommended to mitigate the Project's impacts under Background Plus Alternative 1 Project Short-Term conditions. As discussed at Draft EIR sections 4.16. and 5.5.16, and at Draft EIR Appendix N, the improvements, however, may not be feasible if disallowed by federal law; federal law states that airport revenues and Federal Aviation Administration (FAA) grant funds may not be used for purposes other than the capital or operating costs of the airport, the local airport system, or other local facilities owned or operated by the airport owner or operator that are directly and substantially related to the air transportation of passengers and property. These restrictions impact the Airport's ability to fund and implement off-airport mitigation measures. Now that the Airport has identified specific mitigation measures for Proposed Project cumulative impacts, it can make specific requests to the FAA, where appropriate, for it to allow funding of off-airport mitigation measures.

At this time, however, because the Airport does not currently have a determination from the FAA that funding for any off-airport mitigation improvements will be allowed, the following mitigation measures are considered infeasible:

Intersection #6: Del Monte Boulevard / Highway 218 – Mitigation #6

1. Add 2nd Northbound Del Monte Blvd Left-Turn Lane
2. Add Northbound Del Monte Blvd Right-Turn Overlap Phasing
3. Add Southbound Del Monte Blvd Right-Turn Overlap Phasing

Implementation of these improvements would reduce the Project's impact to a less than significant level. The project would be responsible for a fair-share contribution towards the total

cost of these improvements, based on the relative number of project trips it would add to the intersection (4 AM and 4 PM peak hour trips).

However, these improvements would be to a Caltrans facility, and would have to be approved by Caltrans before implementation. It is not certain that Caltrans would agree to implement these improvements. In addition, even with the Project's fair-share contribution, there is no guarantee that there would be sufficient funding available to implement these improvements. This impact could be mitigated by constructing the left-turn lane and implementing overlap phasing; however, the impact is considered significant and unavoidable at this time because the improvement necessary to reduce the significant impact is infeasible as it is within the jurisdiction and control of another agency (Caltrans) and implementation within the necessary timeframe cannot be assured.

Intersection #7: Highway 218 / Fremont Boulevard – Mitigation #2

1. Add 2nd Northbound Highway 218 Left-Turn Lane

Implementation of this improvement would reduce the Project's impact to a less than significant level. The project would be responsible for a fair-share contribution towards the total cost of this improvement, based on the relative number of project trips it would add to the intersection (4 AM and 4 PM peak hour trips).

However, this improvement would be to a Caltrans facility, and would have to be approved by Caltrans before implementation. It is not certain that Caltrans would agree to implement this improvement. In addition, even with the Project's fair-share contribution, there is no guarantee that there would be sufficient funding available to implement this improvement. This impact could be mitigated by constructing the left-turn lane; however, the impact is considered significant and unavoidable at this time because the improvement necessary to reduce the significant impact is infeasible as it is within the jurisdiction and control of another agency (Caltrans) and implementation within the necessary timeframe cannot be assured.

Intersection #9: Highway 218 / Del Rey Gardens Drive – Mitigation #7

1. Signalize Intersection
2. Add 2nd Northbound Highway 218 Through Lane
3. Add 2nd Southbound Highway 218 Through Lane

Implementation of these improvements would reduce the Project's impact (18 AM and 20 PM peak hour trips) to a less than significant level. The project would be responsible for a fair-share contribution towards the total cost of these improvements, based on the relative number of project trips it would add to the intersection.

However, these improvements would be to a Caltrans facility, and would have to be approved by Caltrans before implementation. It is not certain that Caltrans would agree to implement these improvements. In addition, even with the Project's fair-share contribution, there is no guarantee that there would be sufficient funding available to implement these improvements. This impact could be mitigated by signalizing the intersection and constructing the through lanes; however, the impact is considered significant and unavoidable at this time because the improvement necessary to reduce the significant impact is infeasible as it is within the jurisdiction and control of another agency (Caltrans) and implementation within the necessary timeframe cannot be assured.

Background Plus Alternative 1 Project Short-Term intersection levels of service (LOS) with mitigation are also summarized in **Tables 24** and **25**. Levels of service with the proposed roundabouts are identified by PI#1, PI#2, etc. (for Proposed Improvement #). The levels of service with the proposed roundabouts do not necessarily indicate the project has an impact at that location. Mitigated levels of service indicate locations where the project would have an impact, and are identified by M#1, M#2, etc. (for Mitigation #).

LOS calculation worksheets for signalized, stop-controlled, and roundabout-controlled intersections are included in **Appendix H**. Vehicle queue estimates are included in **Appendix I**.

Road Segment #4

The Alternative 1 Project Short-Term is expected to add only 3 AM peak hour 4 PM peak hour trips to segment #4. This will not be enough of an increase in traffic to affect traffic operations on these segments.

Table 24: Background Plus Alt. 1 Project Short-Term – Intersection LOS (1 – 9)

Scenario # →								1		4		6		
	N-S Street	E-W Street	Int Control	LOS Std	Peak Hour	Miti #	Prop Imp #	Existing		Background		Proj Trips	Back+Alt 1 Short-Term	
								Delay	LOS	Delay	LOS		Delay	LOS
1	Olmsted Road	Highway 68	Signal	C/D	AM			51.0	D	64.2	E	-10	64.2	E
					PM			126.0	F	145.2	F	-11	142.3	F
				C/D	AM		*PI#1*	*12.5*	*B*	*13.9*	*B*		*13.8*	*B*
					PM			*17.6*	*C*	*21.8*	*C*		*20.9*	*C*
2	Olmsted Road	Garden Road	One-Way Stop	D	AM			10.7	B	11.5	B	-17	23.1	C
					PM			10.8	B	11.5	B	-18	17.3	C
					AM		*PI#2*	*6.7*	*A*	*7.2*	*A*		*7.1*	*A*
					PM			*6.2*	*A*	*6.7*	*A*		*6.6*	*A*
3	Olmsted Way	Fred Kane Drive	All-Way Stop	D	AM			7.6	A	7.7	A	0	7.6	A
					PM			8.2	A	8.6	A	0	8.3	A
4	Airport Road	Euclid Avenue	Two-Way Stop	D	AM			9.8	A	9.9	A	-1	9.9	A
					PM			10.1	B	10.2	B	-2	10.2	B
5	Airport Road	N. Fremont Street	Signal	D	AM			11.7	B	12.6	B	-3	12.6	B
					PM			14.2	B	14.8	B	-4	14.8	B
6	Del Monte Boulevard	Highway 218	Signal	C/D	AM			34.3	C	38.5	D	4	38.6	D
					PM			38.9	D	45.0	D	4	45.0	D
					AM	*M#6*				*34.3*	*C*		*34.3*	*C*
					PM					*34.9*	*C*		*34.9*	*C*
7	Highway 218	Fremont Boulevard	Signal	C/D	AM			31.3	C	38.0	D	4	38.2	D
					PM			46.1	D	58.7	E	4	58.8	E
					AM	*M#2*		*26.1*	*C*	*29.3*	*C*		*29.4*	*C*
					PM			*32.5*	*C*	*34.0*	*C*		*34.1*	*C*
8	Highway 218	General Jim Moore Blvd	Signal	C/D	AM			17.0	B	19.5	B	6	19.6	B
					PM			15.2	B	18.5	B	6	18.7	B
9	Highway 218	Del Rey Gardens Drive	One-Way Stop	C/D	AM			24.1	C	28.5	D	18	29.3	D
					PM			19.0	C	22.0	C	20	22.1	C
					AM	*M#7*				*3.5*	*A*		*3.6*	*A*
					PM					*3.3*	*A*		*3.4*	*A*

Notes:

1 Signal, roundabout and all-way stop delay is average overall delay in seconds per vehicle (sec/veh).

2 One- and two-way stop delay is worst approach delay in seconds per vehicle (sec/veh).

3 LOS highlighted in red indicates intersection operating below level of service standard.

4 * = delay greater than 300 seconds.

5 LOS in bold box indicates project impact.

Table 25: Background Plus Alt. 1 Project Short-Term – Intersection LOS (10 – 19)

Scenario # →								1		4		6		
	N-S Street	E-W Street	Intersection Control	LOS Standard	Peak Hour	MM #	Prop Imp #	Existing		Background		Proj Trips	Back+Alt 1 Short-Term	
								Delay	LOS	Delay	LOS		Delay	LOS
10	Highway 218	Ryan Ranch Road	Signal	C/D	AM			6.9	A	7.4	A	10	7.4	A
					PM			16.6	B	25.7	C	12	26.1	C
11	Josselyn Canyon Road	Highway 68	Signal	C/D	AM			44.5	D	51.4	D	-2	51.2	D
					PM			19.8	B	22.7	C	-3	22.6	C
					AM		*PI#3*	*11.3*	*B*	*12.0*	*B*		*12.0*	*B*
					PM			*13.8*	*B*	*12.7*	*B*		*12.7*	*B*
12	Highway 218	Highway 68	Signal	C/D	AM			24.3	C	32.2	C	3	32.2	C
					PM			29.7	C	33.1	C	4	33.5	C
					AM		*PI#4*	*13.3*	*B*	*17.5*	*C*		*17.6*	*C*
					PM			*16.2*	*C*	*17.7*	*C*		*17.8*	*C*
13	Ragsdale Drive	Highway 68	Signal	C/D	AM			12.3	B	12.1	B	-1	12.1	B
					PM			4.2	A	4.2	A	-1	4.2	A
14	York Road	Highway 68	Signal	C/D	AM			25.3	C	32.6	C	-1	32.5	C
					PM			42.8	D	46.8	D	-1	46.8	D
					AM	*M#3*	*PI#5*	*15.8*	*C*	*18.8*	*C*		*18.8*	*C*
					PM			*21.3*	*C*	*23.7*	*C*		*23.7*	*C*
15	Pasadera Drive	Highway 68	Signal	C/D	AM			47.5	D	67.4	E	-1	67.2	E
					PM			14.5	B	17.7	B	-1	17.6	B
					AM		*PI#6*	*11.0*	*B*	*12.4*	*B*		*12.4*	*B*
					PM			*10.6*	*B*	*11.5*	*B*		*11.5*	*B*
16	Laureles Grade Road	Highway 68	Signal	C/D	AM			27.2	C	36.6	D	-1	36.5	D
					PM			31.7	C	39.5	D	-1	39.3	D
					AM	*M#8*	*PI#7*	*14.8*	*B*	*18.2*	*C*		*18.1*	*C*
					PM			*11.9*	*B*	*13.2*	*B*		*13.2*	*B*
17	Corral de Tierra Road	Highway 68	Signal	C/D	AM			35.2	D	91.4	F	-1	91.2	F
					PM			57.8	E	64.3	E	-1	64.2	E
					AM	*M#4*	*PI#8*	*16.9*	*C*	*21.9*	*C*		*21.9*	*C*
					PM			*14.2*	*B*	*15.3*	*C*		*15.3*	*C*
18	San Benancio Road	Highway 68	Signal	C/D	AM			70.3	E	106.6	F	-1	106.5	F
					PM			18.9	B	36.6	D	-1	36.5	D
					AM	*M#9*	*PI#9*	*17.9*	*C*	*24.2*	*C*		*24.2*	*C*
					PM			*13.0*	*B*	*14.4*	*B*		*14.4*	*B*
19	Torero Drive	Highway 68	One-Way Stop	C/D	AM			*	F	*	F	-1	*	F
					PM			111.3	F	156.5	F	-1	156.5	F
					AM	*M#5*	*PI#10*	*16.4*	*C*	*12.0*	*B*		*12.0*	*B*
					PM			*12.4*	*B*	*24.1*	*C*		*24.1*	*C*

Notes:

1 Signal, roundabout and all-way stop delay is average overall delay in seconds per vehicle (sec/veh).

2 One- and two-way stop delay is worst approach delay in seconds per vehicle (sec/veh).

3 LOS highlighted in red indicates intersection operating below level of service standard.

4 * = delay greater than 300 seconds.

5 LOS in bold box indicates project impact.

7 Cumulative Traffic Conditions

This section describes traffic operations in the study area under Cumulative conditions, within a timeframe of approximately 20 years. This scenario does not include trips generated by the Project, but does include trips generated by increased enplanements at the Airport unrelated to the proposed Project, as well as other development projects in the study area.

7.1 Cumulative Traffic Volumes

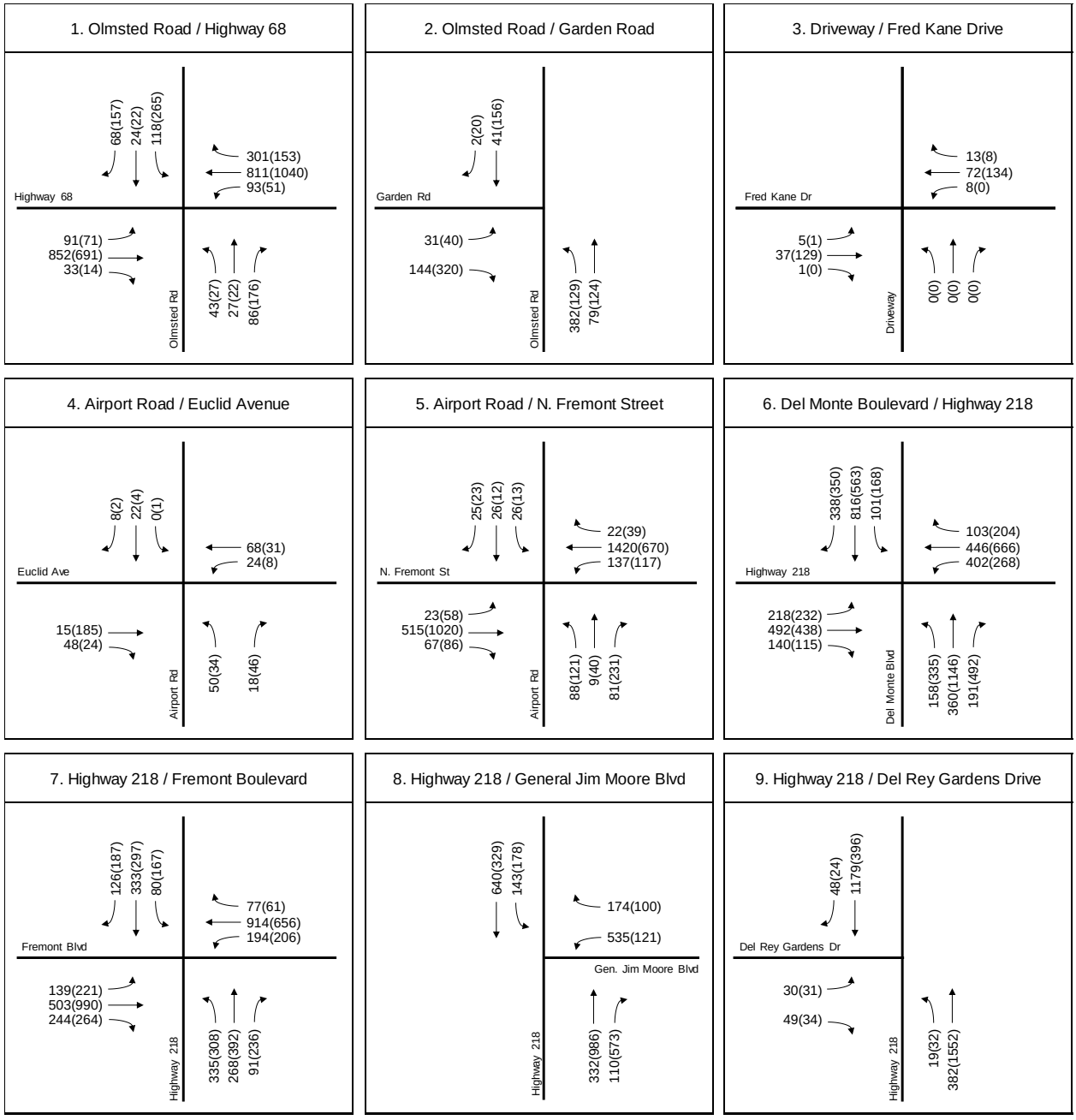
Anticipated growth in the boarding of passengers (i.e., enplanements) is expected to occur with or without the implementation of the Project. Trips generated by increased enplanements at the Airport under Cumulative conditions were estimated based on aviation forecast projections in the Airport's updated draft Final Airport Master Plan (AMP), which represent projected aviation demand for a twenty-year planning horizon. The aviation forecast projections are based on anticipated regional and national growth in aviation demand and are not due to changes in capacity at the Airport.

The Airport's enplanements, which were 197,322 in 2016, are projected to reach 245,000 in the ten-year planning horizon, representing an increase of approximately 24%. For the twenty-year planning horizon, an increase of approximately 48% was assumed. To account for this projected increase, trips generated by the Airport in 2016 (based on traffic counts at the Airport's access points) were increased by 48% to estimate the trips generated by increased enplanements in the twenty-year planning horizon. As is the case with the existing trips generated by the Airport, the trips associated with the increased enplanements include trips made by employees, support services, etc.

In addition, trips from development external to the Airport were estimated based on approved and proposed projects in the study area that have not yet been constructed, and future traffic volume forecasts developed for the *SR 68 Scenic Highway Plan* study (August 2017). The list of proposed projects and their trip generation in the study area and a map of their locations are included in **Appendix P**.

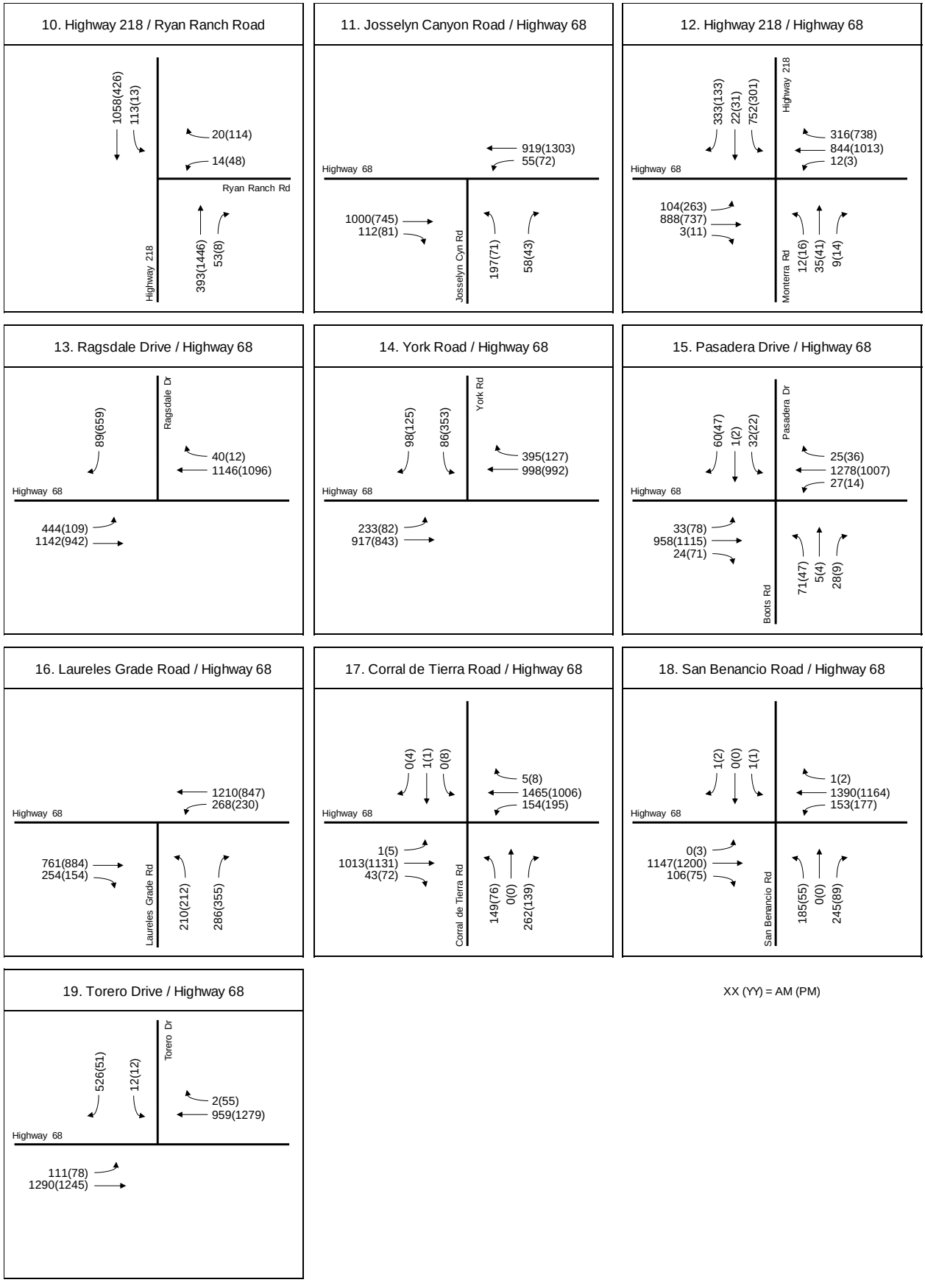
In assessing Cumulative traffic conditions, trips from increased enplanements and from development external to the Airport were combined and added to the Existing conditions traffic volumes to obtain Cumulative conditions traffic volumes. Cumulative weekday AM and PM peak hour traffic volumes are shown in **Figures 30** and **31.**

Figure 30: Cumulative Volumes (1 – 9)



XX (YY) = AM (PM)

Figure 31: Cumulative Volumes (10 – 19)



7.2 Cumulative Intersection Operations

Based on the City of Monterey and Caltrans level of service standards, the following study intersections are projected to operate deficiently under Cumulative traffic conditions:

Intersection #1 – Olmsted Road / Highway 68

Intersection #6 – Del Monte Boulevard / Highway 218

Intersection #7 – Highway 218 / Fremont Boulevard

Intersection #9 – Highway 218 / Del Rey Gardens Drive

Intersection #10 – Highway 218 / Ryan Ranch Road

Intersection #11 – Josselyn Canyon Road / Highway 68

Intersection #12 – Highway 218 / Highway 68

Intersection #14 – York Road / Highway 68

Intersection #15 – Pasadera Drive / Highway 68

Intersection #16 – Laureles Grade Road / Highway 68

Intersection #17 – Corral De Tierra Road / Highway 68

Intersection #18 – San Benancio Road / Highway 68

Intersection #19 – Torero Drive / Highway 68

Cumulative conditions intersection levels of service are summarized in **Tables 26** and **27**. (The Mitigation and Proposed Project Improvements listed in this table reflect the improvements identified in the short-term analysis.) LOS calculation worksheets are included in **Appendix H**. Vehicle queue estimates are included in **Appendix I**.

7.3 Cumulative Road Segment Operations

Road segment operations under Cumulative traffic conditions are discussed here qualitatively. The following road segments operate deficiently under Existing conditions and would continue to operate deficiently with the added traffic under Cumulative traffic conditions:

Segment #2 – Highway 68, from Begin/End Freeway to Josselyn Canyon Road

Segment #3 – Highway 68, from Josselyn Canyon Road to Olmsted Road

Segment #4 – Highway 68, from Olmsted Road to Highway 218

Segment #6 – Highway 68, from Ragsdale Drive to Laureles Grade

Segment #7 – Highway 68, from Laureles Grade to Corral De Tierra Road

Segment #8 – Highway 68, from Corral De Tierra Road to Torero Drive

Segment #9 – Highway 68, from Torero Drive to Begin/End Freeway

Table 26: Cumulative – Intersection LOS (1 – 9)

Scenario # →								7	
	N-S Street	E-W Street	Int Control	LOS Std	Peak Hour	Miti #	Prop Imp #	Cumulative	
								Delay	LOS
1	Olmsted Road	Highway 68	Signal	C/D	AM			73.0	E
					PM			165.2	F
				C/D	AM		*PI#1*	*15.1*	*C*
					PM			*16.2*	*C*
2	Olmsted Road	Garden Road	One-Way Stop	D	AM			12.5	B
					PM			12.2	B
					AM		*PI#2*	*7.6*	*A*
					PM			*7.2*	*A*
3	Olmsted Way	Fred Kane Drive	All-Way Stop	D	AM			7.8	A
					PM			8.9	A
4	Airport Road	Euclid Avenue	Two-Way Stop	D	AM			10.1	B
					PM			10.4	B
5	Airport Road	N. Fremont Street	Signal	D	AM			12.6	B
					PM			15.4	B
6	Del Monte Boulevard	Highway 218	Signal	C/D	AM			42.8	D
					PM			52.8	D
					AM	*M#10*		*31.8*	*C*
					PM			*34.9*	*C*
7	Highway 218	Fremont Boulevard	Signal	C/D	AM			46.5	D
					PM			72.2	E
					AM	*M#11*		*28.8*	*C*
					PM			*33.6*	*C*
8	Highway 218	General Jim Moore Blvd	Signal	C/D	AM			24.0	C
					PM			23.4	C
9	Highway 218	Del Rey Gardens Drive	One-Way Stop	C/D	AM			34.7	D
					PM			25.5	D
					AM	*M#7*		*3.6*	*A*
					PM			*3.3*	*A*

Notes:

1 Signal, roundabout and all-way stop delay is average overall delay in seconds per vehicle (sec/veh).

2 One- and two-way stop delay is worst approach delay in seconds per vehicle (sec/veh).

3 LOS highlighted in red indicates intersection operating below level of service standard.

4 * = delay greater than 300 seconds.

5 LOS in bold box indicates project impact.

Table 27: Cumulative– Intersection LOS (10 – 19)

Scenario # →								7	
	N-S Street	E-W Street	Intersection Control	LOS Standard	Peak Hour	MM #	Prop Imp #	Cumulative	
								Delay	LOS
10	Highway 218	Ryan Ranch Road	Signal	C/D	AM			8.1	A
					PM			45.7	D
					AM	*M#12*		*7.8*	*A*
					PM			*9.4*	*A*
11	Josselyn Canyon Road	Highway 68	Signal	C/D	AM			59.7	E
					PM			26.1	C
					AM		*PI#3*	*12.8*	*B*
					PM			*15.4*	*C*
12	Highway 218	Highway 68	Signal	C/D	AM			39.6	D
					PM			33.6	C
					AM	*M#13*	*PI#4*	*24.3*	*C*
					PM			*11.1*	*B*
13	Ragsdale Drive	Highway 68	Signal	C/D	AM			12.1	B
					PM			4.2	A
14	York Road	Highway 68	Signal	C/D	AM			42.3	D
					PM			51.1	D
					AM	*M#3*	*PI#5*	*22.5*	*C*
					PM			*13.9*	*B*
15	Pasadera Drive	Highway 68	Signal	C/D	AM			90.7	F
					PM			22.5	C
					AM		*PI#6*	*14.1*	*B*
					PM			*12.6*	*B*
16	Laureles Grade Road	Highway 68	Signal	C/D	AM			44.0	D
					PM			42.6	D
					AM	*M#8*	*PI#7*	*23.4*	*C*
					PM			*14.7*	*B*
17	Corral de Tierra Road	Highway 68	Signal	C/D	AM			166.9	F
					PM			73.1	E
					AM	*M#4*	*PI#8*	*23.6*	*C*
					PM			*15.7*	*C*
18	San Benancio Road	Highway 68	Signal	C/D	AM			152.8	F
					PM			54.5	D
					AM	*M#9*	*PI#9*	*23.1*	*C*
					PM			*16.9*	*C*
19	Torero Drive	Highway 68	One-Way Stop	C/D	AM			*	F
					PM			208.1	F
					AM	*M#5*	*PI#10*	*13.5*	*B*
					PM			*14.1*	*B*

Notes:

1 Signal, roundabout and all-way stop delay is average overall delay in seconds per vehicle (sec/veh).

2 One- and two-way stop delay is worst approach delay in seconds per vehicle (sec/veh).

3 LOS highlighted in red indicates intersection operating below level of service standard.

4 * = delay greater than 300 seconds.

5 LOS in bold box indicates project impact.

8 Cumulative Plus Project Long-Term Traffic Conditions

This section describes traffic operations in the study area under Cumulative traffic conditions with the addition of Project traffic under the two long-term project alternatives, namely; Proposed Project Long-Term and Alternative 1 Project Long-Term traffic conditions. Since the analysis addresses a conservative long-term buildout of the proposed AMP, both alternatives are the same in the long term with the exception of where the permanent ARFF building is relocated (i.e., south of the airfield [Proposed Project] or north of the airfield [Alternative 1 Project]).

The Long-Term development scenarios contain a variety of non-aviation land uses, including General Light Industrial and Office Park on the north side of the Airport, and High-Turnover Restaurant, Medical-Dental Office, and General Office on the south side of the Airport. These non-aviation land uses were chosen to represent a conservative, high-level assessment of the possible road network improvements that may be required to accommodate the intensity of these types of development. They also include future ultimate buildout of the north side GA area.

The analysis associated with these Long-Term non-aviation land uses was only considered at a programmatic level. Site-specific traffic studies would be required before any of these non-aviation land uses could be developed.

8.1 Proposed Project Long-Term Traffic Conditions

8.1.1 Proposed Project Long-Term – Trip Generation, Distribution, and Assignment

Trip generation rates are based on rates published in the Institute of Transportation Engineers (ITE) *Trip Generation*, 9th Edition, 2012, where appropriate. The ITE *Trip Generation* manual does not contain appropriate rates for the Port-a-Port T-hangars, the Monterey Navy Flying Club, or the General Aviation hangars. The trip generation rates for these land uses were therefore developed based on actual gate counts at the Airport's existing hangar gates. The gate counts were collected between November 1 and December 31, 2016.

As discussed in Section 3.2.3, the Proposed Project Long-Term scenario includes a combination of actions and development that would reduce traffic at some locations and increase traffic at other locations within the study area. This scenario also includes high-intensity development on the north and south sides of the Airport. This scenario would result in a total net new trip generation of 10,991 daily trips, with 1,370 occurring during the AM peak hour (1,164 in, 206 out) and 1,368 occurring during the PM peak hour (265 in, 1,103 out). Details of the Proposed Project Long-Term trip generation are provided in **Table 28**.

The Long-Term Project trips were assigned to the study intersections using the same distribution percentages used for the Proposed Project Short-Term scenario. Although the Proposed Project Short-Term and Long-Term land uses are different (i.e., General Aviation vs General Light Industrial, Office Park, High-Turnover Restaurant, Medical-Dental Office, and General Office), the same trip distribution percentages were used, as they are based on the relative sizes and locations of population areas in the region, and the assumption that areas

with higher populations would contribute more traffic to the project site than areas with lower populations. The increases and reductions in trips from the relocated hangars were added to the new trips generated by the new hangars and the long-term non-aviation development to obtain the Proposed Project Long-Term AM and PM peak hour trip assignments, which are shown in **Figures 32** and **33**.

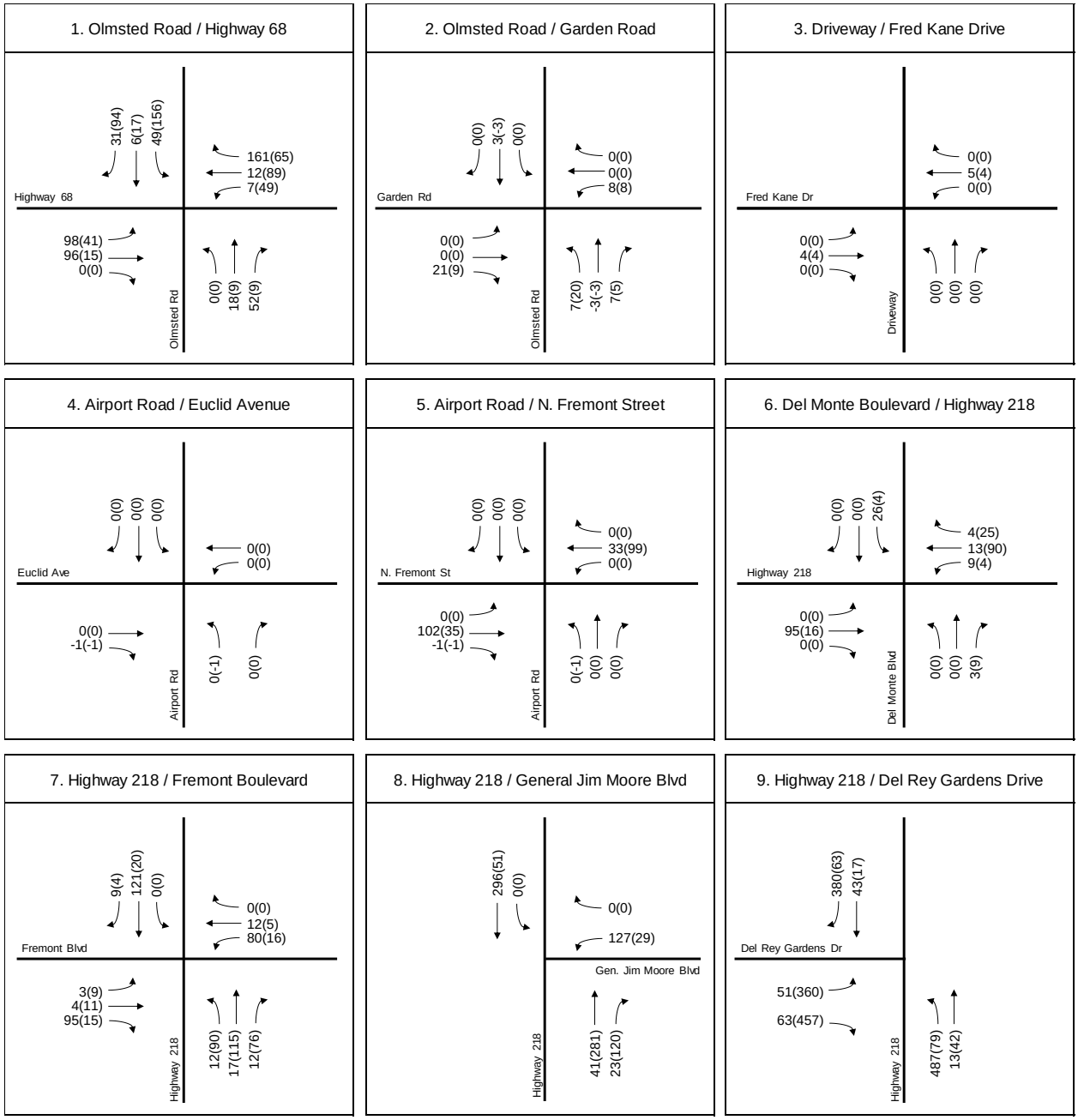
Table 28: Proposed Project Long-Term Trip Generation

Proposed Project Long-Term		WEEK DAY	WEEKDAY AM PK HR			WEEKDAY PM PK HR		
TRIP GENERATION RATES	ITE Code	DAILY RATE	PK HR RATE	% IN	% OUT	PK HR RATE	% IN	% OUT
Hangars (per unit)	N/A	1.41	0.17	83%	17%	0.32	45%	55%
General Light Industrial (per 1,000 SF)	110	7.22	0.96	88%	12%	1.04	12%	88%
Office Park (per 1,000 SF)	750	11.68	1.75	89%	11%	1.51	14%	86%
High-Turnover Restaurant (per 1,000 SF)	932	127.15	10.81	55%	45%	9.85	60%	40%
Medical-Dental Office (per 1,000 SF)	720	36.11	2.39	79%	21%	3.16	28%	72%
General Office (per 1,000 SF)	710	13.33	1.94	88%	12%	1.96	17%	83%
TRIPS GENERATED BY AREA	Units / SF	DAILY TRIPS	PK HR TRIPS	TRIPS IN	TRIPS OUT	PK HR TRIPS	TRIPS IN	TRIPS OUT
North Side via CONA Neighborhood								
Relocated Port-a-Port & Navy Flying Club Hangars	-7	-10	-1	-1	0	-2	-1	-1
North Side via North Side Road								
Relocated GA Hangars	44	62	7	6	1	14	6	8
New GA Hangars	7	10	1	1	0	2	1	1
Relocated Port-a-Port & Navy Flying Club Hangars	7	10	1	1	0	2	1	1
Long-Term GA Hangars	106	149	18	15	3	34	15	19
General Light Industrial	400,000	2,886	383	337	46	415	50	365
Office Park	325,000	3,796	570	507	63	492	69	423
South Side via Olmsted Road								
Relocated GA Hangars	-44	-62	-7	-6	-1	-14	-6	-8
High-Turnover Restaurant	10,000	1,272	108	59	49	99	59	40
Medical-Dental Office	45,000	1,625	108	85	23	142	40	102
General Office	94,000	1,253	182	160	22	184	31	153
Total Net New Generated Trips		**10,991**	**1,370**	**1,164**	**206**	**1,368**	**265**	**1,103**

Notes:

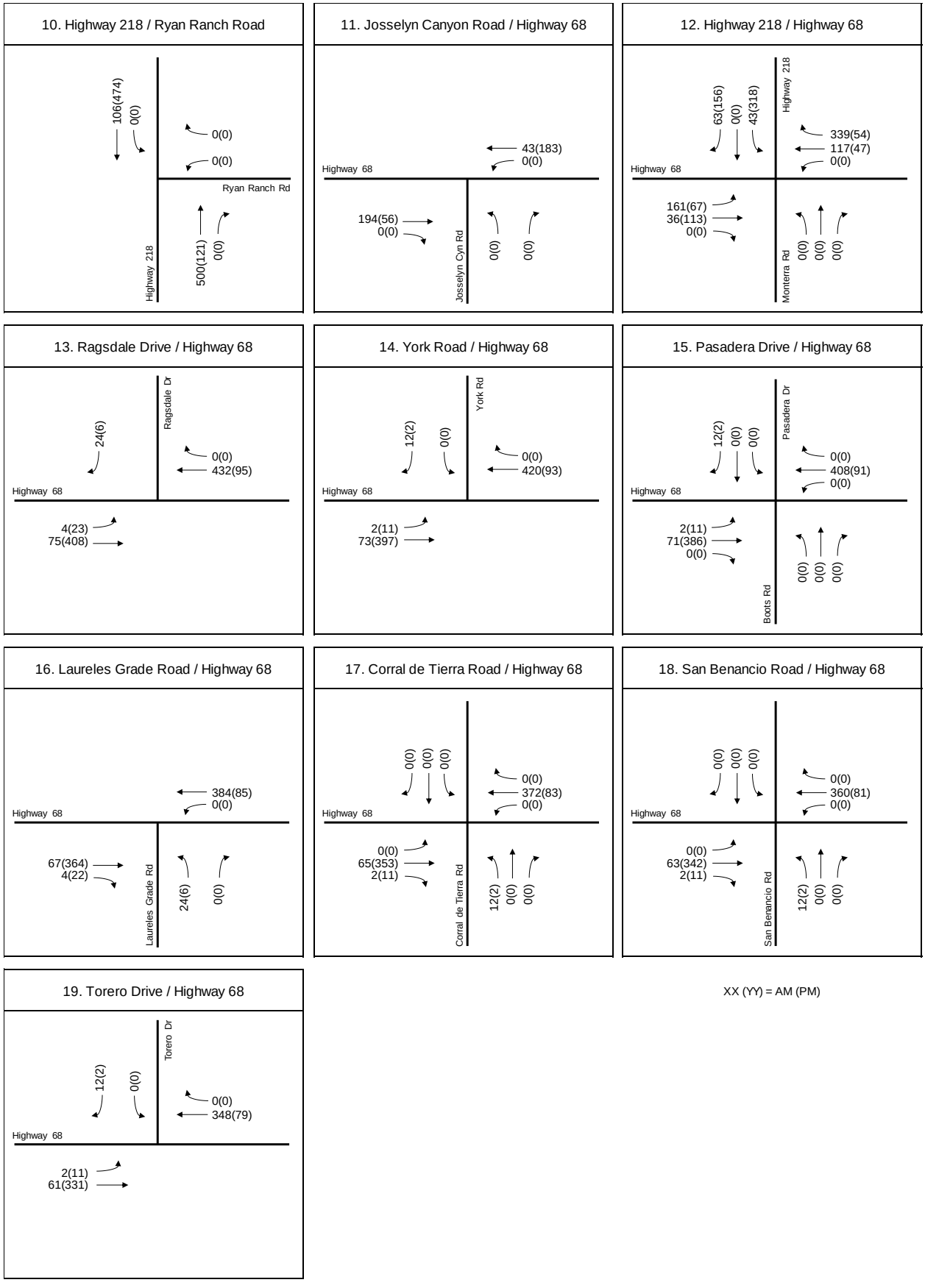
1. Trip generation rates from Institute of Transportation Engineers (ITE) *Trip Generation*, 9th Edition, 2012, where appropriate.
2. Trip generation rates for hangars based on gate counts at Monterey Regional Airport (November 1 - December 31, 2016).
3. Relocated trips in red are subtracted from their current access point and added to the north side via the North Side Road.
4. The 44 hangars relocated from the south side are included in the 51 hangars on the north side.

Figure 32: Proposed Project Long-Term Trip Assignment (1 – 9)



XX (YY) = AM (PM)

Figure 33: Proposed Project Long-Term Trip Assignment (10 – 19)



8.1.2 Cumulative Plus Proposed Project Long-Term – Intersection Operations

The Proposed Project Long-Term trip assignments were combined with the Cumulative conditions traffic volumes to obtain Cumulative Plus Proposed Project Long-Term AM and PM peak hour traffic volumes, which are shown in **Figures 34** and **35**.

Based on the City of Monterey and Caltrans level of service standards, the following study intersections would operate deficiently under Cumulative Plus Proposed Project Long-Term traffic conditions (**Table 29**):

Intersection #1 – Olmsted Road / Highway 68
Intersection #6 – Del Monte Boulevard / Highway 218
Intersection #7 – Highway 218 / Fremont Boulevard
Intersection #8 – Highway 218 / General Jim Moore Boulevard
Intersection #9 – Highway 218 / Del Rey Gardens Drive
Intersection #10 – Highway 218 / Ryan Ranch Road
Intersection #11 – Josselyn Canyon Road / Highway 68
Intersection #12 – Highway 218 / Highway 68
Intersection #14 – York Road / Highway 68
Intersection #15 – Pasadera Drive / Highway 68
Intersection #16 – Laureles Grade Road / Highway 68
Intersection #17 – Corral De Tierra Road / Highway 68
Intersection #18 – San Benancio Road / Highway 68
Intersection #19 – Torero Drive / Highway 68

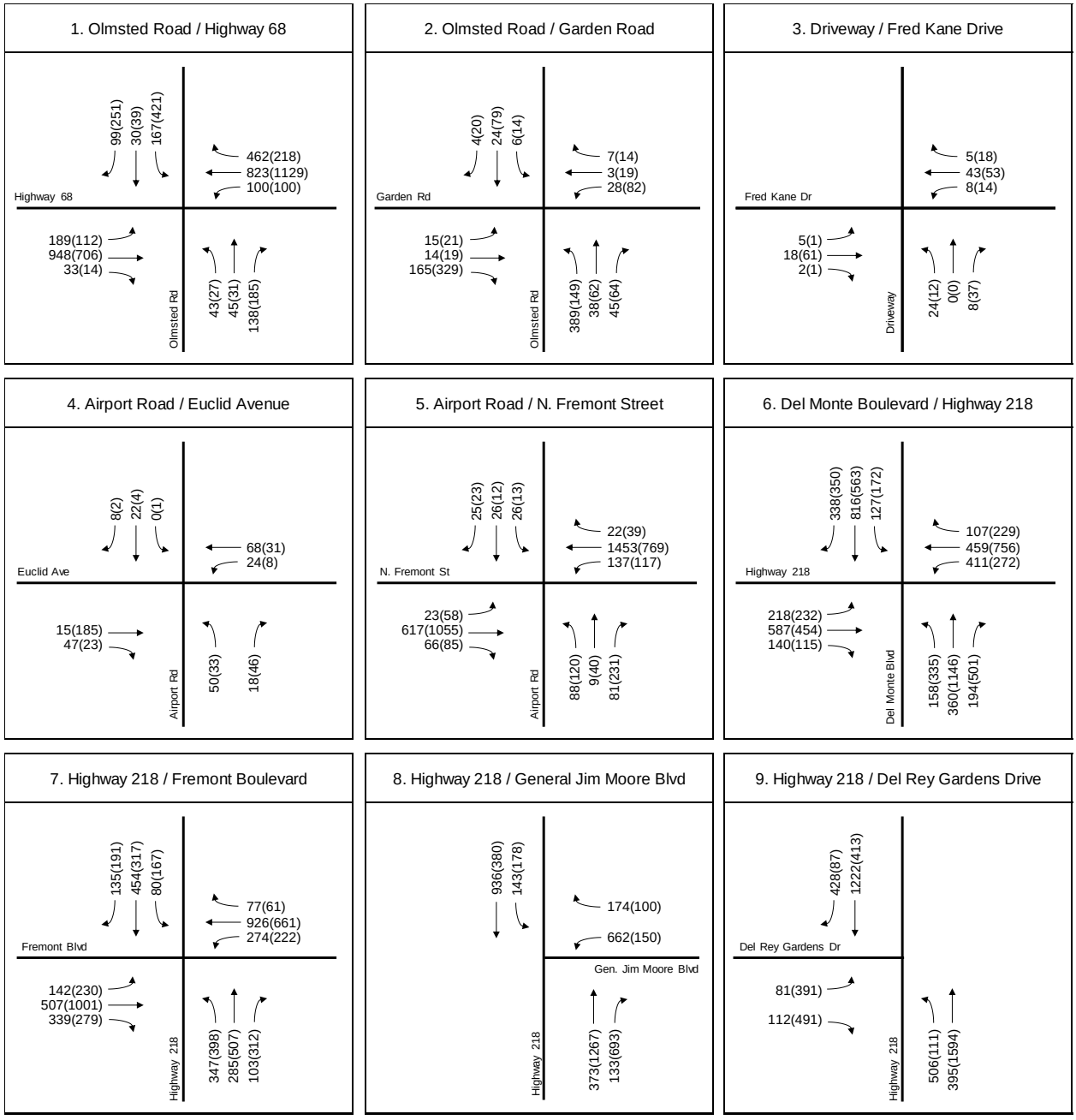
It should be noted that these intersections would also operate at deficient levels of service under Cumulative without Project conditions.

8.1.3 Cumulative Plus Proposed Project Long-Term – Road Segment Operations

Road segment operations under Cumulative Plus Project Long-Term traffic conditions are discussed here qualitatively. The following road segments operate deficiently under Existing conditions and would continue to operate deficiently with the added traffic under Cumulative Plus Proposed Project Long-Term traffic conditions:

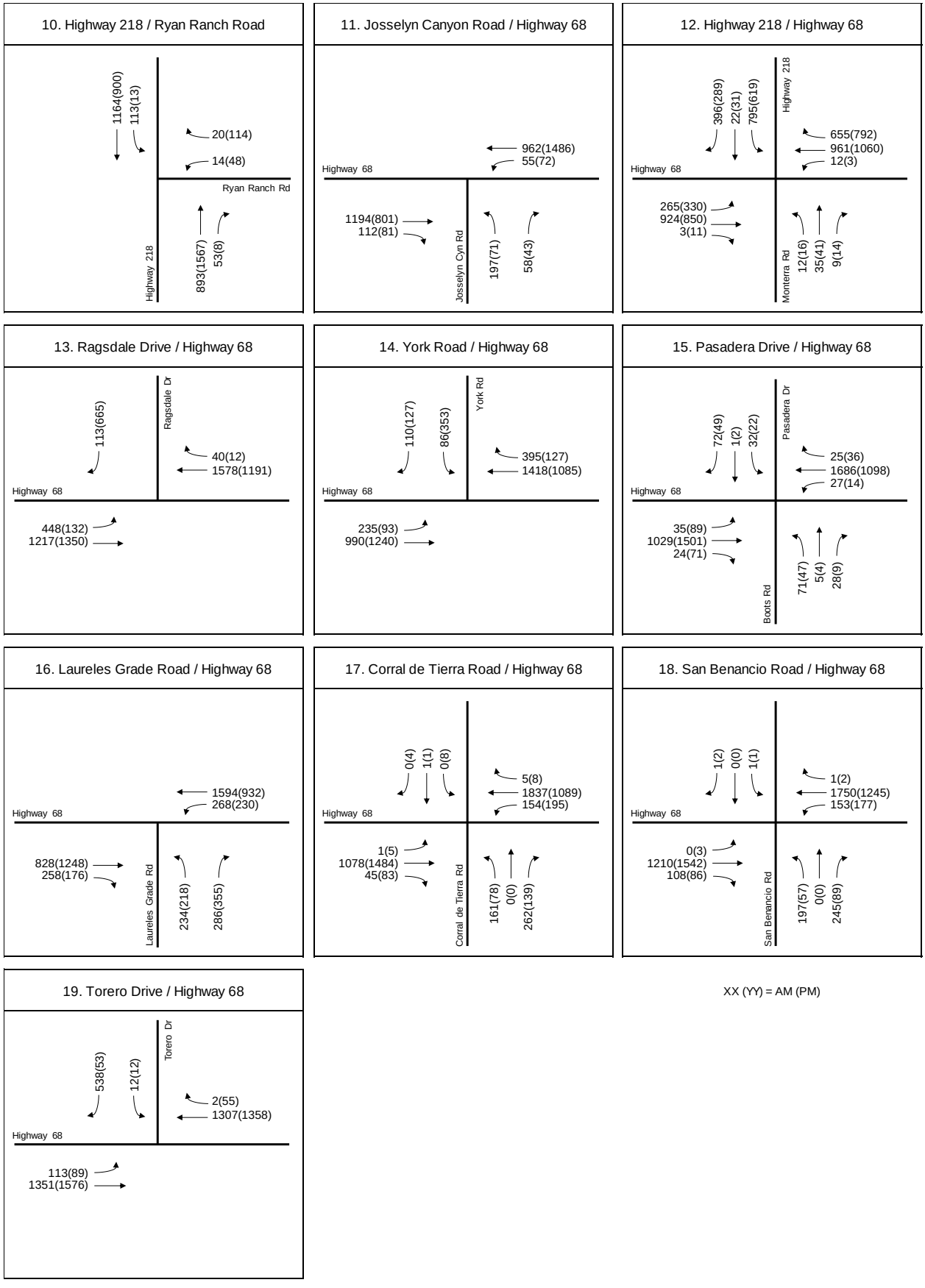
Segment #2 – Highway 68, from Begin/End Freeway to Josselyn Canyon Road
Segment #3 – Highway 68, from Josselyn Canyon Road to Olmsted Road
Segment #4 – Highway 68, from Olmsted Road to Highway 218
Segment #6 – Highway 68, from Ragsdale Drive to Laureles Grade
Segment #7 – Highway 68, from Laureles Grade to Corral De Tierra Road
Segment #8 – Highway 68, from Corral De Tierra Road to Torero Drive
Segment #9 – Highway 68, from Torero Drive to Begin/End Freeway

Figure 34: Cumulative Plus Proposed Project Long-Term Volumes (1 – 9)



XX (YY) = AM (PM)

Figure 35: Cumulative Plus Proposed Project Long-Term Volumes (10 – 19)



8.1.4 Cumulative Plus Proposed Project Long-Term – Project Impacts

Based on the criteria for project impacts, the Project would have a significant cumulative impact at the following intersections under Cumulative Plus Proposed Project Long-Term conditions:

Intersection #1 – Olmsted Road / Highway 68
Intersection #6 – Del Monte Boulevard / Highway 218
Intersection #7 – Highway 218 / Fremont Boulevard
Intersection #8 – Highway 218 / General Jim Moore Boulevard
Intersection #9 – Highway 218 / Del Rey Gardens Drive
Intersection #10 – Highway 218 / Ryan Ranch Road
Intersection #11 – Josselyn Canyon Road / Highway 68
Intersection #12 – Highway 218 / Highway 68
Intersection #14 – York Road / Highway 68
Intersection #15 – Pasadera Drive / Highway 68
Intersection #16 – Laureles Grade Road / Highway 68
Intersection #17 – Corral De Tierra Road / Highway 68
Intersection #18 – San Benancio Road / Highway 68
Intersection #19 – Torero Drive / Highway 68

Cumulative Plus Proposed Project Long-Term intersection levels of service (LOS) are summarized in **Table 29**. LOS calculation worksheets are included in **Appendix H**. Vehicle queue estimates are included in **Appendix I**.

8.1.5 Cumulative Plus Proposed Project Long-Term – Mitigation Measures

As discussed in the Executive Summary, the Proposed Project Long-Term scenario includes conservative development with a corresponding high trip generation estimate. It is anticipated that this level of development would require major improvements to the local and regional road network to mitigate the project's impacts.

A detailed analysis of these major improvements is beyond the scope of this study. However, the following discussion presents a high-level assessment of some of the major improvements that may be required to achieve acceptable LOS C traffic operations in the study area under Cumulative Plus Proposed Project Long-Term traffic conditions.

Highway 218 Corridor

It is anticipated that two Highway 218 through lanes would be required in each direction at the Highway 218 intersections with Del Monte Boulevard, N. Fremont Street, General Jim Moore Boulevard, Del Rey Gardens Drive, and Ryan Ranch Road. Two lanes in each direction would probably also be required at other intersections along the corridor, and possibly along the entire length of the corridor. As discussed in Section 1.6, TAMC is in the beginning stages of conducting a Highway 218 Corridor Study. When completed, the Highway 218 Corridor Study is expected to provide information regarding potential strategies for improving the corridor. Caltrans has also anticipated the widening of Highway 218, as described in a 2009 Caltrans "Transportation Planning Fact Sheet."

At the Highway 218 / Highway 68 intersection, the Highway 68 approaches are expected to require dual eastbound left-turn lanes, three westbound through lanes, and dual westbound

right-turn lanes, while the southbound Highway 218 approach is expected to require triple southbound left-turn lanes and dual southbound right-turn lanes.

The Highway 218 / Del Rey Gardens Drive intersection would provide the only access to the development on the north side of the Airport. As a result, all traffic to the north side of the Airport would be concentrated at this intersection. At the Highway 218 / Del Rey Gardens Drive intersection, northbound Highway 218 is expected to require triple northbound left-turn lanes (in addition to two northbound and two southbound through lanes), and eastbound Del Rey Gardens Drive is expected to require dual left-turn lanes and dual right-turn lanes. The existing northbound left-turn lane at this intersection is extremely short (about 50 feet long), and is back-to-back with the southbound left-turn lane at the Monterey Peninsula School District driveway, which is only about 100 feet south of Del Rey Gardens Drive. To allow the widening of Highway 218 and the additional turn lanes at this location, the school district driveway may have to be realigned to form a four-legged intersection with Del Rey Gardens Drive. Realigning the school district driveway would require significant earthwork due to the steep embankment on the east side of Highway 218.

Highway 68 Corridor

As discussed in Section 1.5, the *SR 68 Scenic Highway Plan* study identified a series of improvements along Highway 68 to relieve congestion and improve safety and reliability along the corridor, with improvements phased in over a 20-year timeframe. “Roundabout Corridor: Concept 1 – Modified”, the Preferred Corridor Concept in the *SR 68 Scenic Highway Plan* study, includes converting nine of the Highway 68 study intersections in this study to roundabout control.

The Monterey Peninsula Airport District, as a member of the Highway 68 Improvement Corridor Team with Caltrans, TAMC, the County of Monterey, and the cities of Monterey, Del Rey Oaks and Seaside, will need to conduct further analysis to determine the improvements necessary to mitigate impacts caused by the Proposed Project Long-Term scenario.

Highway 1 and N. Fremont / Highway 1 / Highway 68 Merge Areas

Although outside the project study area for the short-term project scenarios, traffic generated by the Proposed Project Long-Term scenario is expected to impact the short weaving segments at the N. Fremont Street / Highway 1 / Highway 68 interchange. In addition, mainline segments of Highway 1 would also likely be impacted. To mitigate the project’s impacts on the mainline segments of Highway 1 and the short weaving segments at the N. Fremont Street / Highway 1/ Highway 68 interchange, the mainline would probably need to be widened to add another lane in each direction and the weaving segments would probably need to be lengthened.

Table 29: Cumulative Plus Proposed Project Long-Term – Intersection LOS (1 – 19)

Scenario # →						1		7		8		
	N-S Street	E-W Street	Int Control	LOS Std	Peak Hour	Existing		Cumulative		Proj Trips	Cu+Prop Long-Term	
						Delay	LOS	Delay	LOS		Delay	LOS
1	Olmsted Road	Highway 68	Signal	C/D	AM	51.0	D	73.0	E	530	147.2	F
					PM	126.0	F	165.2	F	544	*	F
2	Olmsted Road	Garden Road	One-Way Stop	D	AM	10.7	B	12.5	B	391	32.4	D
					PM	10.8	B	12.2	B	412	27.4	D
3	Olmsted Way	Fred Kane Drive	All-Way Stop	D	AM	7.6	A	7.8	A	0	7.7	A
					PM	8.2	A	8.9	A	0	7.9	A
4	Airport Road	Euclid Avenue	Two-Way Stop	D	AM	9.8	A	10.1	B	-1	10.1	B
					PM	10.1	B	10.4	B	-2	10.4	B
5	Airport Road	N. Fremont Street	Signal	D	AM	11.7	B	12.6	B	134	12.8	B
					PM	14.2	B	15.4	B	132	15.8	B
6	Del Monte Boulevard	Highway 218	Signal	C/D	AM	34.3	C	42.8	D	150	45.6	D
					PM	38.9	D	52.8	D	148	55.1	E
7	Highway 218	Fremont Boulevard	Signal	C/D	AM	31.3	C	46.5	D	365	55.7	E
					PM	46.1	D	72.2	E	361	106.3	F
8	Highway 218	General Jim Moore Blvd	Signal	C/D	AM	17.0	B	24.0	C	487	67.3	E
					PM	15.2	B	23.4	C	481	48.1	D
9	Highway 218	Del Rey Gardens Drive	One-Way Stop	C/D	AM	24.1	C	34.7	D	1037	107.5	F
					PM	19.0	C	25.5	D	1018	*	F
10	Highway 218	Ryan Ranch Road	Signal	C/D	AM	6.9	A	8.1	A	606	12.8	B
					PM	16.6	B	45.7	D	595	59.4	E
11	Josselyn Canyon Road	Highway 68	Signal	C/D	AM	44.5	D	59.7	E	237	101.4	F
					PM	19.8	B	26.1	C	239	53.6	D
12	Highway 218	Highway 68	Signal	C/D	AM	24.3	C	39.6	D	759	66.3	E
					PM	29.7	C	33.6	C	755	56.1	E
13	Ragsdale Drive	Highway 68	Signal	C/D	AM	12.3	B	12.1	B	535	20.5	C
					PM	4.2	A	4.2	A	532	4.6	A
14	York Road	Highway 68	Signal	C/D	AM	25.3	C	42.3	D	507	122.4	F
					PM	42.8	D	51.1	D	503	84.8	F
15	Pasadera Drive	Highway 68	Signal	C/D	AM	47.5	D	90.7	F	493	202.6	F
					PM	14.5	B	22.5	C	490	79.1	E
16	Laureles Grade Road	Highway 68	Signal	C/D	AM	27.2	C	44.0	D	479	112.3	F
					PM	31.7	C	42.6	D	477	88.4	F
17	Corral de Tierra Road	Highway 68	Signal	C/D	AM	35.2	D	166.9	F	451	260.8	F
					PM	57.8	E	73.1	E	449	155.8	F
18	San Benancio Road	Highway 68	Signal	C/D	AM	70.3	E	152.8	F	437	236.2	F
					PM	18.9	B	54.5	D	436	129.8	F
19	Torero Drive	Highway 68	One-Way Stop	C/D	AM	*	F	*	F	423	*	F
					PM	111.3	F	208.1	F	423	*	F

Notes:

1 Signal, roundabout and all-way stop delay is average overall delay in seconds per vehicle (sec/veh).

2 One- and two-way stop delay is worst approach delay in seconds per vehicle (sec/veh).

3 LOS highlighted in red indicates intersection operating below level of service standard.

4 * = delay greater than 300 seconds.

5 LOS in bold box indicates project impact.

8.2 Alternative 1 Project Long-Term Traffic Conditions

8.2.1 Alternative 1 Project Long-Term – Trip Generation, Distribution, and Assignment

As discussed in Section 3.2.4, the Alternative 1 Project Long-Term scenario includes a similar combination of actions and development to the Proposed Project that would reduce traffic at some locations and increase traffic at other locations within the study area. This scenario also includes high-intensity development on the north and south sides of the Airport. The only difference between this scenario and the Proposed Project Long-Term scenario is this scenario includes the relocation of the Airport Rescue and Firefighting Building from the south side of the Airport to the north side of the Airport.

This scenario would result in the same amount of net new traffic on the road network as the Proposed Project Long-Term scenario, however, with this scenario, traffic generated by the ARFF Building would be redistributed from the south side of the Airport to the north side of the Airport.

The Alternative 1 Project Long-Term scenario would result in a total net new trip generation of 10,991 daily trips, with 1,370 occurring during the AM peak hour (1,164 in, 206 out) and 1,368 occurring during the PM peak hour (265 in, 1,103 out). Details of the Alternative 1 Project Long-Term trip generation are provided in **Table 30**.

The Project trips were assigned to the study intersections using the same distribution percentages used for the Proposed Project Short-Term scenario. The increases and reductions in trips from the relocated hangars were added to the new trips generated by the new hangars and the long-term non-aviation development to obtain the Alternative 1 Project Long-Term AM and PM peak hour trip assignments, which are shown in **Figures 36** and **37**.

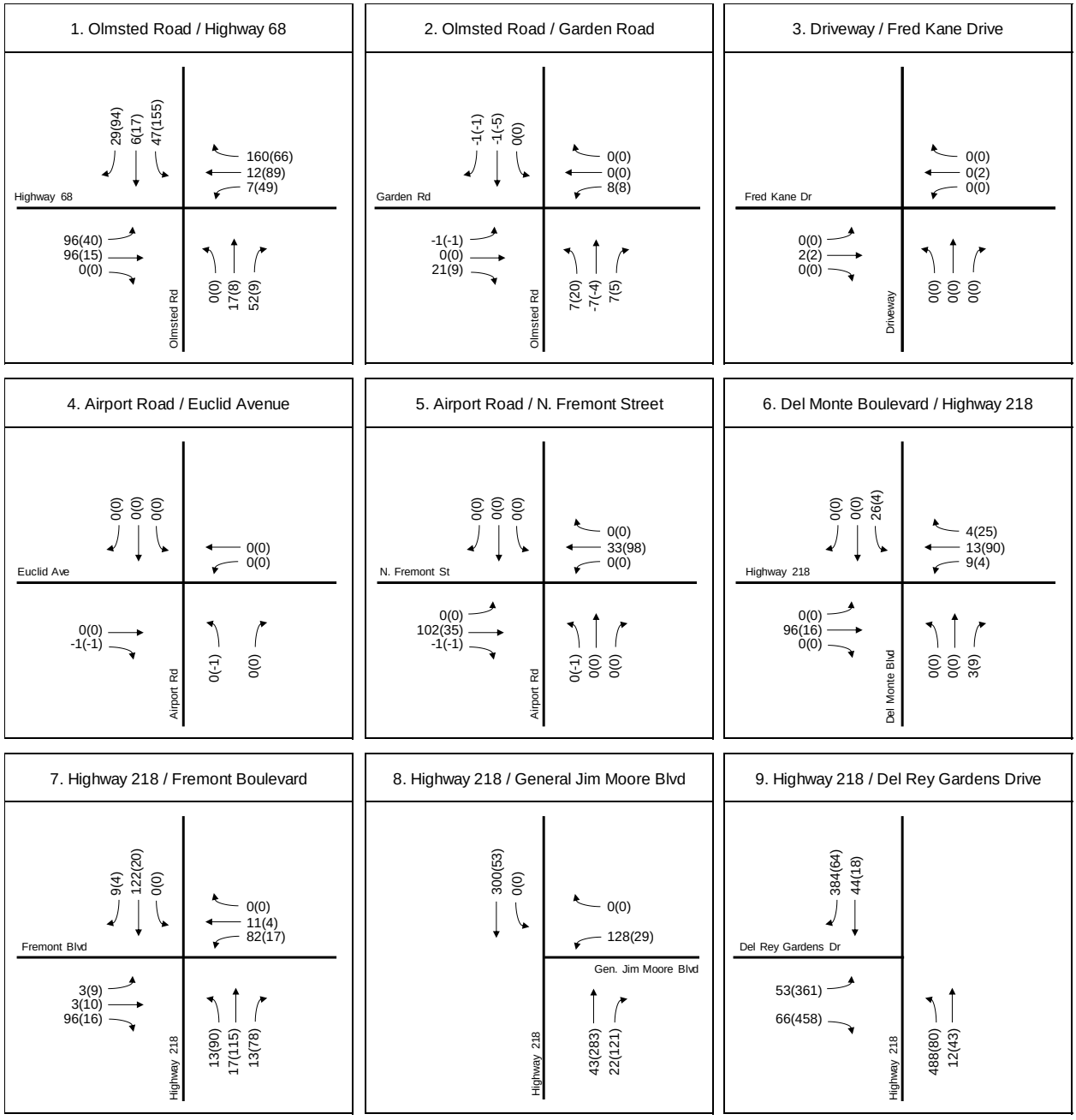
Table 30: Alt. 1 Project Long-Term Trip Generation

Alternative 1 Project Long-Term		WEEK DAY	WEEKDAY AM PK HR			WEEKDAY PM PK HR		
TRIP GENERATION RATES	ITE Code	DAILY RATE	PK HR RATE	% IN	% OUT	PK HR RATE	% IN	% OUT
Hangars (per unit)	N/A	1.41	0.17	83%	17%	0.32	45%	55%
General Light Industrial (per 1,000 SF)	110	7.22	0.96	88%	12%	1.04	12%	88%
Office Park (per 1,000 SF)	750	11.68	1.75	89%	11%	1.51	14%	86%
High-Turnover Restaurant (per 1,000 SF)	932	127.15	10.81	55%	45%	9.85	60%	40%
Medical-Dental Office (per 1,000 SF)	720	36.11	2.39	79%	21%	3.16	28%	72%
General Office (per 1,000 SF)	710	13.33	1.94	88%	12%	1.96	17%	83%
TRIPS GENERATED BY AREA	Units / SF	DAILY TRIPS	PK HR TRIPS	TRIPS IN	TRIPS OUT	PK HR TRIPS	TRIPS IN	TRIPS OUT
North Side via CONA Neighborhood								
Relocated Port-a-Port & Navy Flying Club Hangars	-7	-10	-1	-1	0	-2	-1	-1
North Side via North Side Road								
Relocated GA Hangars	44	62	7	6	1	14	6	8
New GA Hangars	7	10	1	1	0	2	1	1
Relocated Port-a-Port & Navy Flying Club Hangars	7	10	1	1	0	2	1	1
Relocated ARFF Building	1	20	10	5	5	4	2	2
Long-Term GA Hangars	106	149	18	15	3	34	15	19
General Light Industrial	400,000	2,886	383	337	46	415	50	365
Office Park	325,000	3,796	570	507	63	492	69	423
South Side via Olmsted Road								
Relocated GA Hangars	-44	-62	-7	-6	-1	-14	-6	-8
Relocated ARFF Building	-1	-20	-10	-5	-5	-4	-2	-2
High-Turnover Restaurant	10,000	1,272	108	59	49	99	59	40
Medical-Dental Office	45,000	1,625	108	85	23	142	40	102
General Office	94,000	1,253	182	160	22	184	31	153
Total Net New Generated Trips		**10,991**	**1,370**	**1,164**	**206**	**1,368**	**265**	**1,103**

Notes:

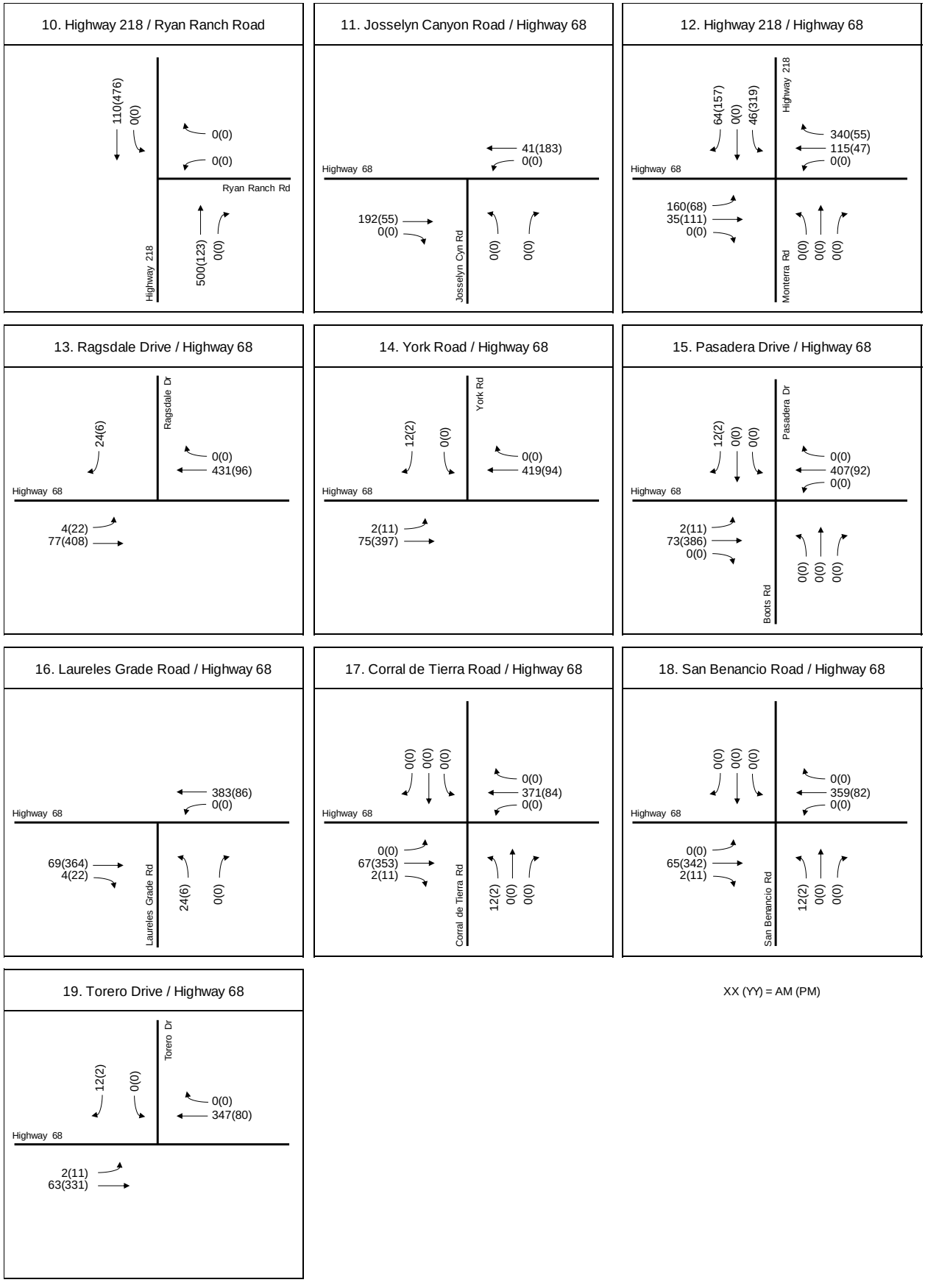
1. Trip generation rates from Institute of Transportation Engineers (ITE) *Trip Generation*, 9th Edition, 2012, where appropriate.
2. Trip generation rates for hangars based on gate counts at Monterey Regional Airport (November 1 - December 31, 2016).
3. Trips generated by ARFF building based on Monterey Fire Department staffing, schedule, and incident reports (November 1 - December 31, 2016).
4. Relocated trips in red are subtracted from their current access point and added to the north side via the North Side Road.
5. The 44 hangars relocated from the south side are included in the 51 hangars on the north side.

Figure 36: Alt. 1 Project Long-Term Trip Assignment (1 – 9)



XX (YY) = AM (PM)

Figure 37: Alt. 1 Project Long-Term Trip Assignment (10 – 19)



8.2.2 Cumulative Plus Alternative 1 Project Long-Term – Intersection Operations

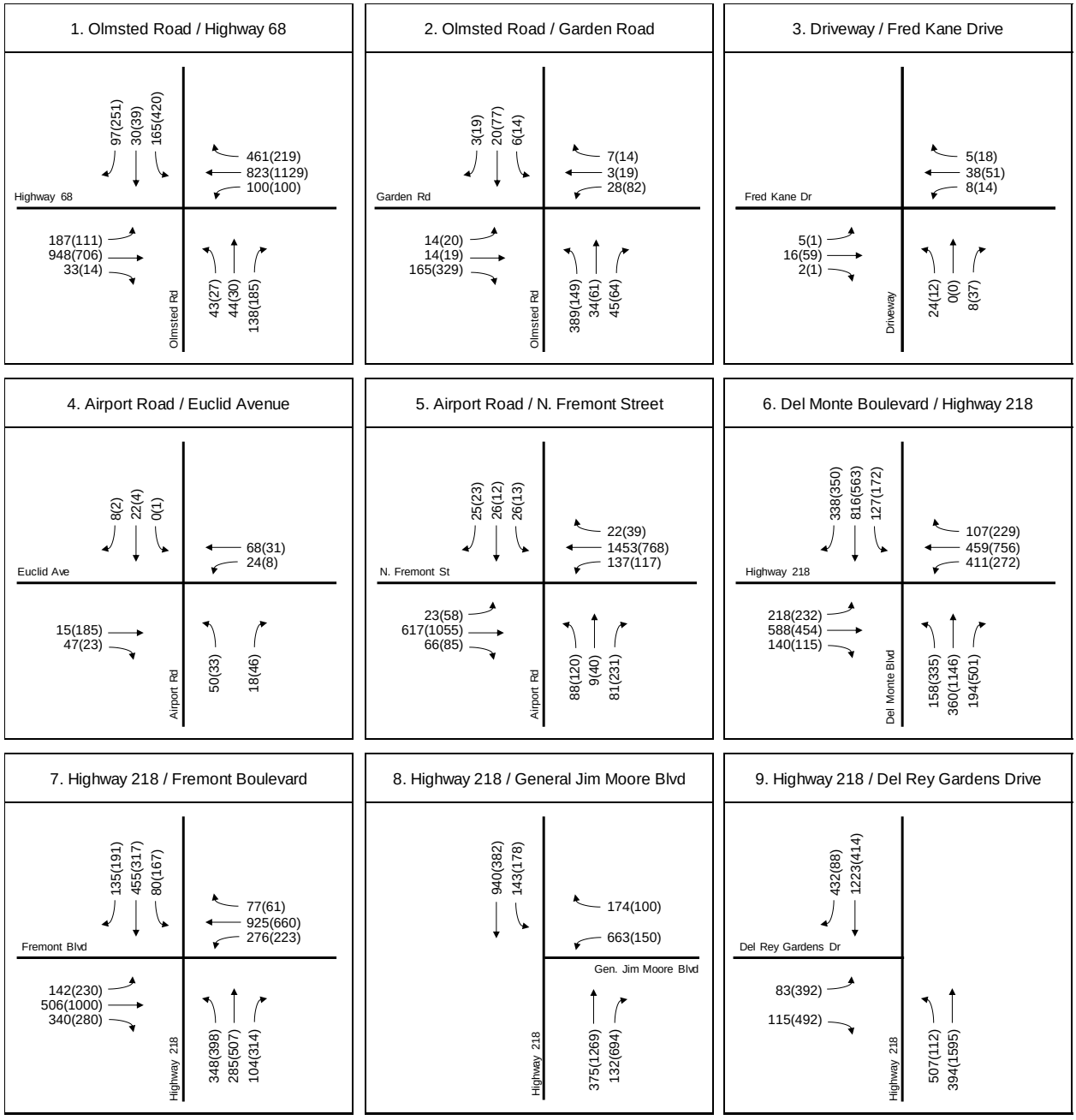
The Alternative 1 Project Long-Term trip assignments were combined with the Cumulative conditions traffic volumes to obtain Cumulative Plus Alternative 1 Project Long-Term AM and PM peak hour traffic volumes, which are shown in **Figures 38** and **39**.

Based on the City of Monterey and Caltrans level of service standards, the following study intersections would operate deficiently under Cumulative Plus Alternative 1 Project Long-Term traffic conditions (**Table 31**):

Intersection #1 – Olmsted Road / Highway 68
Intersection #6 – Del Monte Boulevard / Highway 218
Intersection #7 – Highway 218 / Fremont Boulevard
Intersection #8 – Highway 218 / General Jim Moore Boulevard
Intersection #9 – Highway 218 / Del Rey Gardens Drive
Intersection #10 – Highway 218 / Ryan Ranch Road
Intersection #11 – Josselyn Canyon Road / Highway 68
Intersection #12 – Highway 218 / Highway 68
Intersection #14 – York Road / Highway 68
Intersection #15 – Pasadera Drive / Highway 68
Intersection #16 – Laureles Grade Road / Highway 68
Intersection #17 – Corral De Tierra Road / Highway 68
Intersection #18 – San Benancio Road / Highway 68
Intersection #19 – Torero Drive / Highway 68

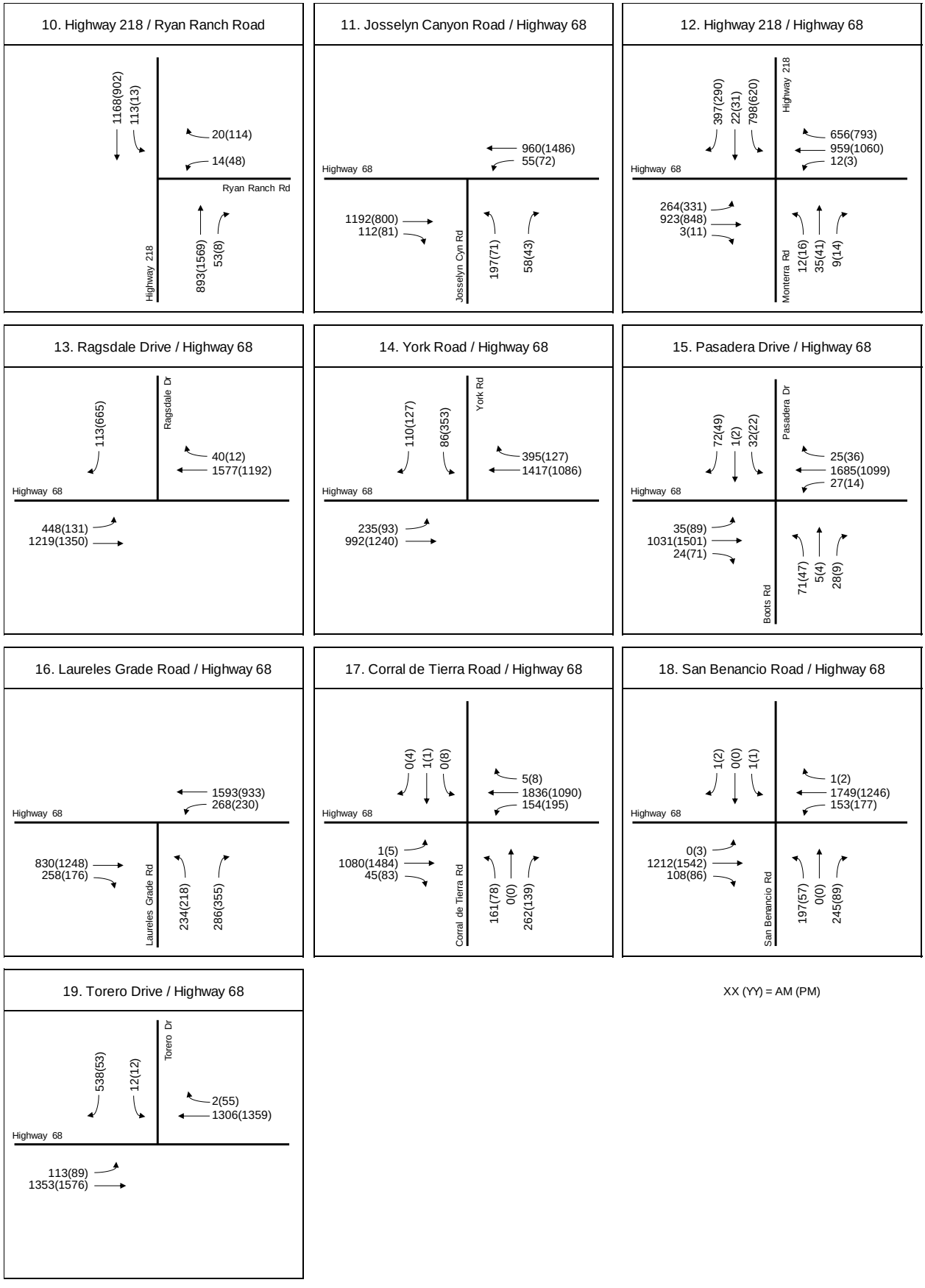
It should be noted that these intersections would also operate at deficient levels of service under Cumulative without Project conditions.

Figure 38: Cumulative Plus Alt. 1 Project Long-Term Volumes (1 – 9)



XX (YY) = AM (PM)

Figure 39: Cumulative Plus Alt. 1 Project Long-Term Volumes (10 – 19)



8.2.3 Cumulative Plus Alternative 1 Project Long-Term – Project Impacts

Based on the criteria for project impacts, the Project would have a significant cumulative impact at the following intersections under Cumulative Plus Alternative 1 Project Long-Term conditions:

Intersection #1 – Olmsted Road / Highway 68
Intersection #6 – Del Monte Boulevard / Highway 218
Intersection #7 – Highway 218 / Fremont Boulevard
Intersection #8 – Highway 218 / General Jim Moore Boulevard
Intersection #9 – Highway 218 / Del Rey Gardens Drive
Intersection #10 – Highway 218 / Ryan Ranch Road
Intersection #11 – Josselyn Canyon Road / Highway 68
Intersection #12 – Highway 218 / Highway 68
Intersection #14 – York Road / Highway 68
Intersection #15 – Pasadera Drive / Highway 68
Intersection #16 – Laureles Grade Road / Highway 68
Intersection #17 – Corral De Tierra Road / Highway 68
Intersection #18 – San Benancio Road / Highway 68
Intersection #19 – Torero Drive / Highway 68

Cumulative Plus Alternative 1 Project Long-Term intersection levels of service (LOS) are summarized in **Table 31**. LOS calculation worksheets are included in **Appendix H**. Vehicle queue estimates are included in **Appendix I**.

8.2.4 Cumulative Plus Alternative 1 Project Long-Term – Mitigation Measures

As discussed in Section 8.2.1, the Alternative 1 Project Long-Term scenario includes high-intensity development with a corresponding high trip generation estimate. It is anticipated that this level of development would require major improvements to the local and regional road network to mitigate the project's impacts.

A detailed analysis of these major improvements is beyond the scope of this study. Section 8.1.5 presents a high-level assessment of some of the major improvements that may be required to achieve acceptable LOS C traffic operations in the study area under Cumulative Plus Proposed Project and Cumulative Plus Alternative 1 Project Long-Term traffic conditions.

Table 31: Cumulative Plus Alt. 1 Project Long-Term – Intersection LOS (1 – 19)

Scenario # →						1		7		9		
	N-S Street	E-W Street	Int Control	LOS Std	Peak Hour	Existing		Cumulative		Proj Trips	Cu+Alt 1 Long-Term	
						Delay	LOS	Delay	LOS		Delay	LOS
1	Olmsted Road	Highway 68	Signal	C/D	AM	51.0	D	73.0	E	522	146.1	F
					PM	126.0	F	165.2	F	542	*	F
2	Olmsted Road	Garden Road	One-Way Stop	D	AM	10.7	B	12.5	B	381	31.6	D
					PM	10.8	B	12.2	B	407	27.1	D
3	Olmsted Way	Fred Kane Drive	All-Way Stop	D	AM	7.6	A	7.8	A	0	7.6	A
					PM	8.2	A	8.9	A	0	7.8	A
4	Airport Road	Euclid Avenue	Two-Way Stop	D	AM	9.8	A	10.1	B	-1	10.1	B
					PM	10.1	B	10.4	B	-2	10.4	B
5	Airport Road	N. Fremont Street	Signal	D	AM	11.7	B	12.6	B	134	12.8	B
					PM	14.2	B	15.4	B	131	15.8	B
6	Del Monte Boulevard	Highway 218	Signal	C/D	AM	34.3	C	42.8	D	151	45.7	D
					PM	38.9	D	52.8	D	148	55.1	E
7	Highway 218	Fremont Boulevard	Signal	C/D	AM	31.3	C	46.5	D	369	56.2	E
					PM	46.1	D	72.2	E	363	106.5	F
8	Highway 218	General Jim Moore Blvd	Signal	C/D	AM	17.0	B	24.0	C	493	68.0	E
					PM	15.2	B	23.4	C	486	47.6	D
9	Highway 218	Del Rey Gardens Drive	One-Way Stop	C/D	AM	24.1	C	34.7	D	1047	108.3	F
					PM	19.0	C	25.5	D	1024	*	F
10	Highway 218	Ryan Ranch Road	Signal	C/D	AM	6.9	A	8.1	A	610	12.9	B
					PM	16.6	B	45.7	D	599	59.7	E
11	Josselyn Canyon Road	Highway 68	Signal	C/D	AM	44.5	D	59.7	E	233	101.0	F
					PM	19.8	B	26.1	C	238	53.6	D
12	Highway 218	Highway 68	Signal	C/D	AM	24.3	C	39.6	D	760	66.1	E
					PM	29.7	C	33.6	C	757	56.3	E
13	Ragsdale Drive	Highway 68	Signal	C/D	AM	12.3	B	12.1	B	536	20.4	C
					PM	4.2	A	4.2	A	532	4.5	A
14	York Road	Highway 68	Signal	C/D	AM	25.3	C	42.3	D	508	122.0	F
					PM	42.8	D	51.1	D	504	84.9	F
15	Pasadera Drive	Highway 68	Signal	C/D	AM	47.5	D	90.7	F	494	202.5	F
					PM	14.5	B	22.5	C	491	79.1	E
16	Laureles Grade Road	Highway 68	Signal	C/D	AM	27.2	C	44.0	D	480	112.1	F
					PM	31.7	C	42.6	D	478	88.4	F
17	Corral de Tierra Road	Highway 68	Signal	C/D	AM	35.2	D	166.9	F	452	260.9	F
					PM	57.8	E	73.1	E	450	155.8	F
18	San Benancio Road	Highway 68	Signal	C/D	AM	70.3	E	152.8	F	438	236.2	F
					PM	18.9	B	54.5	D	437	129.9	F
19	Torero Drive	Highway 68	One-Way Stop	C/D	AM	*	F	*	F	424	*	F
					PM	111.3	F	208.1	F	424	*	F

Notes:

1 Signal, roundabout and all-way stop delay is average overall delay in seconds per vehicle (sec/veh).

2 One- and two-way stop delay is worst approach delay in seconds per vehicle (sec/veh).

3 LOS highlighted in red indicates intersection operating below level of service standard.

4 * = delay greater than 300 seconds.

5 LOS in bold box indicates project impact.

9 References

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15. *Traffic Infusion on Residential Environment (TIRE),* D. K. Goodrich, 2011
16. *Transportation Planning Fact Sheet, State Route (SR) 218 in Monterey County*, Caltrans, December 2009.

9.2 List of Contacts

1. John Olejnik, Planning Management Liaison, Caltrans District 5, San Luis Obispo, CA
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5. Elizabeth Caraker, Principal Planner, City of Monterey Planning Office, Monterey, CA
6. Craig Malin, City Manager, City of Seaside, Seaside, CA
7. Dan Dawson, Former City Manager, City of Del Rey Oaks, Del Rey Oaks, CA
8. Virginia Murillo, Transportation Planner, Transportation Agency for Monterey County, Salinas, CA

A: LOS Descriptions for Signalized Intersections

APPENDIX A

LEVEL OF SERVICE (LOS) DESCRIPTION
SIGNALIZED INTERSECTIONS

The capacity of an urban street is related primarily to the signal timing and the geometric characteristics of the facility as well as to the composition of traffic on the facility. Geometrics are a fixed characteristic of a facility. Thus, while traffic composition may vary somewhat over time, the capacity of a facility is generally a stable value that can be significantly improved only by initiating geometric improvements. A traffic signal essentially allocates time among conflicting traffic movements that seek to use the same space. The way in which time is allocated significantly affects the operation and the capacity of the intersection and its approaches.

The methodology for signalized intersection is designed to consider individual intersection approaches and individual lane groups within approaches. A lane group consists of one or more lanes on an intersection approach. The outputs from application of the method described in the HCM 2010 are reported on the basis of each lane. For a given lane group at a signalized intersection, three indications are displayed: green, yellow and red. The red indication may include a short period during which all indications are red, referred to as an all-red interval and the yellow indication forms the change and clearance interval between two green phases.

The methodology for analyzing the capacity and level of service must consider a wide variety of prevailing conditions, including the amount and distribution of traffic movements, traffic composition, geometric characteristics, and details of intersection signalization. The methodology addresses the capacity, LOS, and other performance measures for lane groups and the intersection approaches and the LOS for the intersection as a whole.

Capacity is evaluated in terms of the ratio of demand flow rate to capacity (v/c ratio), whereas LOS is evaluated on the basis of control delay per vehicle (in seconds per vehicle). The methodology does not take into account the potential impact of downstream congestion on intersection operation, nor does the methodology detect and adjust for the impacts of turn-pocket overflows on through traffic and intersection operation.

LEVEL OF SERVICE (LOS) CRITERIA FOR SIGNALIZED INTERSECTIONS

(Reference Highway Capacity Manual 2010)

Level of Service	Control Delay (seconds / vehicle)
A	**<10**
B	**>10 - 20**
C	**>20 - 35**
D	**>35 - 55**
E	**>55 - 80**
F	**>80**

B: LOS Descriptions for Unsignalized Intersections with Two-Way Stop Control

APPENDIX B

LEVEL OF SERVICE (LOS) DESCRIPTION
UNSIGNALIZED INTERSECTIONS WITH TWO-WAY STOP CONTROL (TWSC)

TWSC intersections are widely used and stop signs are used to control vehicle movements at such intersections. At TWSC intersections, the stop-controlled approaches are referred to as the minor street approaches; they can be either public streets or private driveways. The intersection approaches that are not controlled by stop signs are referred to as the major street approaches. A three-leg intersection is considered to be a standard type of TWSC intersection if the single minor street approach (i.e. the stem of the T configuration) is controlled by a stop sign. Three-leg intersections where two of the three approaches are controlled by stop signs are a special form of unsignalized intersection control.

At TWSC intersections, drivers on the controlled approaches are required to select gaps in the major street flow through which to execute crossing or turning maneuvers on the basis of judgement. In the presence of a queue, each driver on the controlled approach must use some time to move into the front-of-queue position and prepare to evaluate gaps in the major street flow. Capacity analysis at TWSC intersections depends on a clear description and understanding of the interaction of drivers on the minor or stop-controlled approach with drivers on the major street. Both gap acceptance and empirical models have been developed to describe this interaction.

Thus, the capacity of the controlled legs is based on three factors:
- the distribution of gaps in the major street traffic stream,;
- driver judgement in selecting gaps through which to execute the desired maneuvers; and
- the follow-up time required by each driver in a queue.

The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, in the absence of incident, control, traffic or geometric delay. Average control delay for any particular minor movement is a function of the capacity of the approach and the degree of saturation and referred to as level of service.

LEVEL OF SERVICE (LOS) CRITERIA FOR TWSC INTERSECTIONS
(Reference Highway Capacity Manual 2010)

Level of Service	Control Delay (seconds / vehicle)
A	**0 - 10**
B	**>10 - 15**
C	**>15 - 25**
D	**>25 - 35**
E	**>35 - 50**
F	**>50**

C: LOS Descriptions for Unsignalized Intersections with All-Way Stop Control

APPENDIX C

LEVEL OF SERVICE (LOS) DESCRIPTION
UNSIGNALIZED INTERSECTIONS WITH ALL-WAY STOP CONTROL (AWSC)

AWSC intersections require every vehicle to stop at the intersection before proceeding. Since each driver must stop, the judgement as to whether to proceed into the intersection is a function of traffic conditions on the other approaches. While giving priority to the driver on the right is a recognized rule in some areas, it is not a good descriptor of actual intersection operations. What happens is the development of a consensus of right-of-way that alternates between the drivers on the intersection approaches, a consensus that depends primarily on the intersection geometry and the arrival patterns at the stop line.

If no traffic is present on the other approaches, a driver can proceed immediately after the stop is made. If there is traffic on one or more of the other approaches, a driver proceeds only after determining that there are no vehicles currently in the intersection and that it is the driver's turn to proceed. Since no traffic signal controls the stream movement or allocates the right-of-way to each conflicting stream, the rate of departure is controlled by the interaction between the traffic streams themselves.

For AWSC intersections, the average control delay (in seconds per vehicle) is used as the primary measure of performance. Control delay is the increased time of travel for a vehicle approaching and passing through an AWSC intersection, compared with a free-flow vehicle if it were not required to slow down or stop at the intersection.

The criteria for AWSC intersections have different threshold values than do those for signalized intersections, primarily because drivers expect different levels of performance from different kinds of traffic control devices (i.e traffic signals, two way stop or all way stop, etc.). The expectation is that a signalized intersection is designed to carry higher traffic volumes than an AWSC intersection and a higher level of control delay is acceptable at a signalized intersection for the same LOS.

For AWSC analysis using the HCM 2010 method, the LOS shown reflects the weighted average of the delay on each of the approaches. If the volume-to-capacity (v/c) ratio at the intersection is larger than 1.0, the intersection operates at LOS F, regardless of the actual control delay.

LEVEL OF SERVICE (LOS) CRITERIA FOR AWSC INTERSECTIONS
(Reference Highway Capacity Manual 2010)

Level of Service	Control Delay (seconds / vehicle)
A	**0 - 10**
B	**>10 - 15**
C	**>15 - 25**
D	**>25 - 35**
E	**>35 - 50**
F	**>50; v/c > 1.0**

D: LOS Descriptions for Roundabouts

APPENDIX D

LEVEL OF SERVICE (LOS) DESCRIPTION
ROUNDABOUT INTERSECTIONS

Roundabout intersections (or roundabouts, for short) are an alternative traffic control that are becoming more and more common in the United States. Similar to all-way stop controlled intersections, vehicles at roundabouts take turns entering the roundabout when conflicting traffic is present. However, unlike all-way stop intersections, vehicles at roundabouts are only required to yield to other conflicting vehicles, bicyclists and pedestrians; if no conflicting traffic is present, vehicles can freely proceed into and through the roundabout. This makes roundabouts generally more efficient than all-way stop or signalized intersections. Since no traffic signal controls the stream movement or allocates the right-of-way to each conflicting stream, the rate of departure is controlled by the interaction between the traffic streams themselves.

The capacity of roundabout approaches are directly influenced by flow patterns, i.e., the approach entering flow, the circulating flow inside the roundabout, and the exiting flow out of the roundabout. Pedestrian and bicyclist traffic crossing the roundabout approaches and exits can also have a lesser impact on the capacity.

For roundabout intersections, the average control delay (in seconds per vehicle) is used as the primary measure of performance. Control delay is the increased time of travel for a vehicle approaching and passing through a roundabout, compared with a free-flow vehicle if it were not required to slow down or yield at the intersection.

The level of service criteria for roundabout intersections is the same as for all-way stop controlled intersections, which reflects their similar operating characteristics.

For roundabout analysis using the HCM 2010 method, the LOS shown reflects the weighted average of the delay on each of the approaches. If the volume-to-capacity (v/c) ratio at the roundabout is larger than 1.0, the roundabout operates at LOS F, regardless of the actual control delay.

LEVEL OF SERVICE (LOS) CRITERIA FOR ROUNDABOUT INTERSECTIONS

(Reference 2010 Highway Capacity Manual)

Level of Service	Control Delay (seconds / vehicle)
A	**0 - 10**
B	**>10 - 15**
C	**>15 - 25**
D	**>25 - 35**
E	**>35 - 50**
F	**>50; v/c >1.0**

E: LOS Descriptions for Two-Lane and Multi-Lane Highways

Appendix E

2010 Highway Capacity Manual
LOS Descriptions for Two-Lane Highway and Multi-Lane Highway Road Segments

Automobile LOS is defined by density.

Automobile Mode

Automobile LOS for multilane highway segments are defined in Exhibit 14-4. Because speeds are constant through a broad range of flow rates, LOS are defined on the basis of density, which is a measure of the proximity of vehicles to each other in the traffic stream.

Exhibit 14-4
Automobile LOS for Multilane Highway Segments

LOS	FFS (mi/h)	Density (pc/mi/ln)
A	All	>0–11
B	All	>11–18
C	All	>18–26
D	All	>26–35
E	60	>35–40
	55	>35–41
	50	>35–43
	45	>35–45
F	Demand Exceeds Capacity	
	60	>40
	55	>41
	50	>43
	45	>45

On Class I two-lane highways, speed and delay due to passing restrictions are both important to motorists. Therefore, on these highways, LOS is defined in terms of both ATS and PTSF. On Class II highways, travel speed is not a significant issue to drivers. Therefore, on these highways, LOS is defined in terms of PTSF only. On Class III highways, high speeds are not expected. Because the length of Class III segments is generally limited, passing restrictions are also not a major concern. In these cases, drivers would like to make steady progress at or near the speed limit. Therefore, on these highways, PFFS is used to define LOS. The LOS criteria for two-lane highways are shown in Exhibit 15-3.

Exhibit 15-3
Automobile LOS for Two-Lane Highways

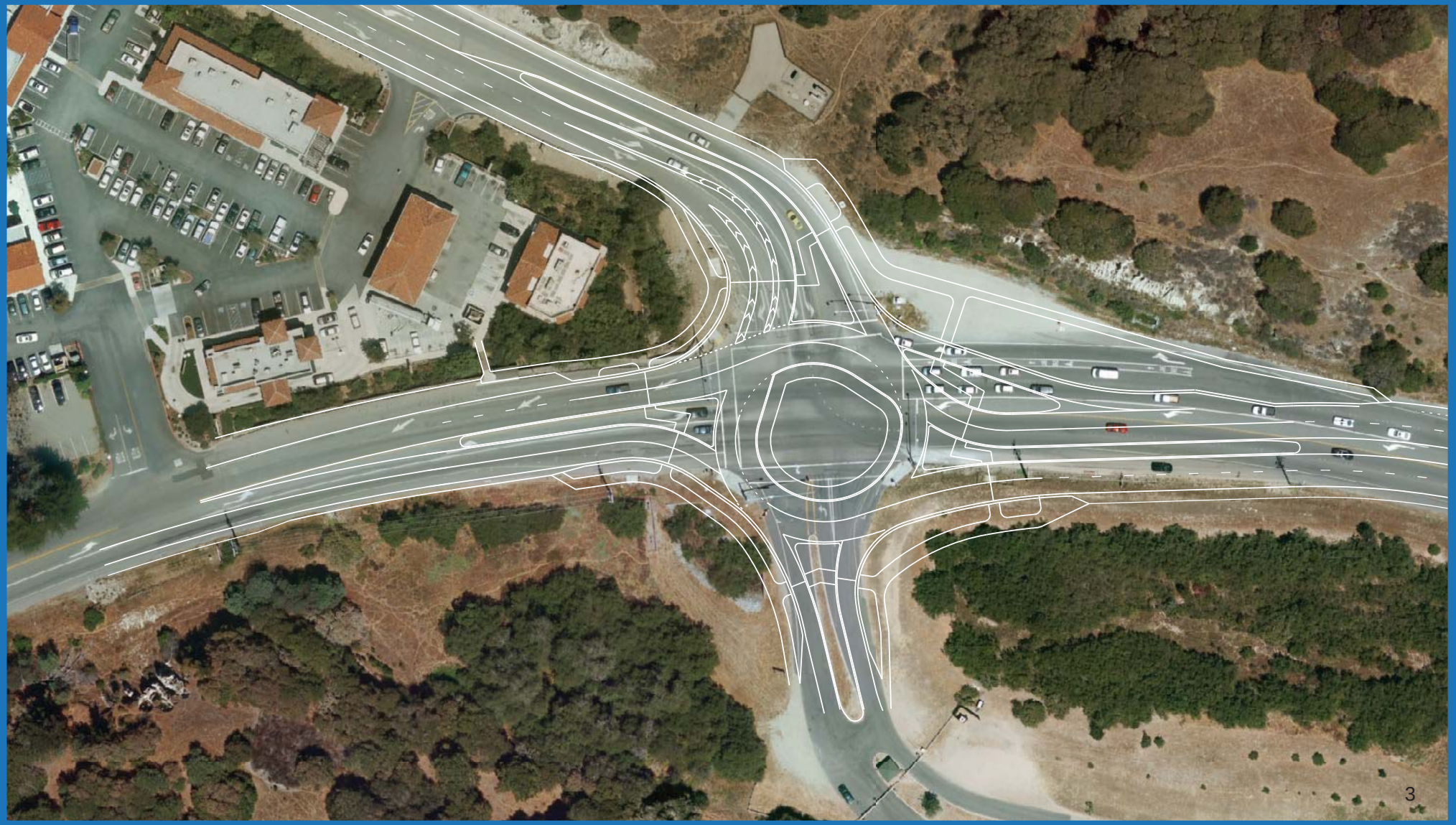
LOS	Class I Highways		Class II Highways	Class III Highways
	ATS (mi/h)	PTSF (%)	PTSF (%)	PFFS (%)
A	>55	≤35	≤40	>91.7
B	>50–55	>35–50	>40–55	>83.3–91.7
C	>45–50	>50–65	>55–70	>75.0–83.3
D	>40–45	>65–80	>70–85	>66.7–75.0
E	≤40	>80	>85	≤66.7

F: Proposed Roundabout Layouts

INT 01: RAB at Josselyn Canyon Rd

INT 02: RAB at Olmsted Rd

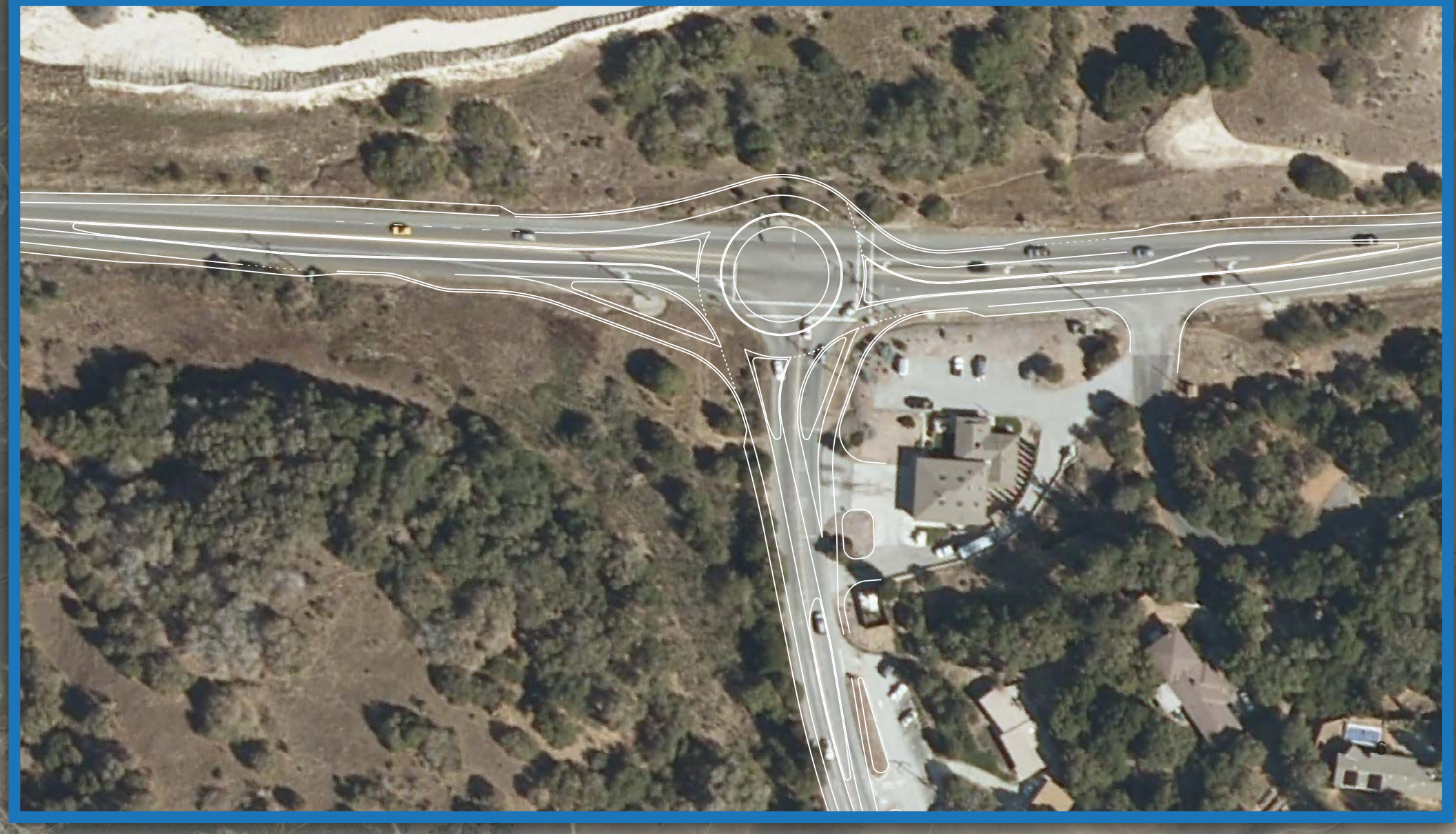
INT 04: RAB at SR 218 - Canyon del Rey Blvd



INT 05: RAB at York Rd

INT 06: RAB at Pasadera Dr

INT 07: RAB at Laureles Grade Rd



INT 08: RAB at Corral De Tierra Rd

INT 09: RAB at San Benancio Rd

INT 10: RAB at Torero Dr

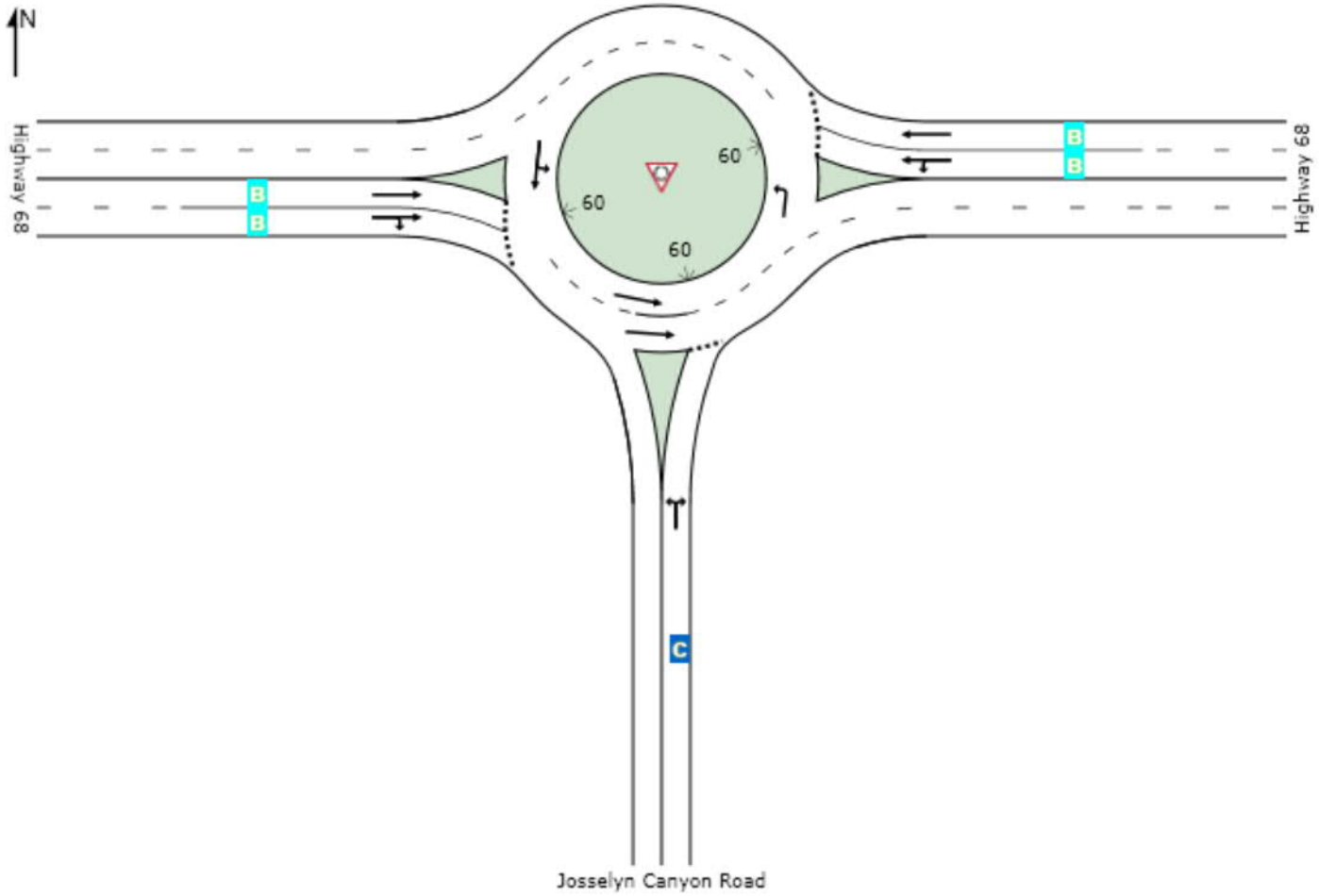
LEVEL OF SERVICE

Site: JCR-68

11. Josselyn Canyon Road - Highway 68
Existing Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	West	Intersection
LOS	C	B	B	B



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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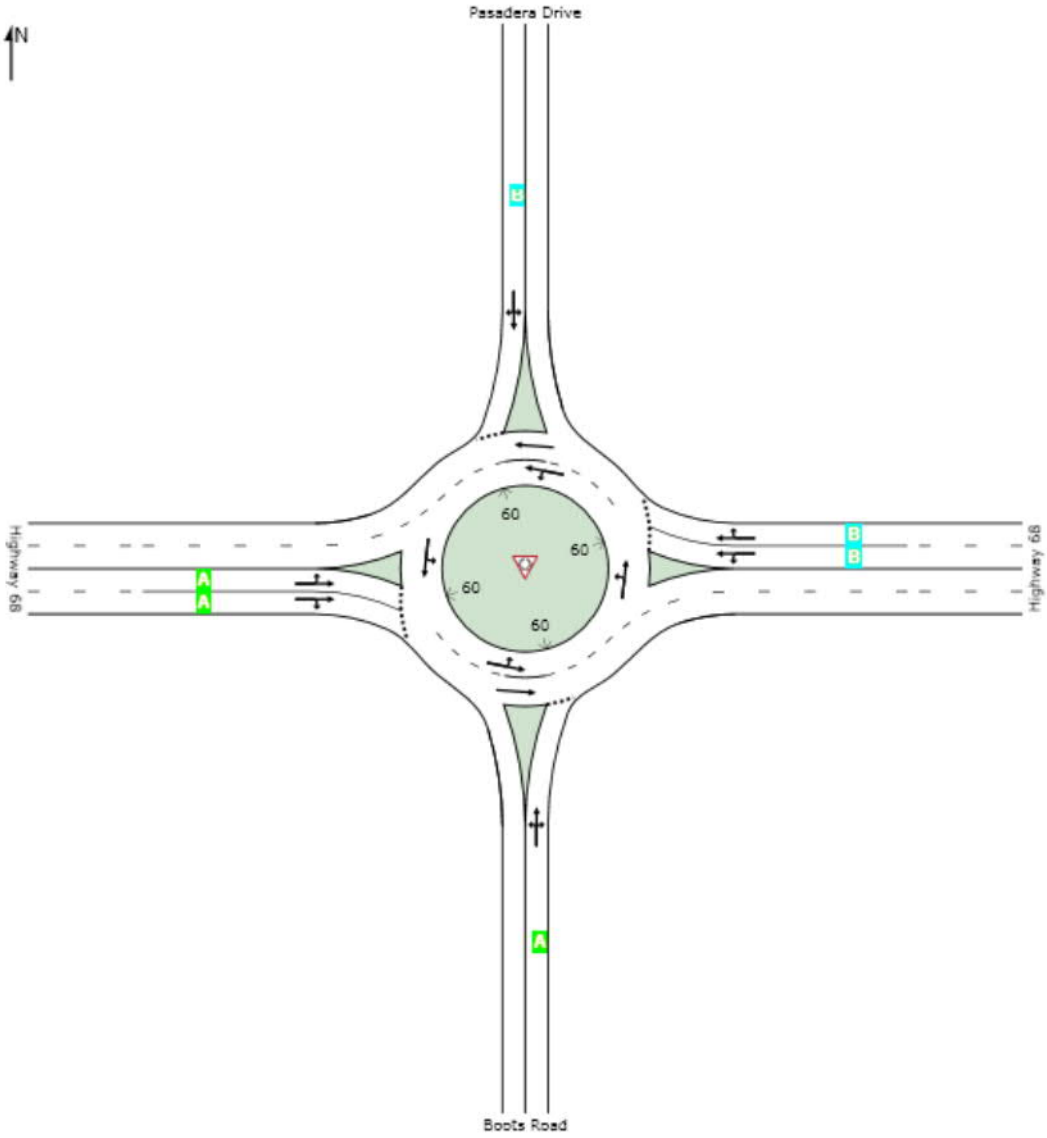
LEVEL OF SERVICE

Site: Pasadera-68

15. Pasadera Drive - Highway 68
Existing Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	North	West	Intersection
LOS	A	B	B	A	B



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
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Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

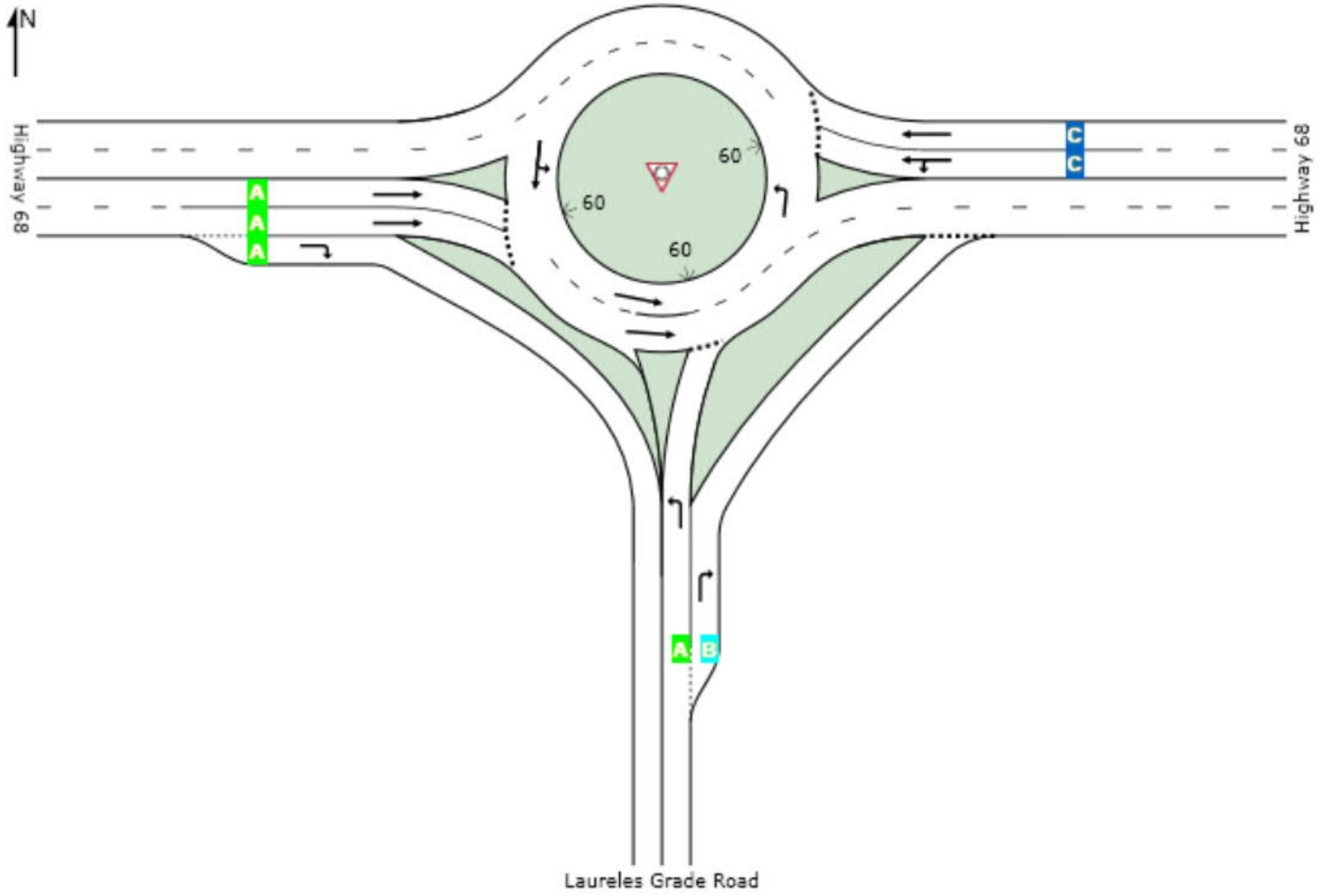
LEVEL OF SERVICE

Site: Laureles-68

16. Laureles Grade Road - Highway 68
Existing Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	West	Intersection
LOS	B	C	A	B



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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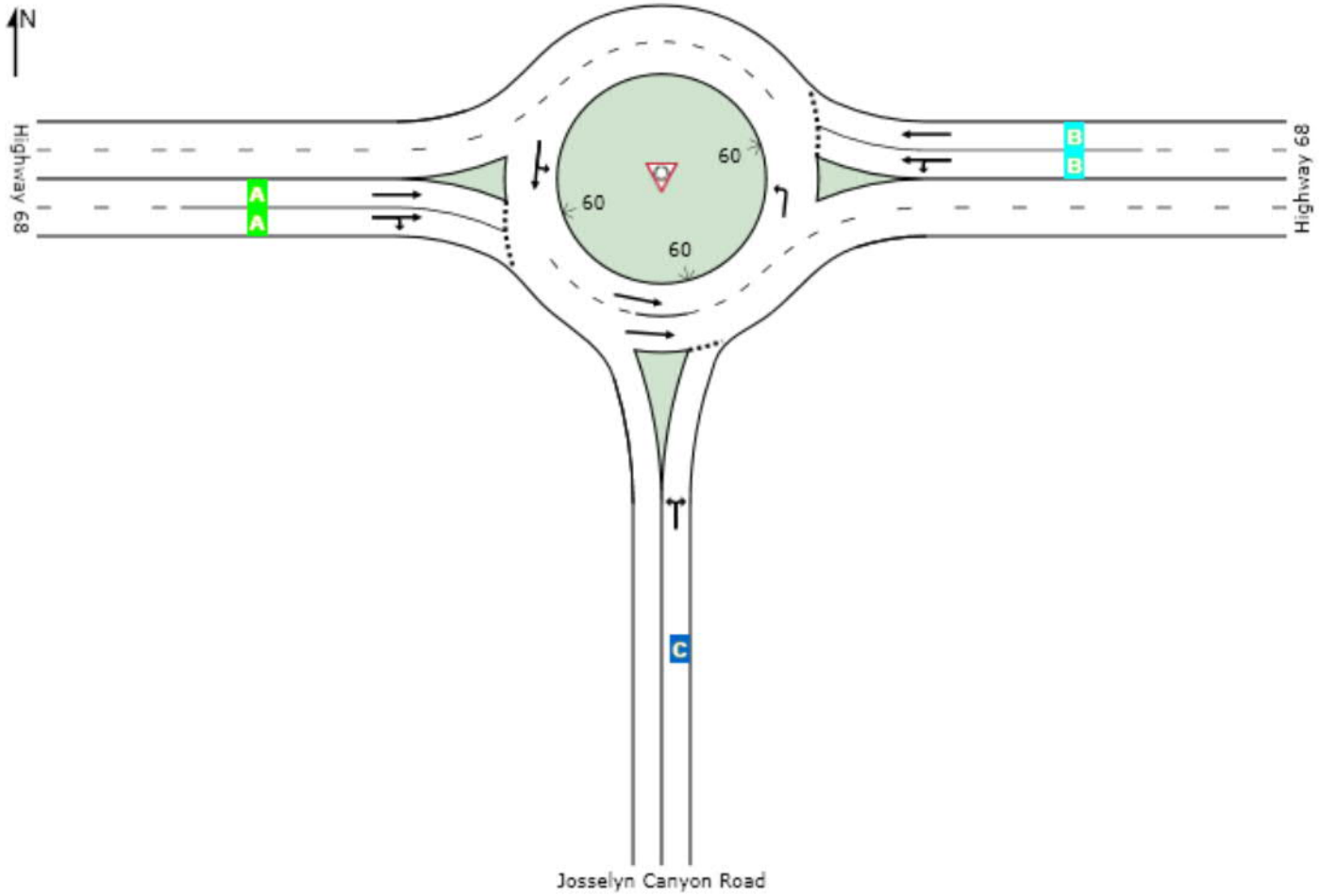
LEVEL OF SERVICE

Site: JCR-68

11. Josselyn Canyon Road - Highway 68
Existing Plus Proposed Project Short-Term Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	West	Intersection
LOS	C	B	A	B



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
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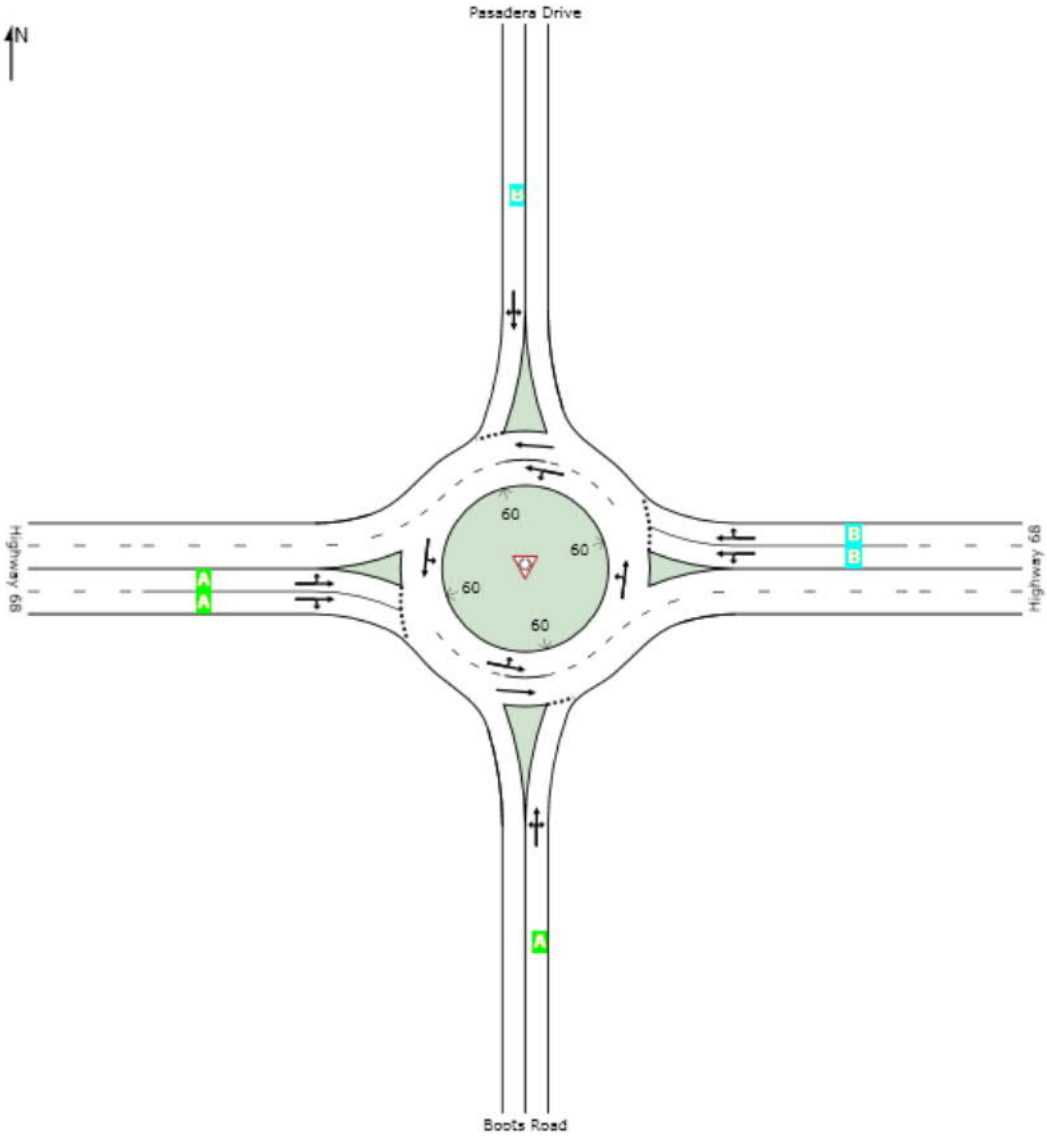
LEVEL OF SERVICE

Site: Pasadera-68

15. Pasadera Drive - Highway 68
Existing Plus Proposed Project Short-Term Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	North	West	Intersection
LOS	A	B	B	A	B



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
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Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

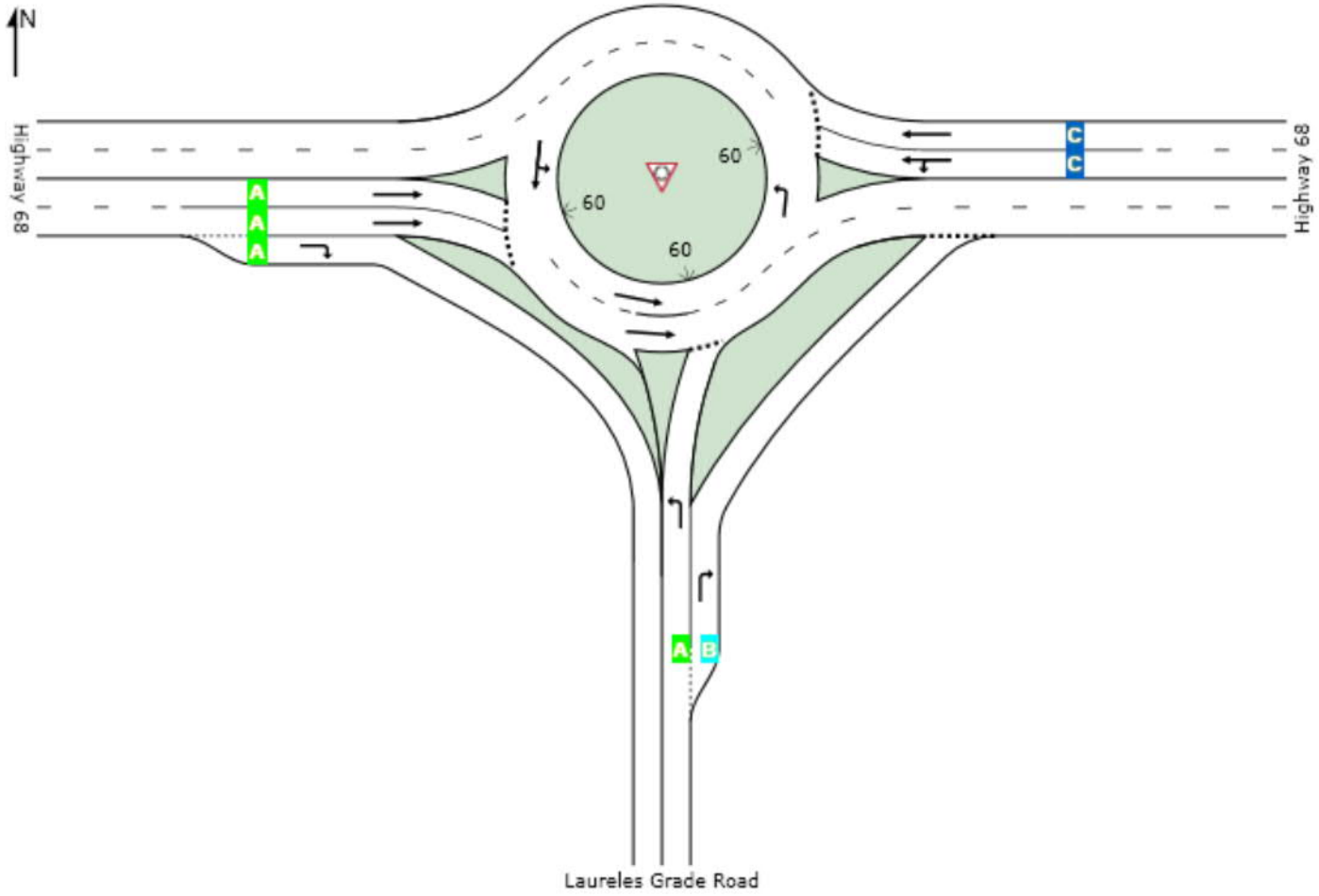
LEVEL OF SERVICE

Site: Laureles-68

16. Laureles Grade Road - Highway 68
Existing Plus Proposed Project Short-Term Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	West	Intersection
LOS	B	C	A	B



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
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Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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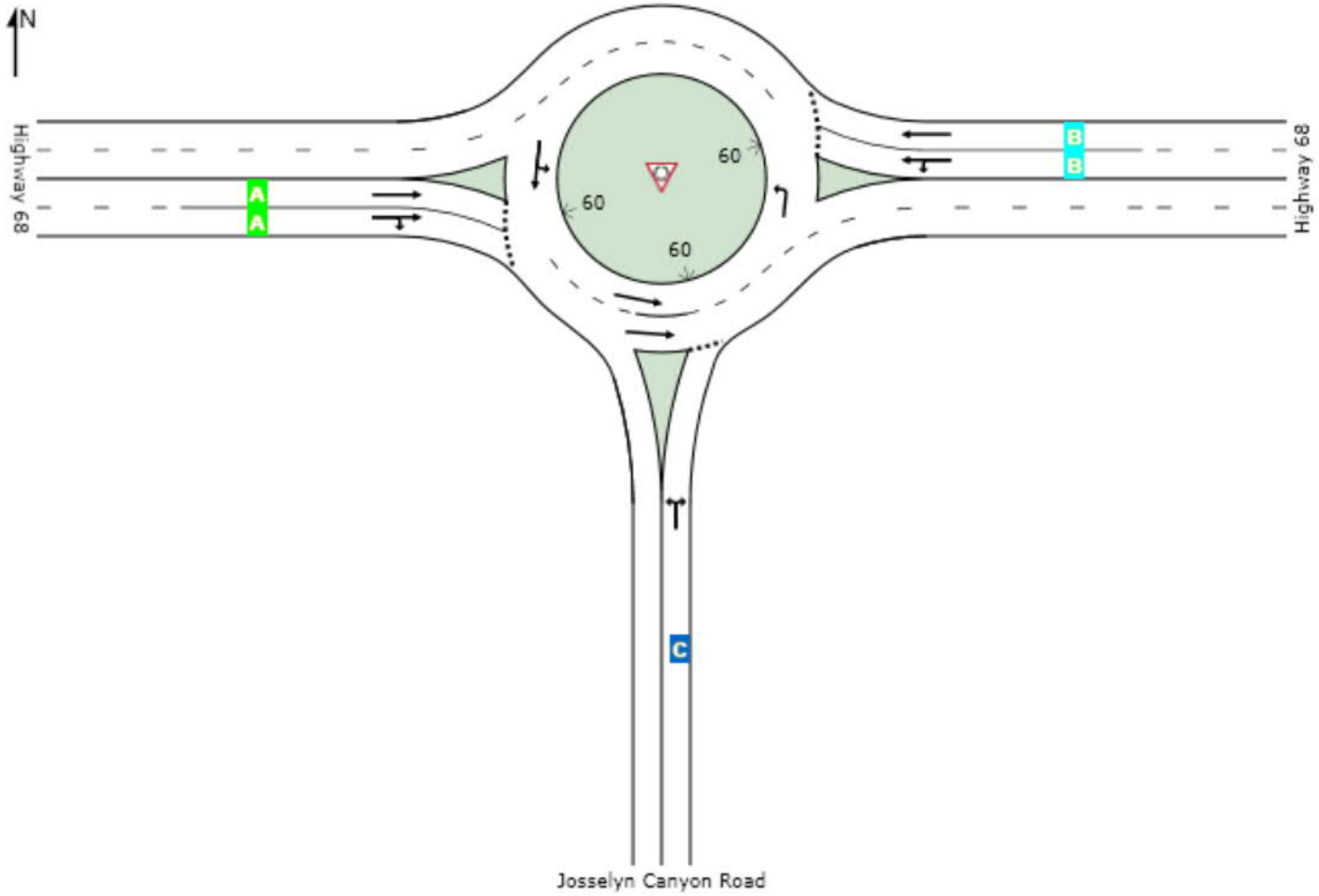
LEVEL OF SERVICE

Site: JCR-68

11. Josselyn Canyon Road - Highway 68
Existing Plus Alt 1 Project Short-Term Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	West	Intersection
LOS	C	B	A	B



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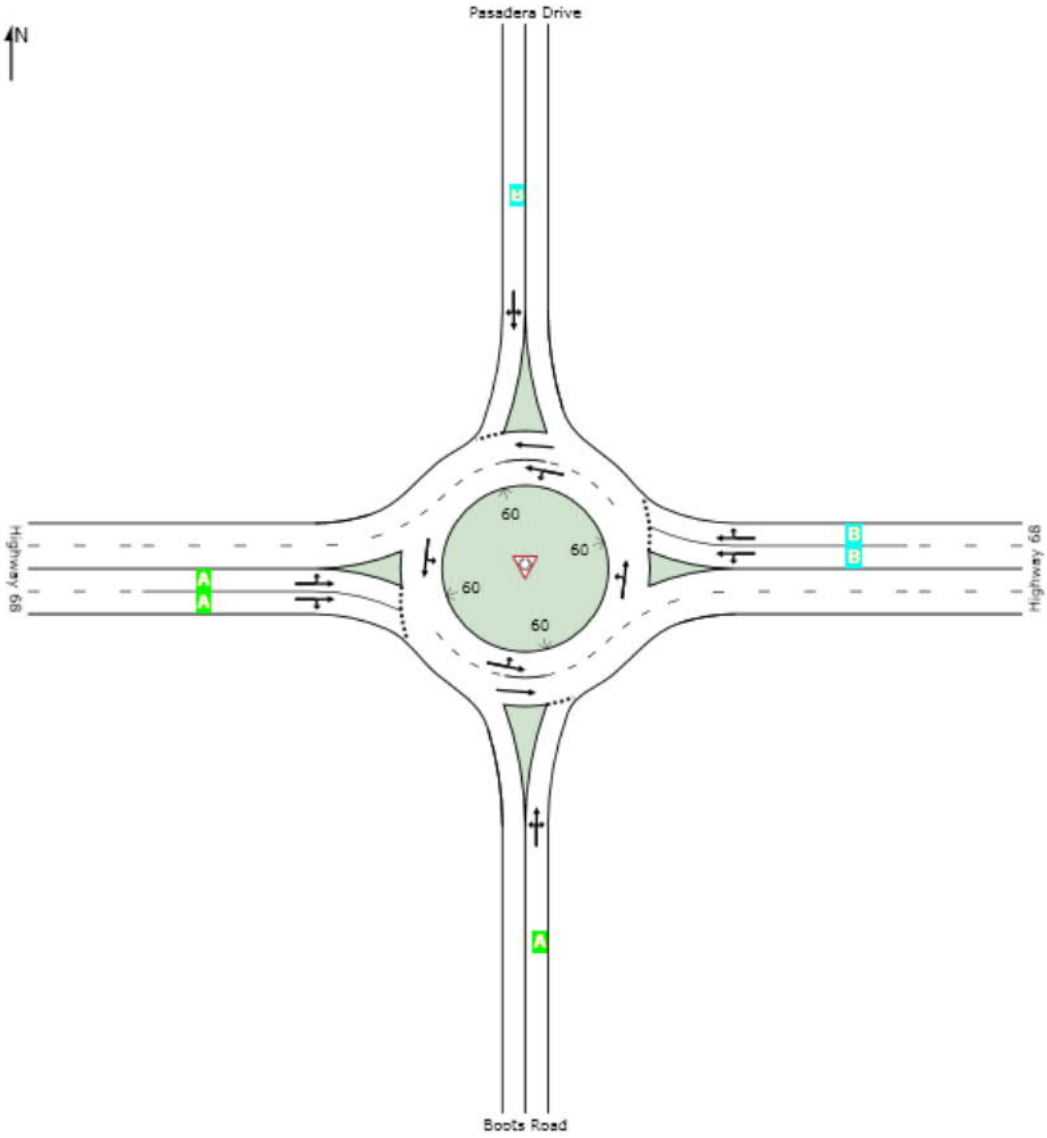
LEVEL OF SERVICE

Site: Pasadera-68

15. Pasadera Drive - Highway 68
Existing Plus Alt 1 Project Short-Term Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	North	West	Intersection
LOS	A	B	B	A	B



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
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Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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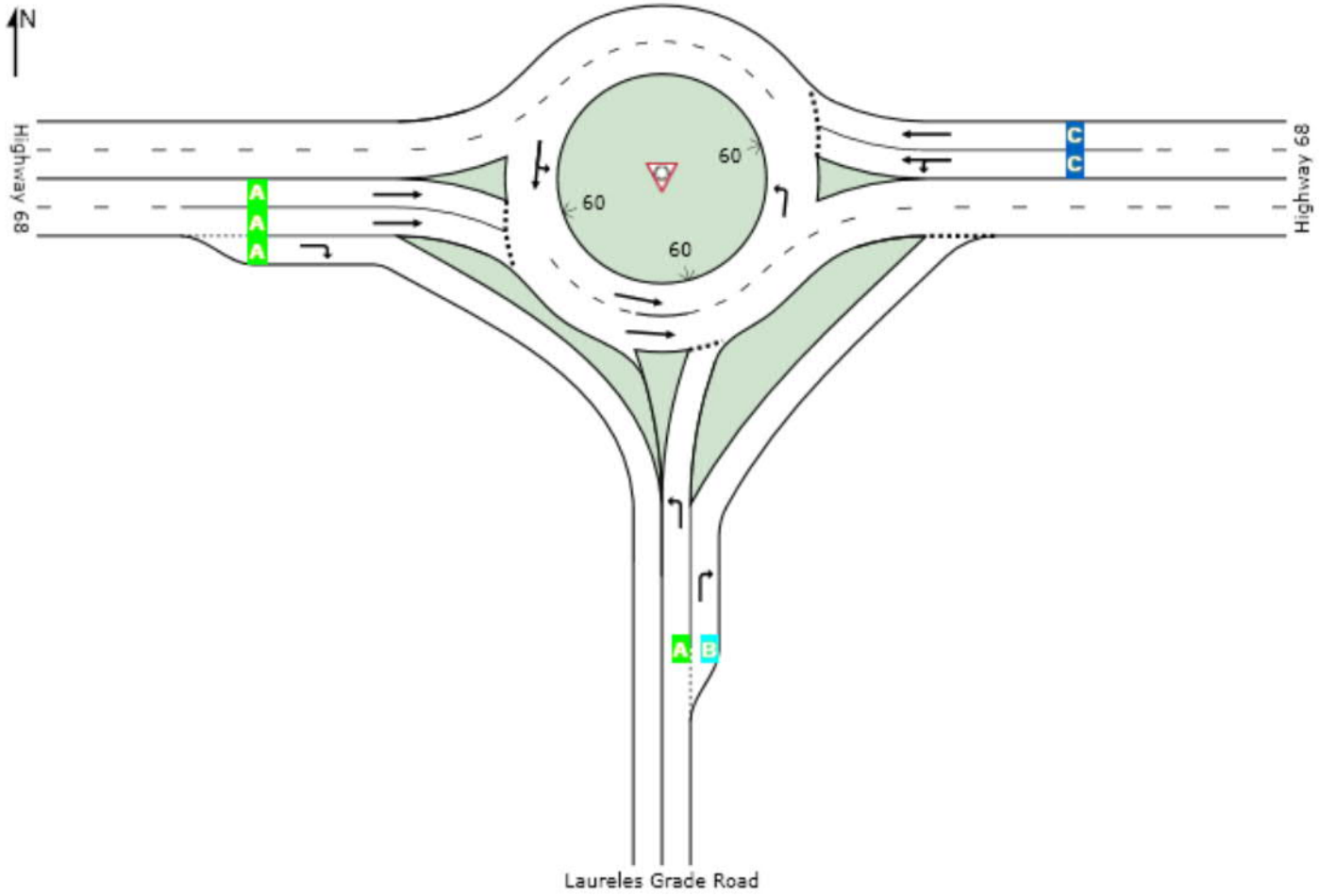
LEVEL OF SERVICE

Site: Laureles-68

16. Laureles Grade Road - Highway 68
Existing Plus Alt1 Project Short-Term Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	West	Intersection
LOS	B	C	A	B



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
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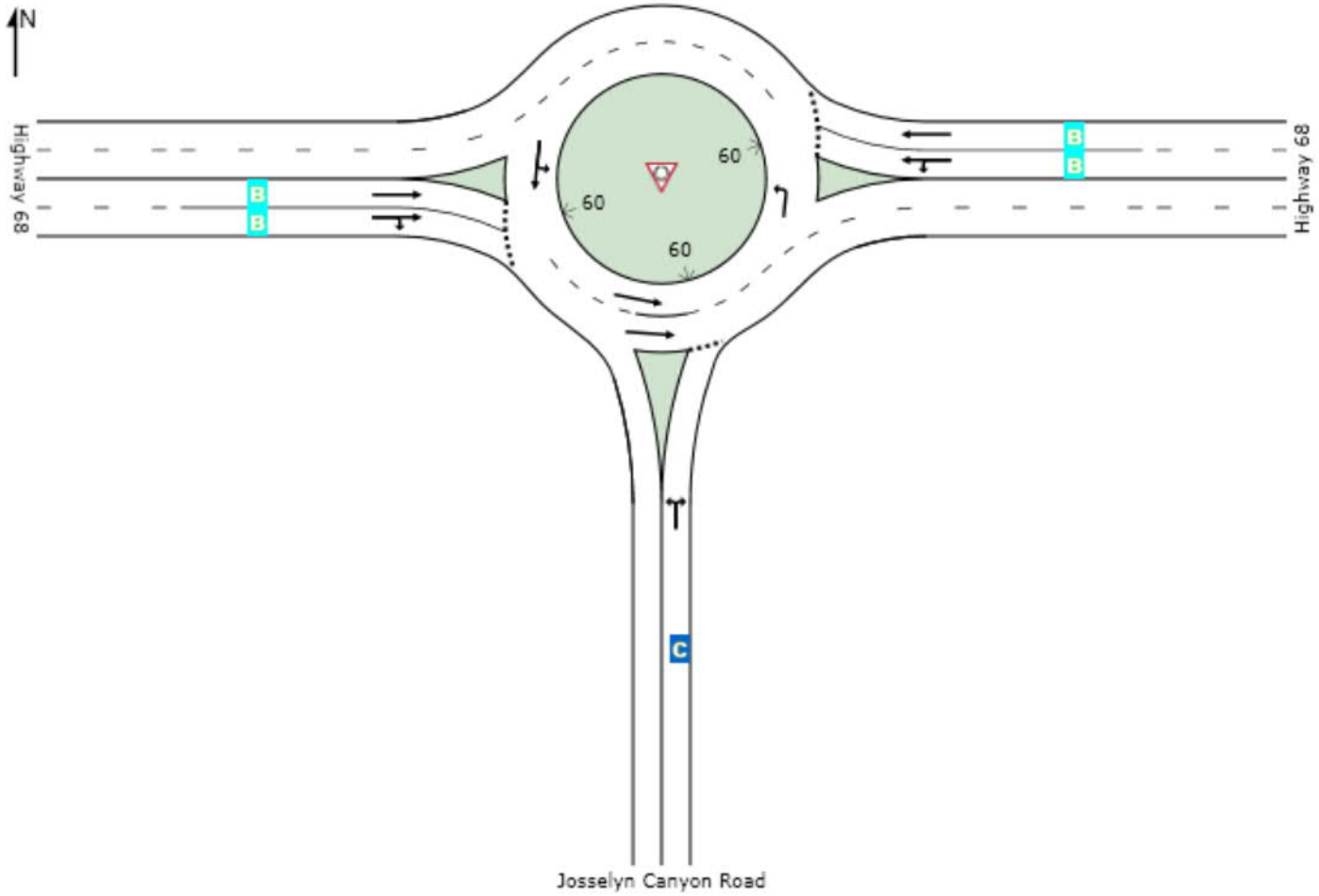
LEVEL OF SERVICE

Site: JCR-68

11. Josselyn Canyon Road - Highway 68
Background Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	West	Intersection
LOS	C	B	B	B



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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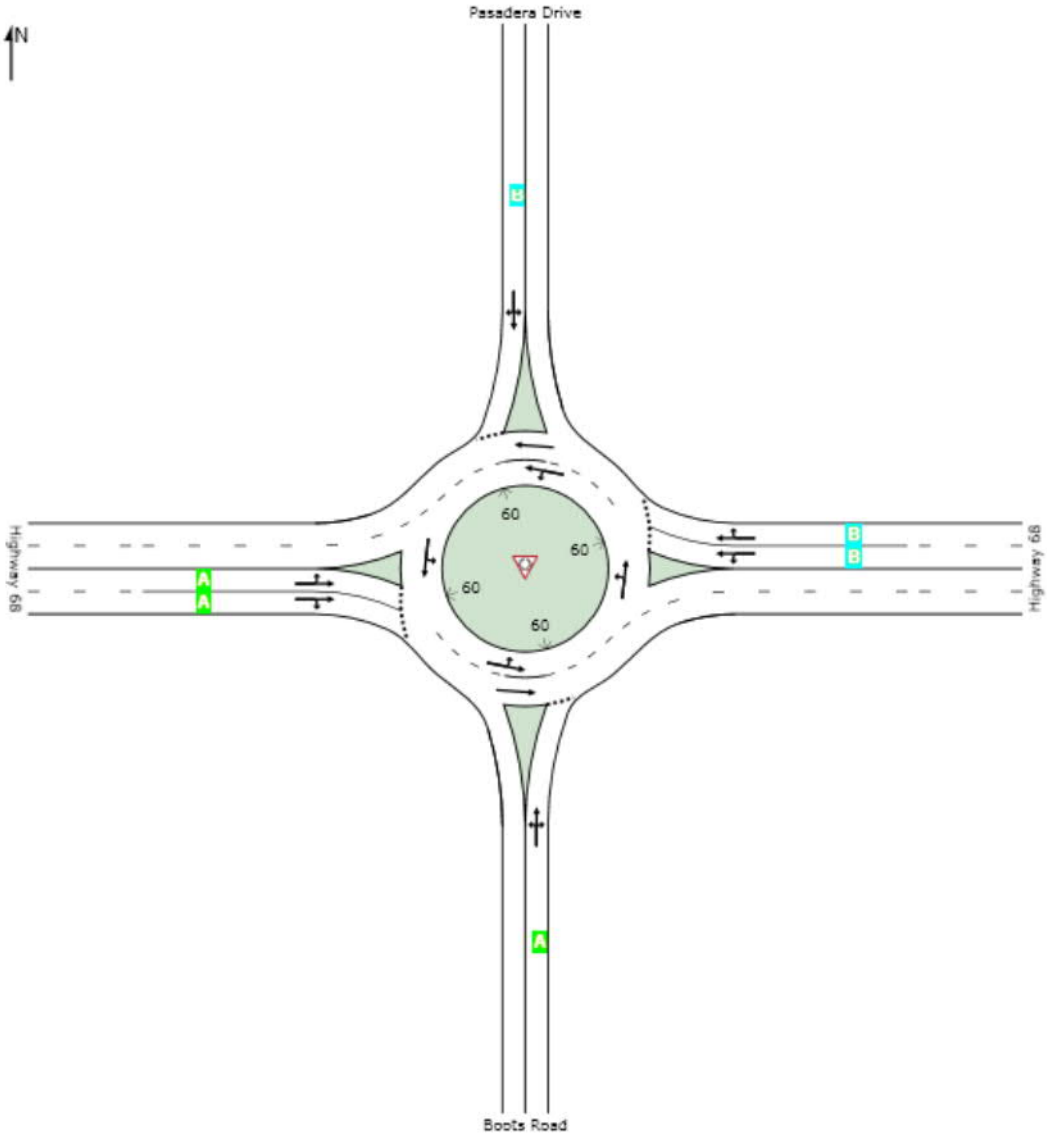
LEVEL OF SERVICE

Site: Pasadera-68

15. Pasadera Drive - Highway 68
Background Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	North	West	Intersection
LOS	A	B	B	A	B



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

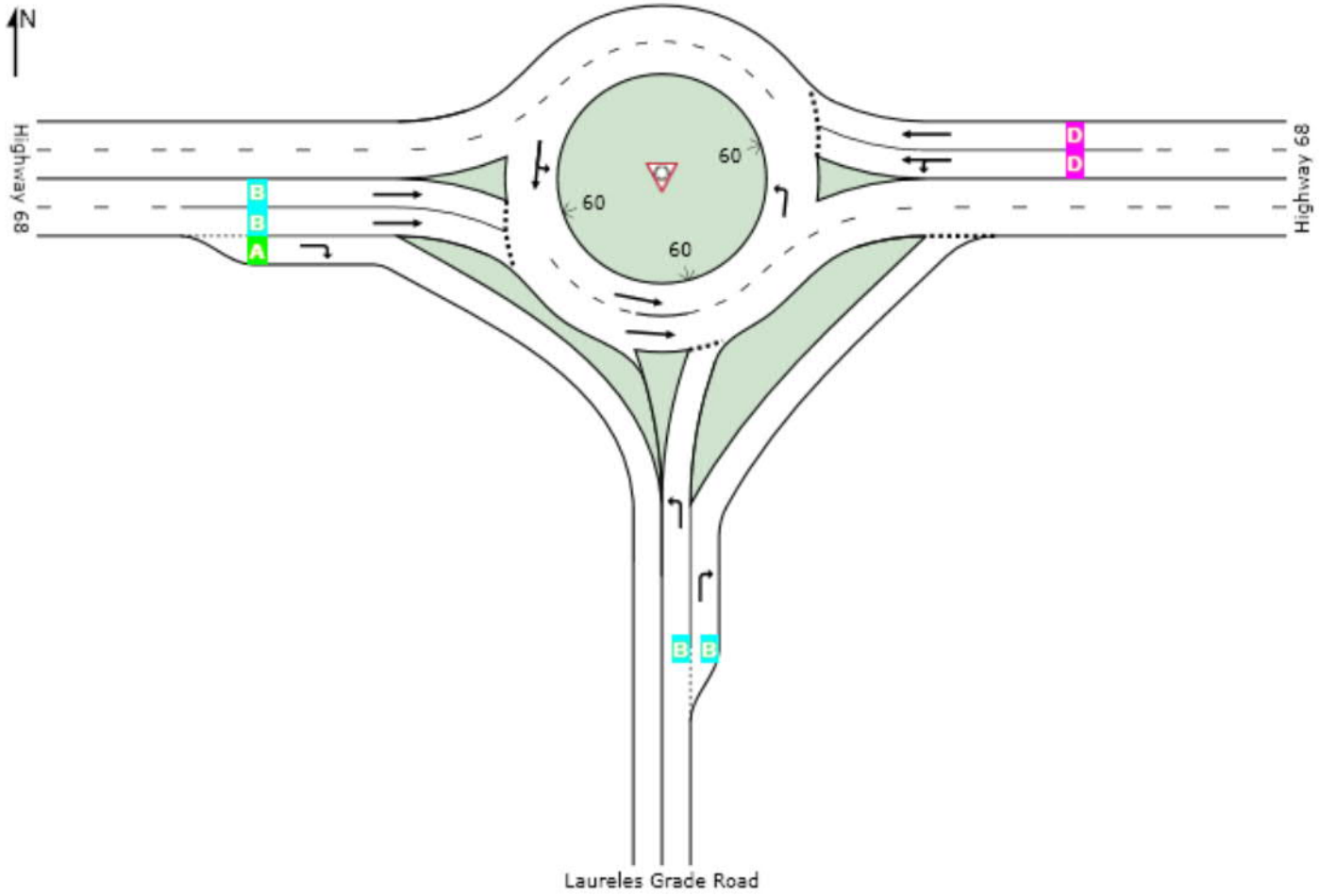
LEVEL OF SERVICE

Site: Laureles-68

16. Laureles Grade Road - Highway 68
Background Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	West	Intersection
LOS	B	D	A	C



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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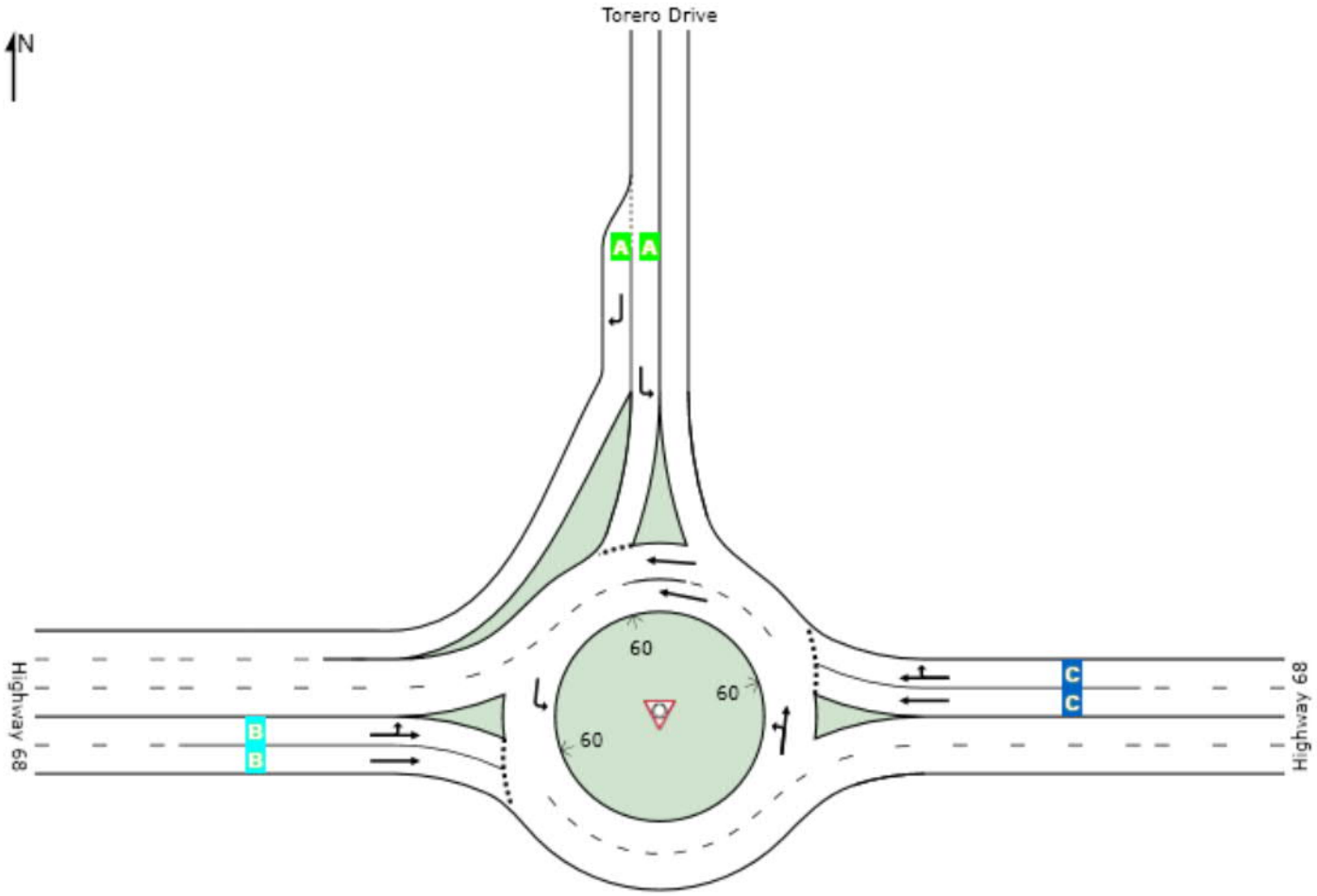
LEVEL OF SERVICE

Site: Torero-68

19. Torero Drive - Highway 68
Background Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	East	North	West	Intersection
LOS	C	A	B	B



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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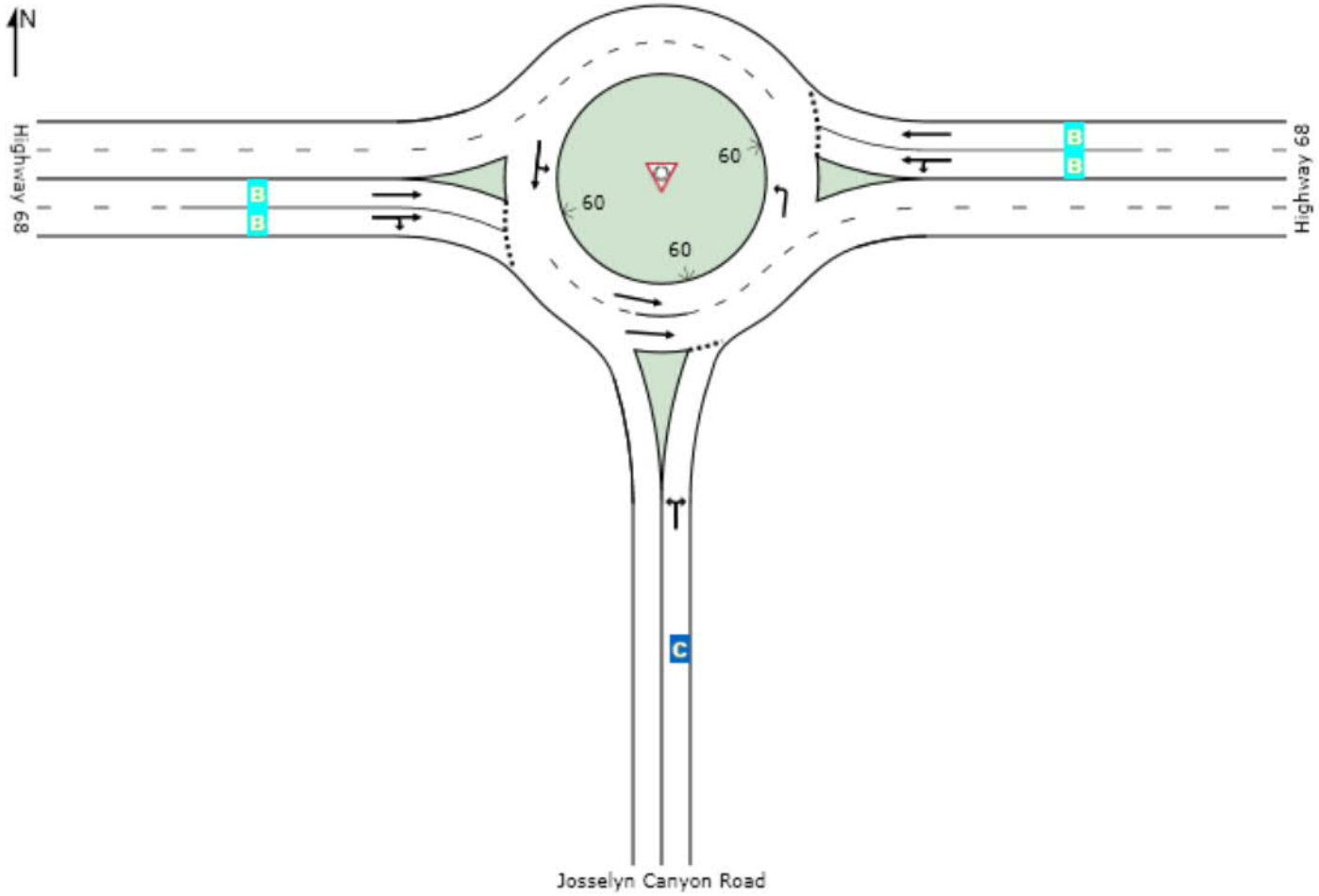
LEVEL OF SERVICE

Site: JCR-68

11. Josselyn Canyon Road - Highway 68
Background Plus Proposed Project Short-Term Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	West	Intersection
LOS	C	B	B	B



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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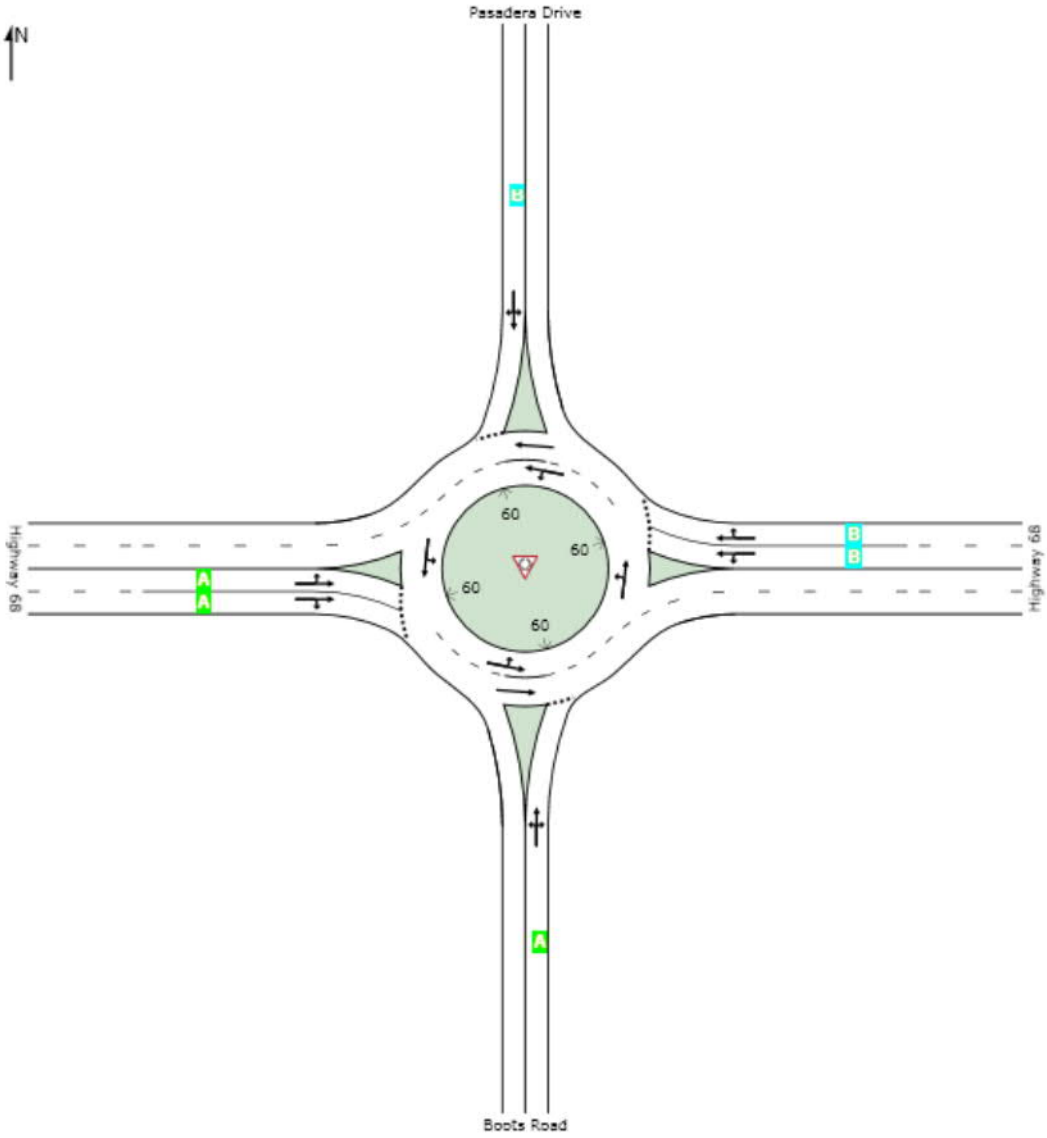
LEVEL OF SERVICE

Site: Pasadera-68

15. Pasadera Drive - Highway 68
Background Plus Proposed Project Short-Term Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	North	West	Intersection
LOS	A	B	B	A	B



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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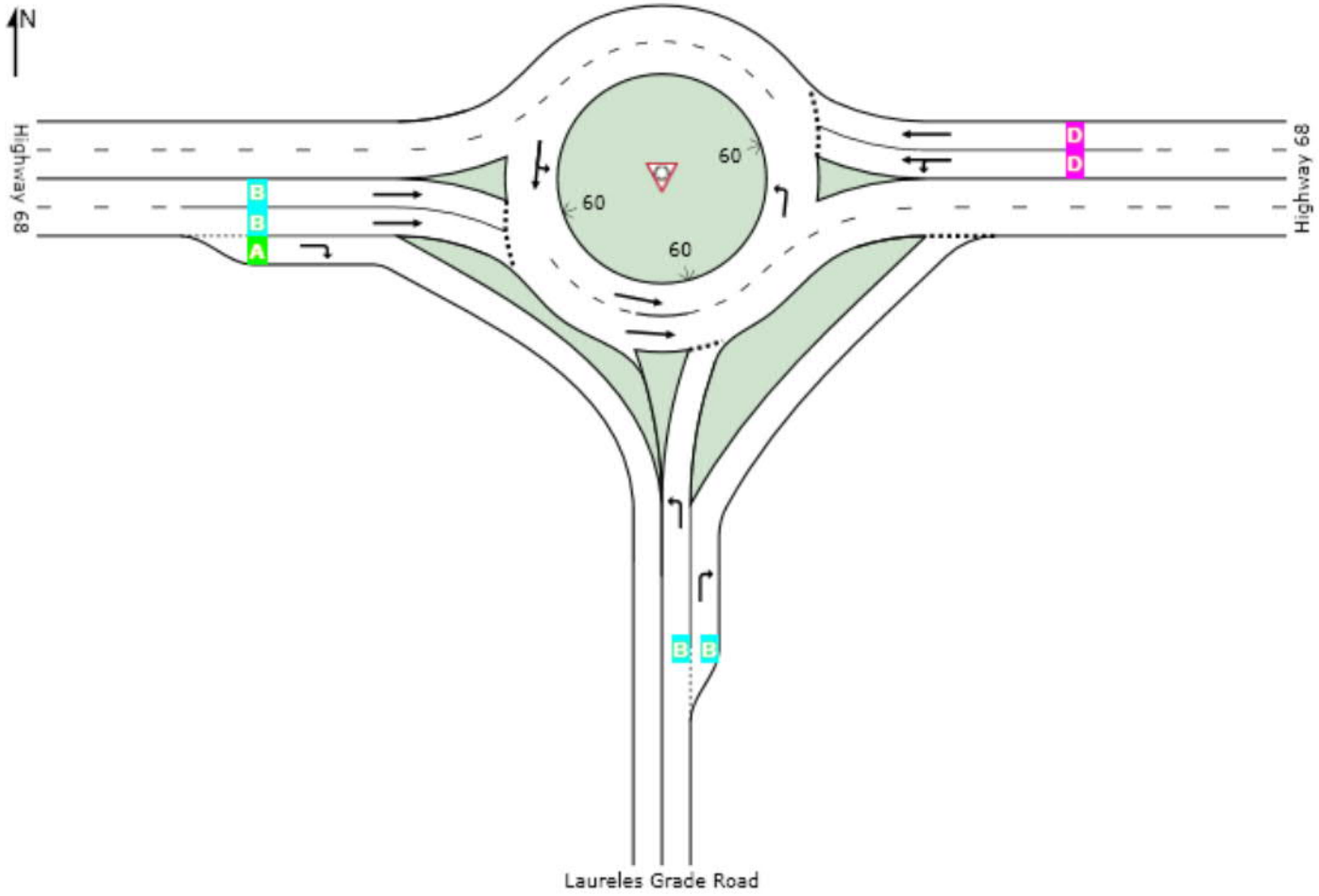
LEVEL OF SERVICE

Site: Laureles-68

16. Laureles Grade Road - Highway 68
Background Plus Proposed Project Short-Term Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	West	Intersection
LOS	B	D	A	C



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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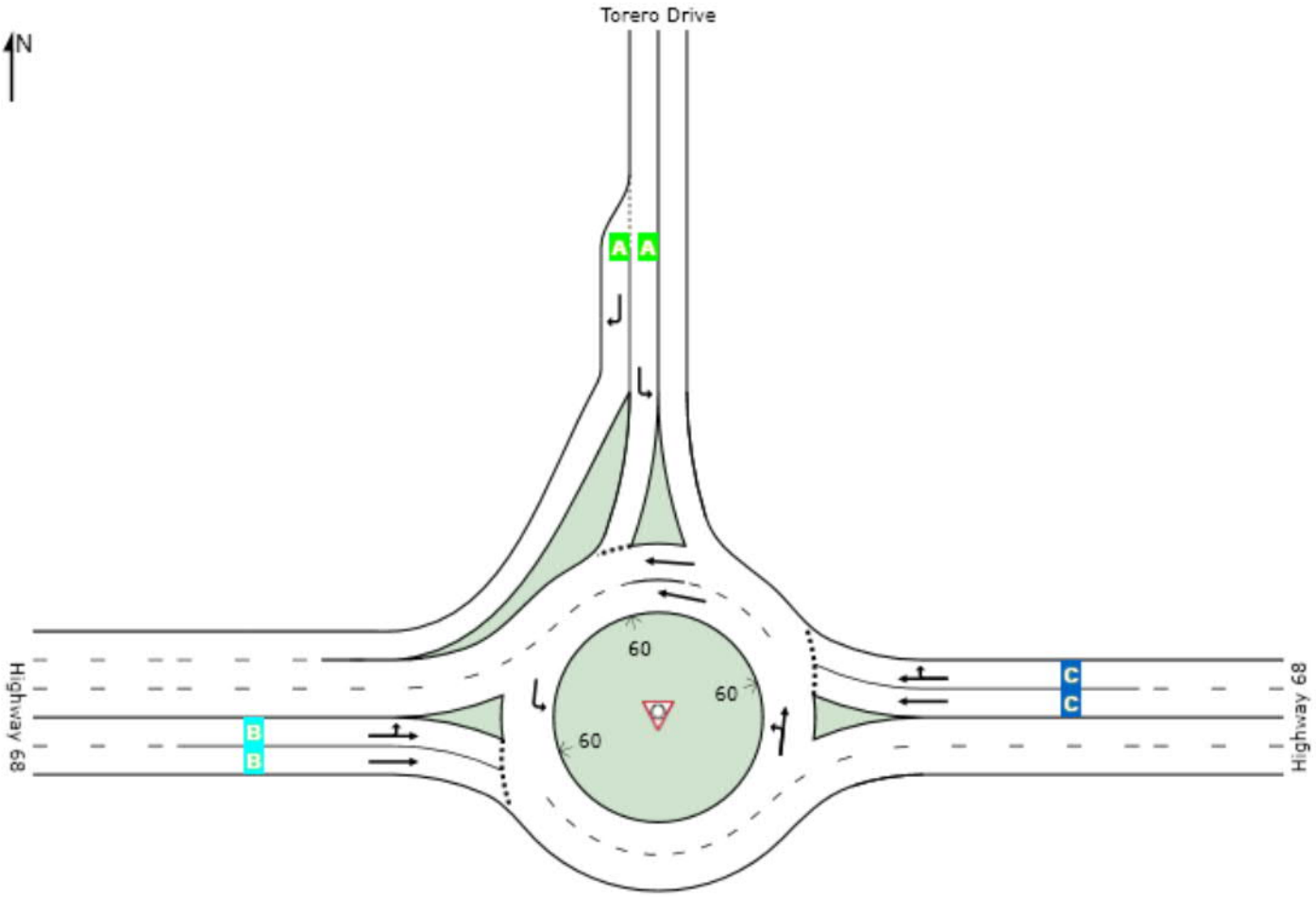
LEVEL OF SERVICE

Site: Torero-68

19. Torero Drive - Highway 68
Background Plus Proposed Project Short-Term Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	East	North	West	Intersection
LOS	C	A	B	B



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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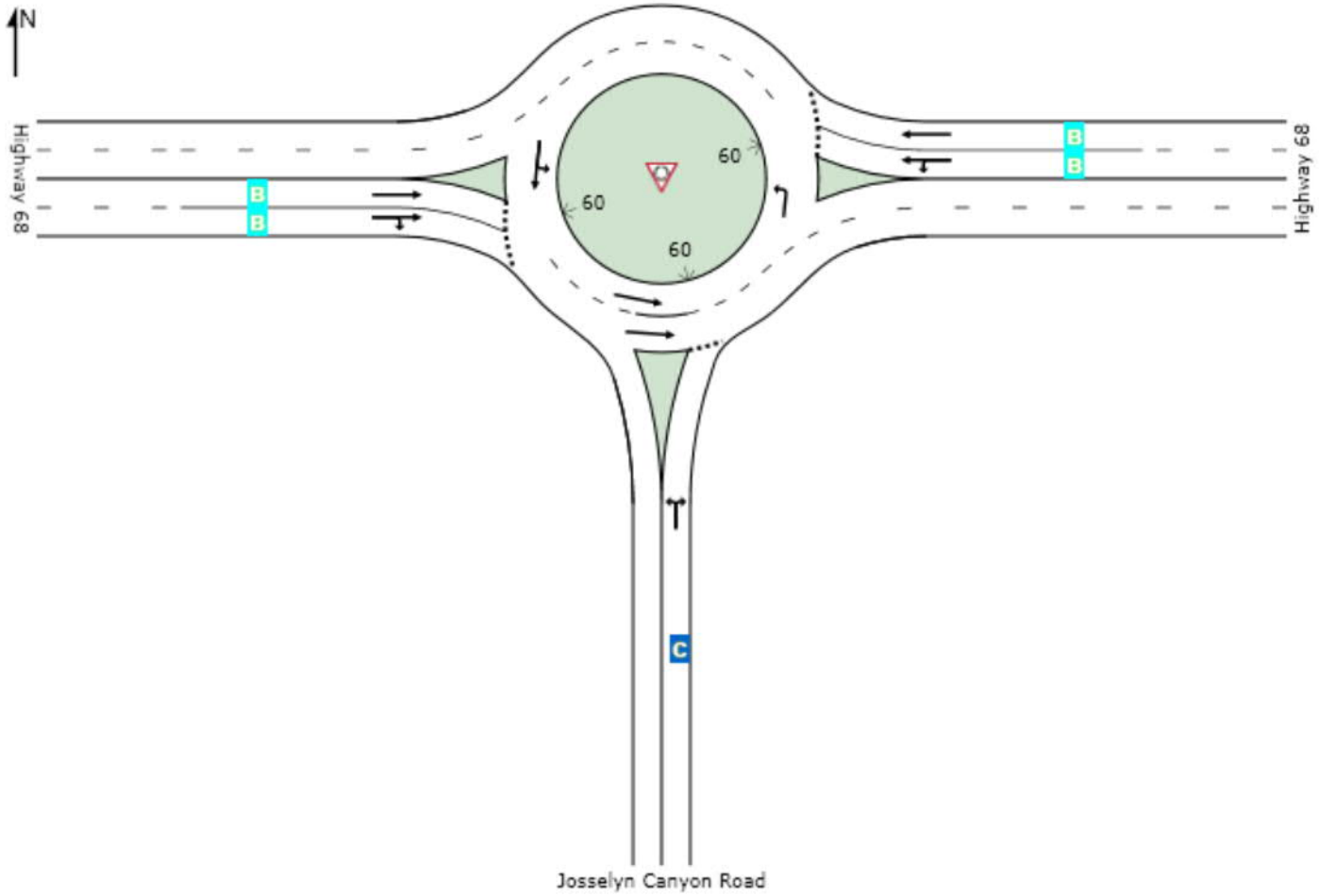
LEVEL OF SERVICE

Site: JCR-68

11. Josselyn Canyon Road - Highway 68
Background Plus Alt 1 Project Short-Term Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	West	Intersection
LOS	C	B	B	B



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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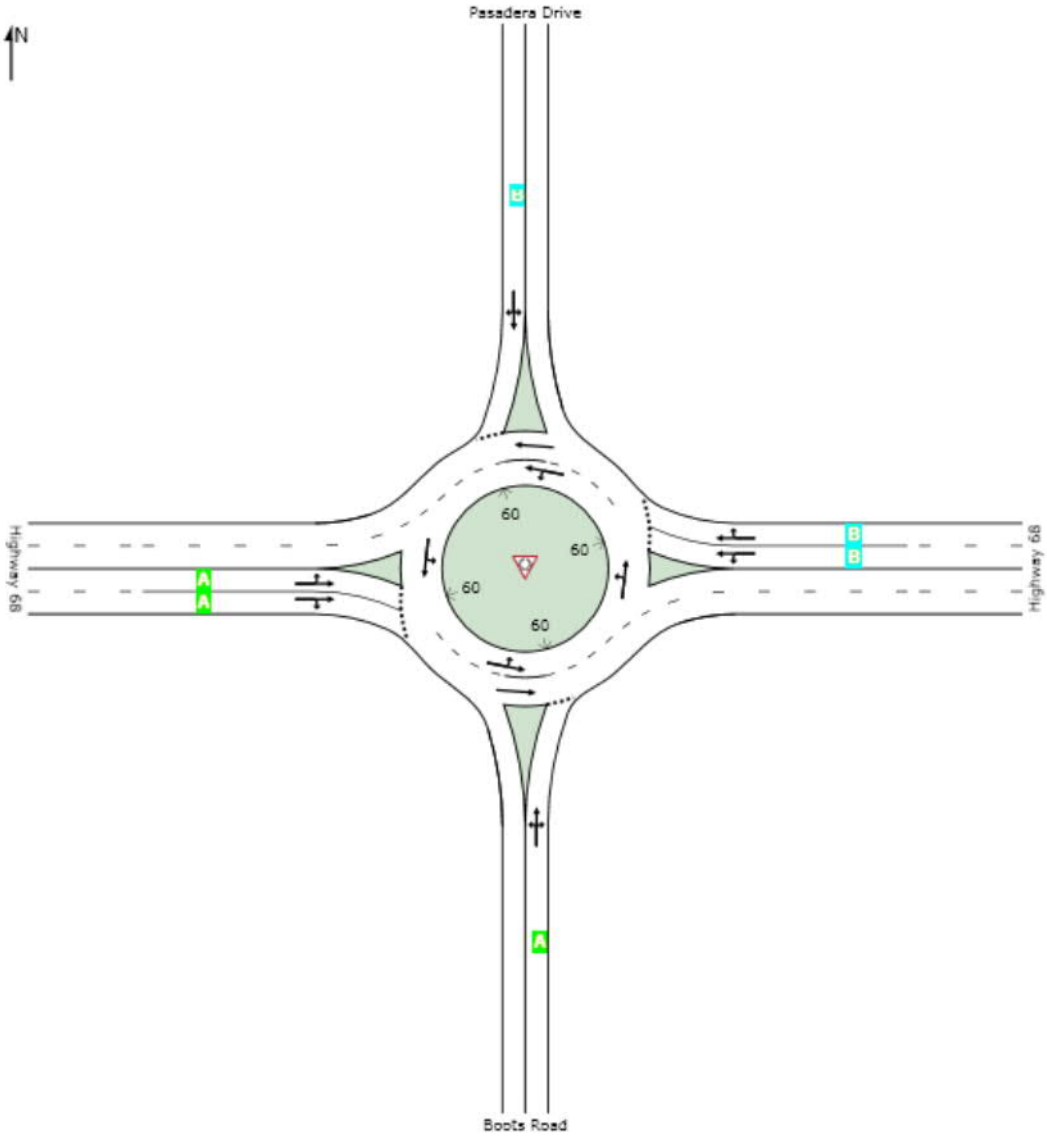
LEVEL OF SERVICE

Site: Pasadera-68

15. Pasadera Drive - Highway 68
Background Plus Alt 1 Project Short-Term Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	North	West	Intersection
LOS	A	B	B	A	B



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

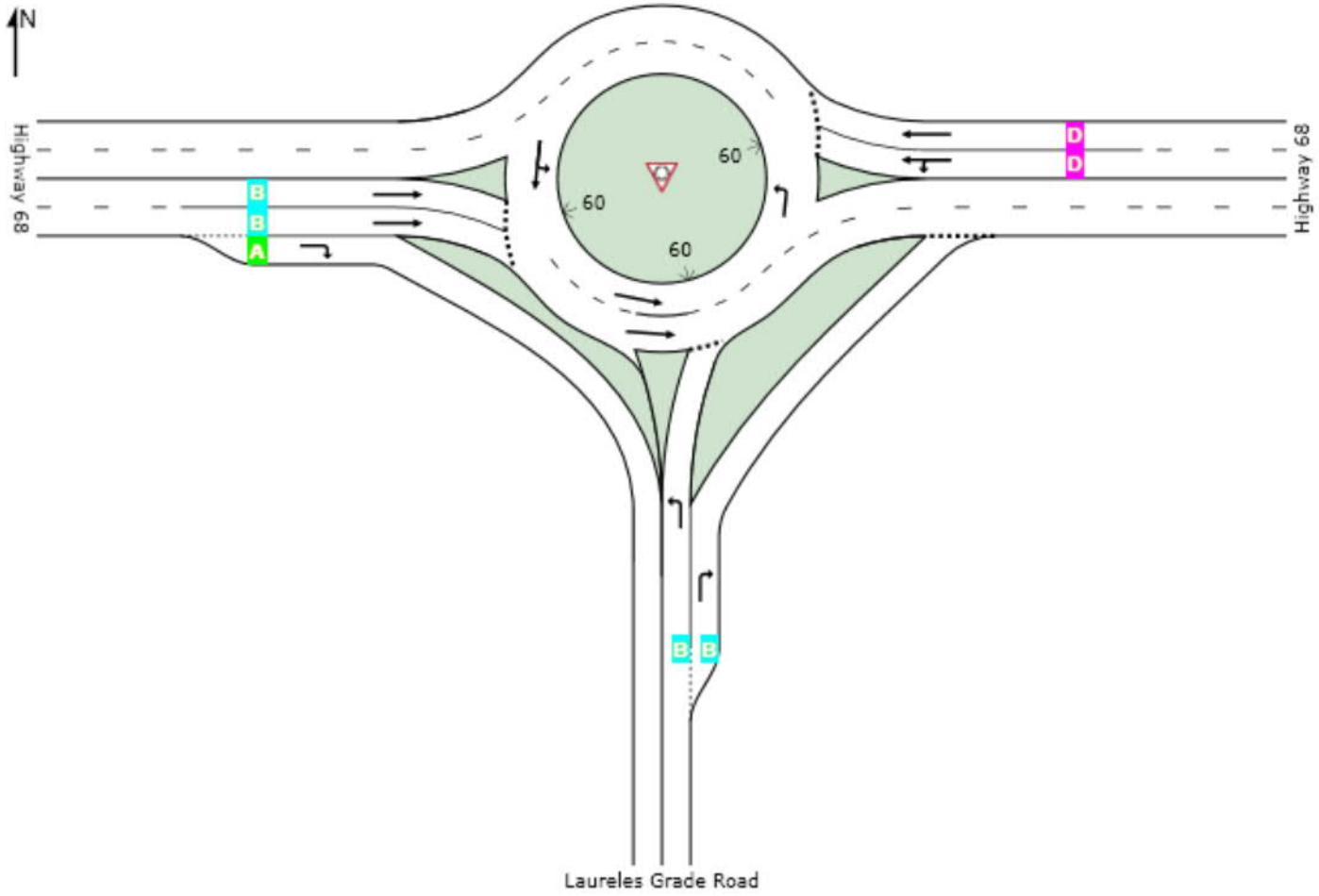
LEVEL OF SERVICE

Site: Laureles-68

16. Laureles Grade Road - Highway 68
Background Plus Alt 1 Project Short-Term Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	West	Intersection
LOS	B	D	A	C



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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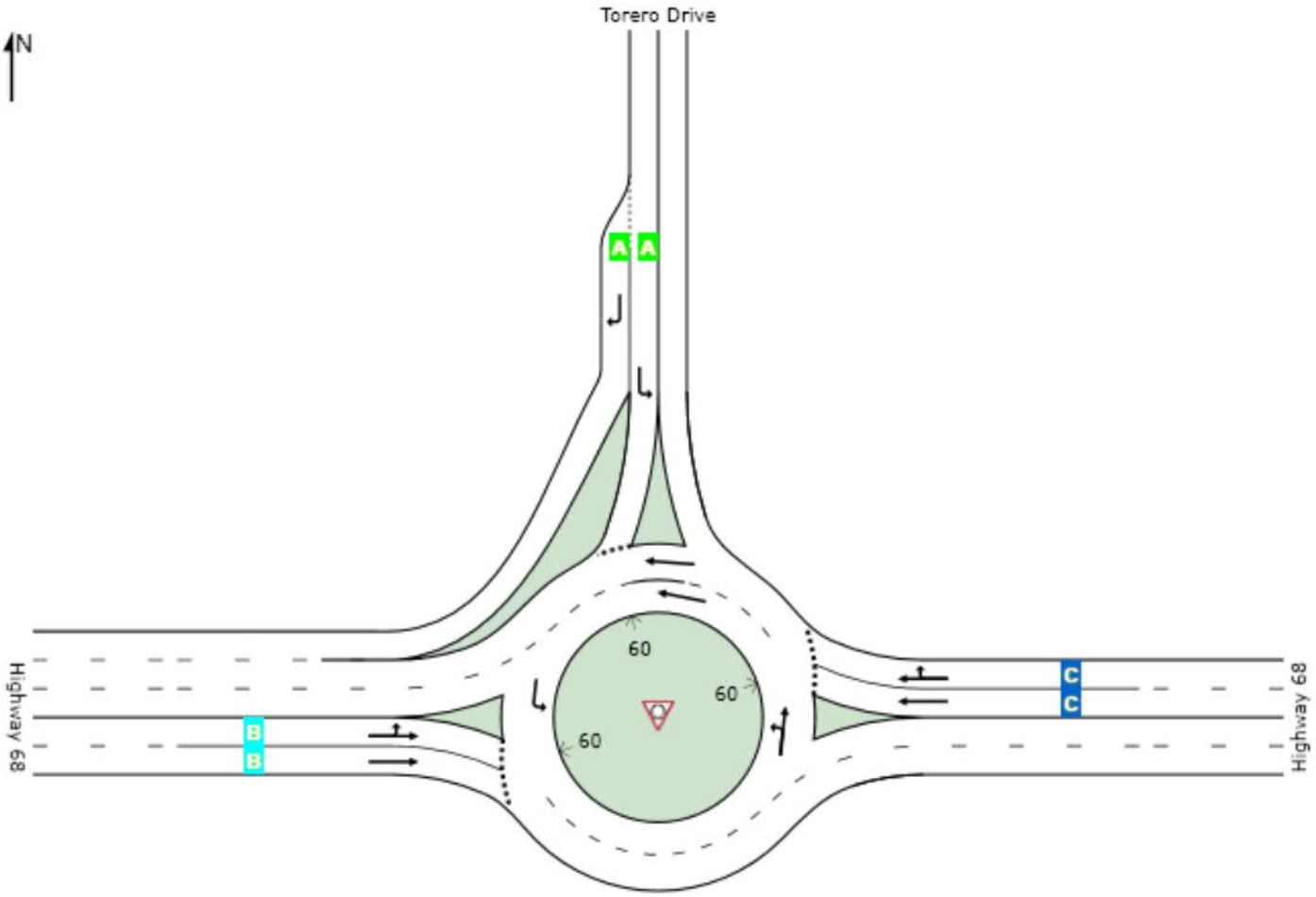
LEVEL OF SERVICE

Site: Torero-68

19. Torero Drive - Highway 68
Background Plus Alt 1 Project Short-Term Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	East	North	West	Intersection
LOS	C	A	B	B



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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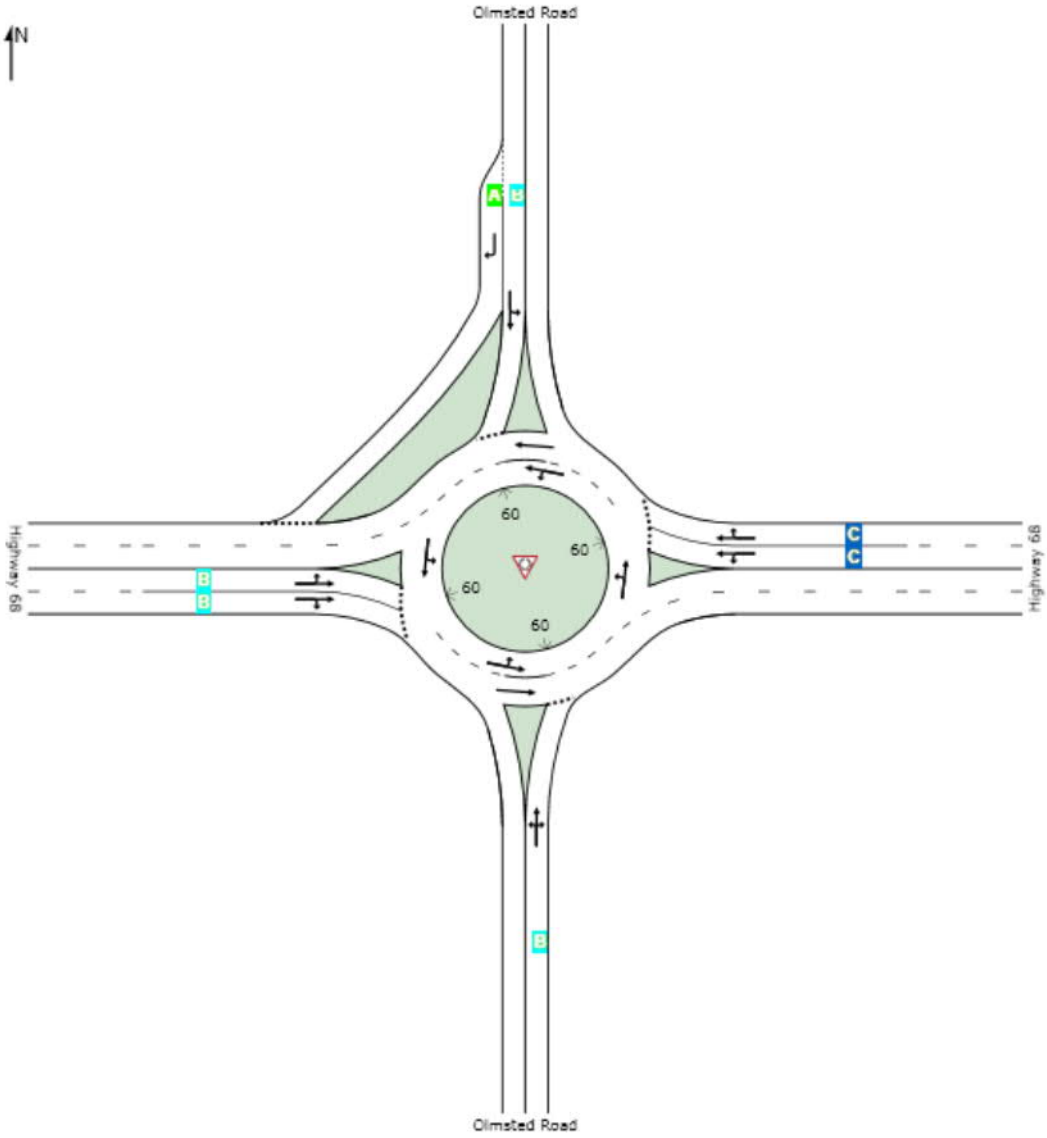
LEVEL OF SERVICE

Site: Olmsted-68

1. Olmsted Road - Highway 68
Cumulative Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	North	West	Intersection
LOS	B	C	B	B	C



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

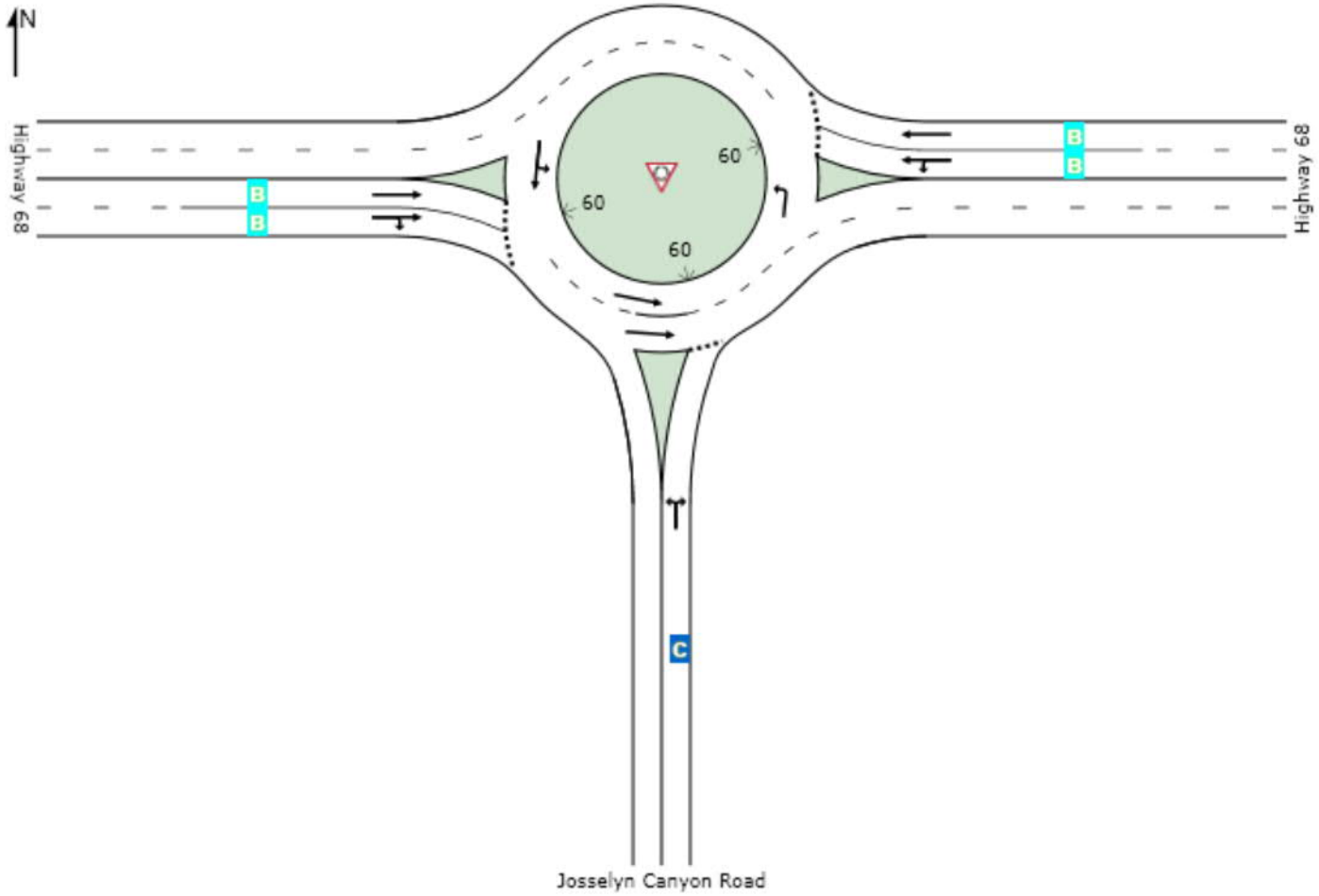
LEVEL OF SERVICE

Site: JCR-68

11. Josselyn Canyon Road - Highway 68
Cumulative Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	West	Intersection
LOS	C	B	B	B



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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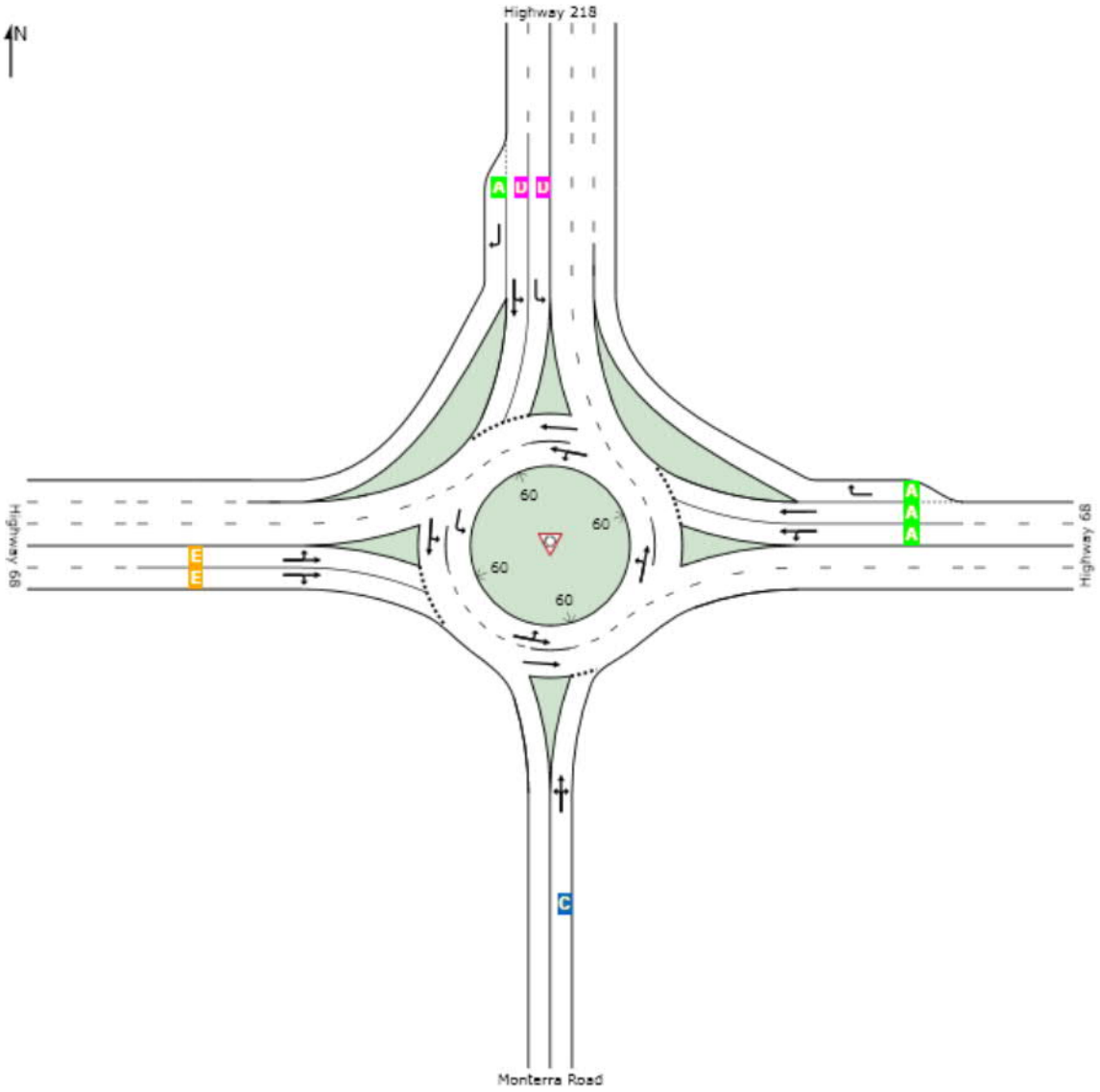
LEVEL OF SERVICE

Site: 218-68

12. Highway 218 - Highway 68
Cumulative Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	North	West	Intersection
LOS	C	A	C	E	C



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

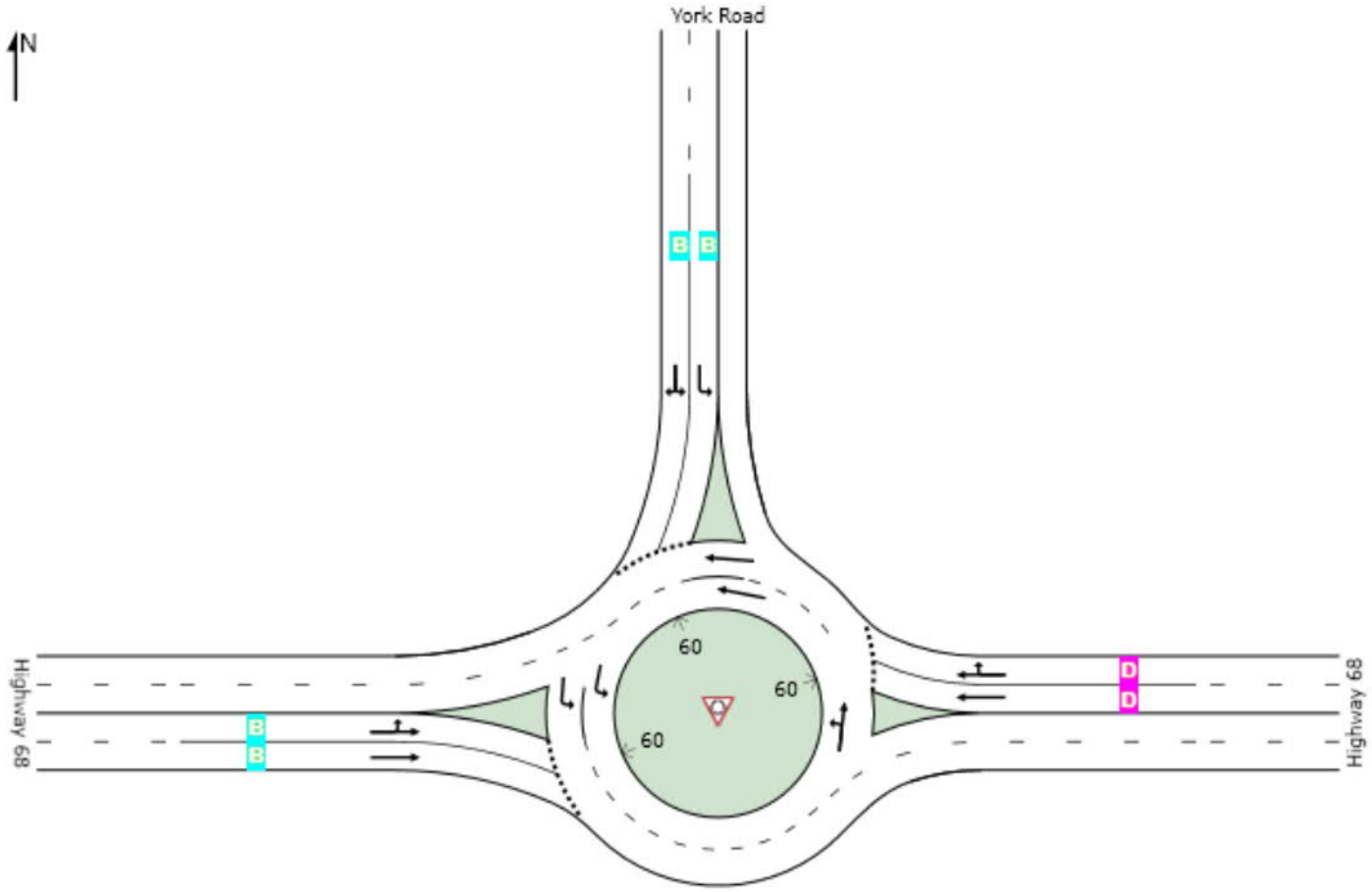
LEVEL OF SERVICE

Site: York-68

14. York Road / Highway 68
Cumulative Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	East	North	West	Intersection
LOS	D	B	B	C



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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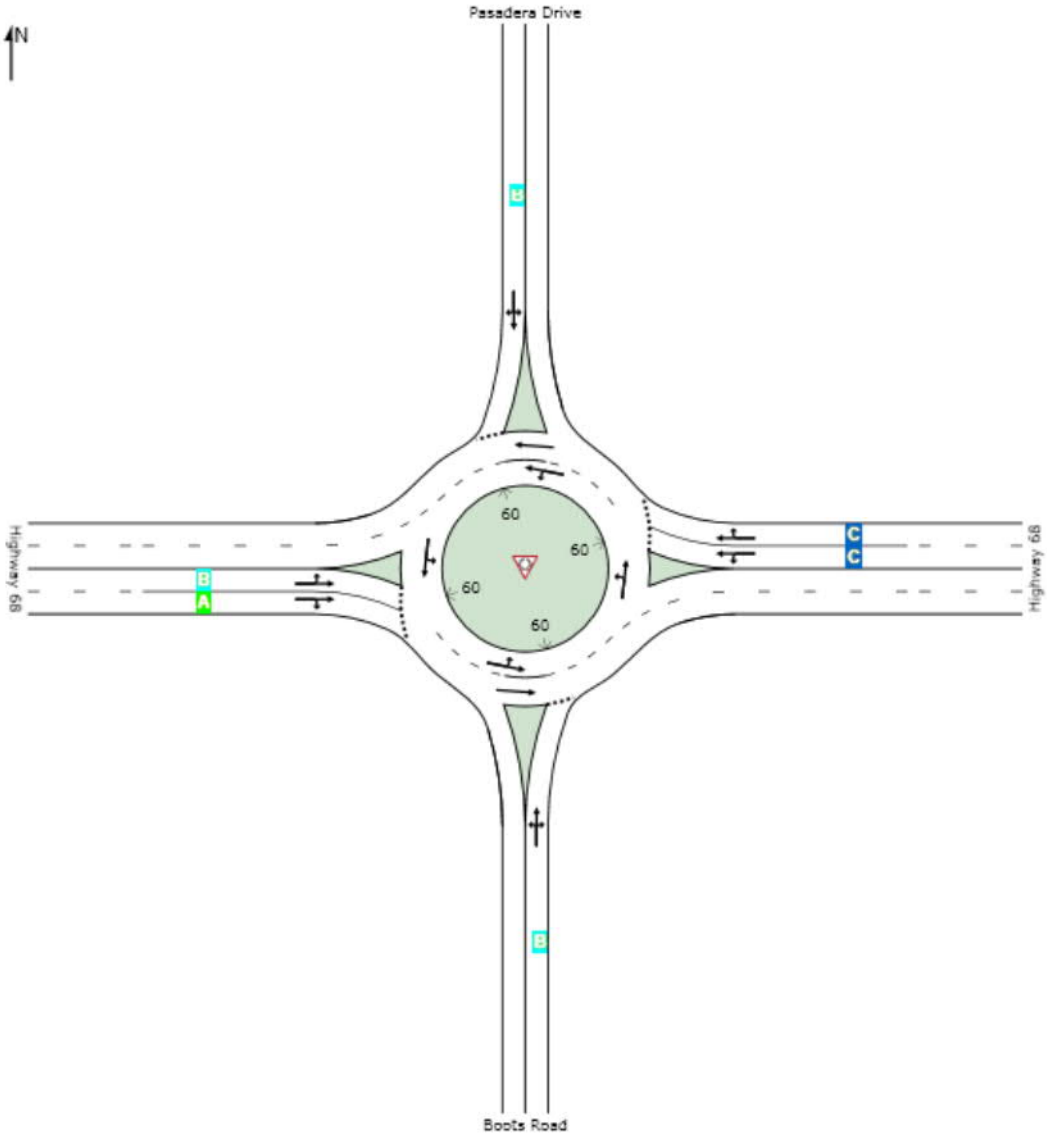
LEVEL OF SERVICE

Site: Pasadera-68

15. Pasadera Drive - Highway 68
Cumulative Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	North	West	Intersection
LOS	B	C	B	B	B



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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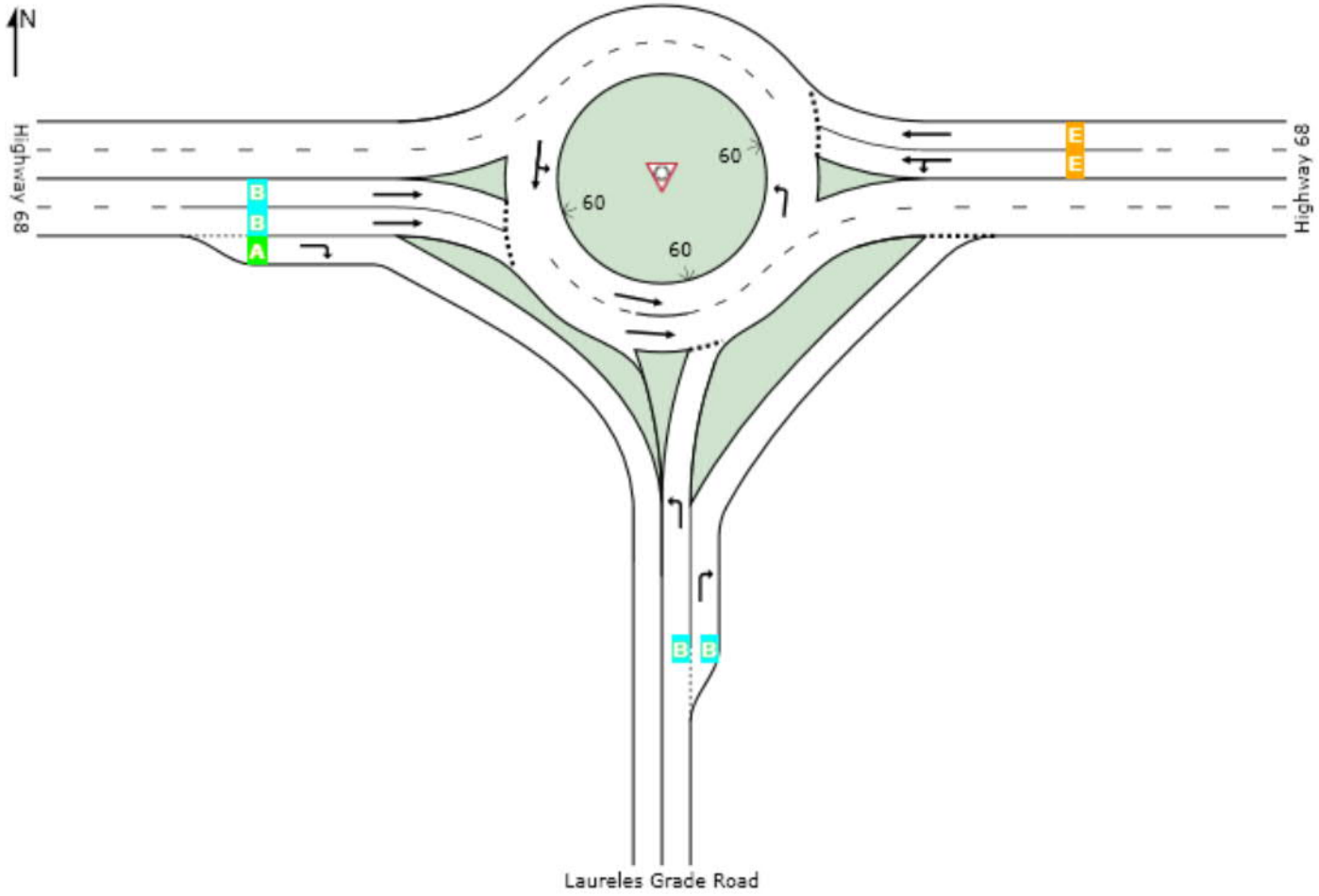
LEVEL OF SERVICE

Site: Laureles-68

16. Laureles Grade Road - Highway 68
Cumulative Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	West	Intersection
LOS	B	E	A	C



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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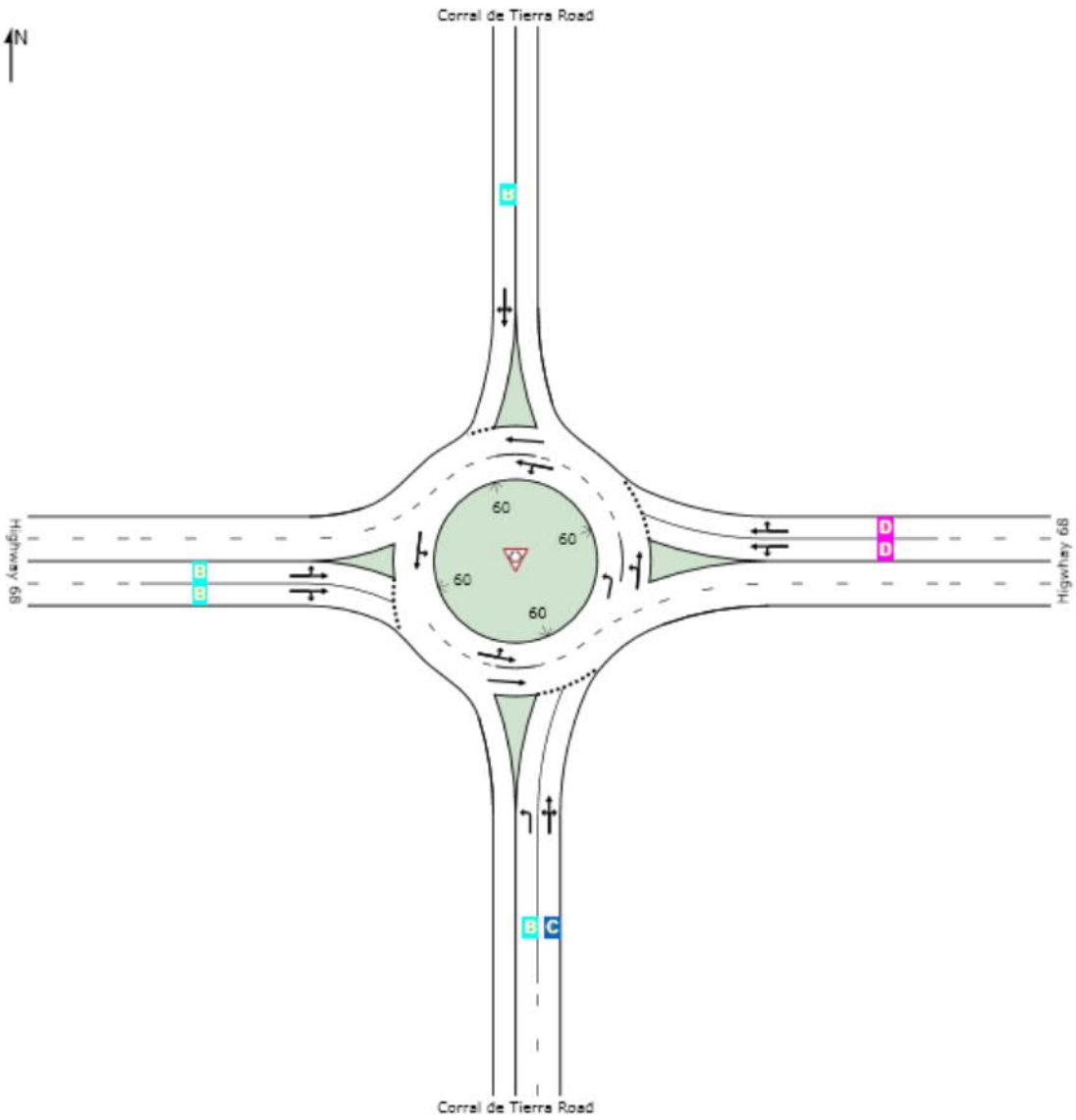
LEVEL OF SERVICE

Site: CdT-68

17. Corral de Tierra Road - Highway 68
Cumulative Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	North	West	Intersection
LOS	C	D	B	B	C



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

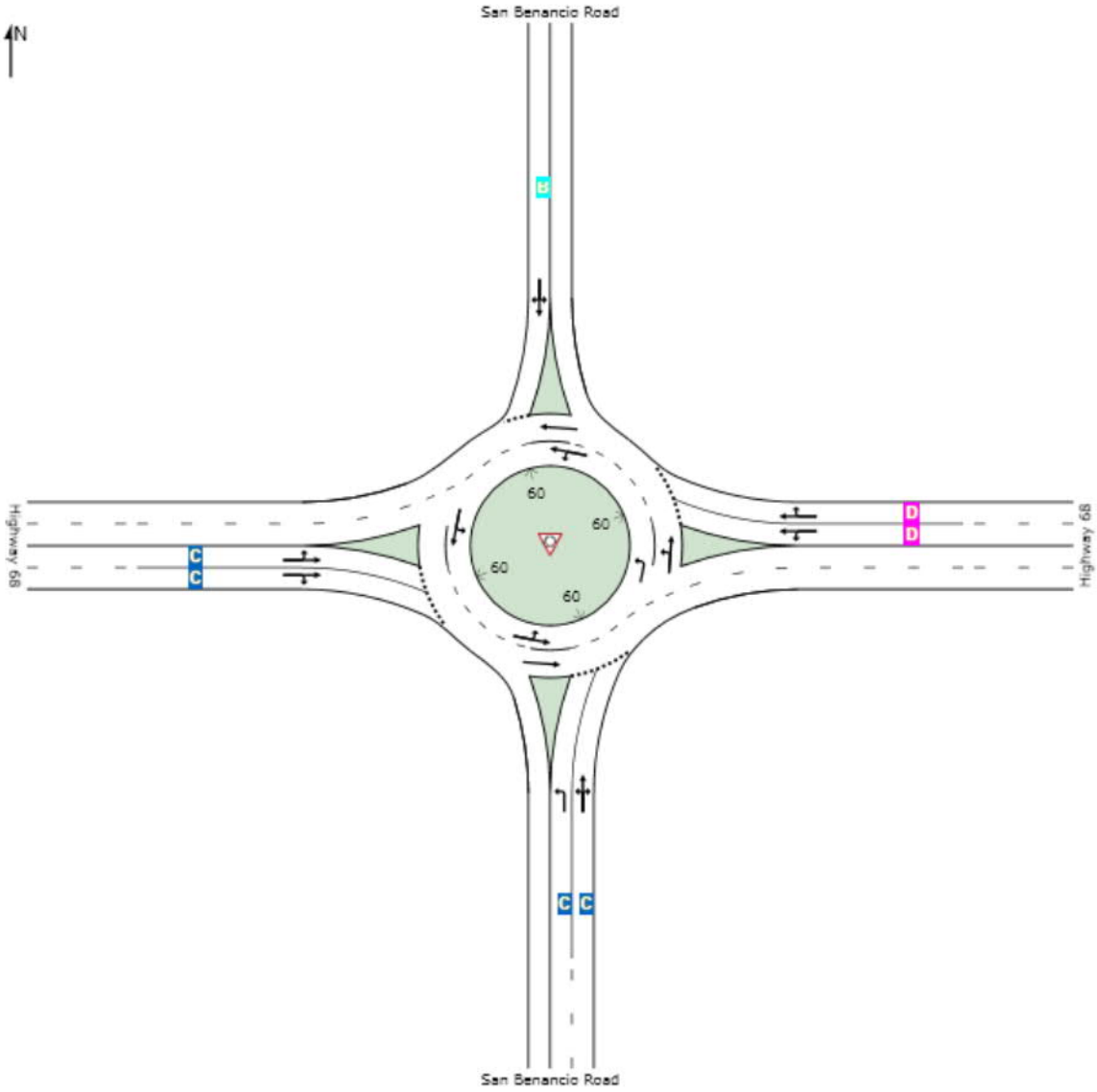
LEVEL OF SERVICE

Site: SanBen-68

18. San Benancio Road - Highway 68
Cumulative Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	South	East	North	West	Intersection
LOS	C	D	B	C	C



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

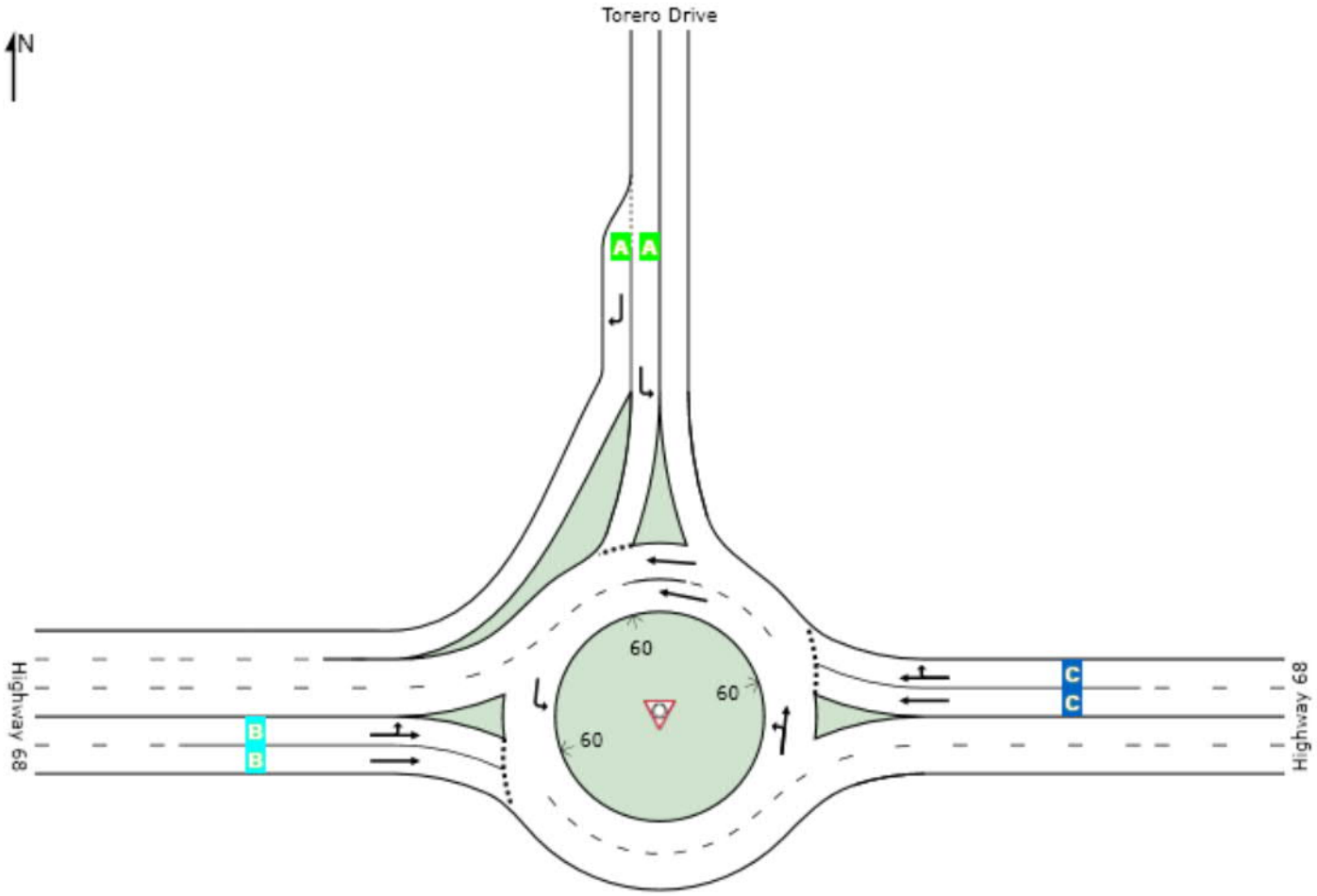
LEVEL OF SERVICE

Site: Torero-68

19. Torero Drive - Highway 68
Cumulative Conditions
AM Peak Hour - Option 2
Roundabout

All Movement Classes

	East	North	West	Intersection
LOS	C	A	B	B



Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

SIDRA INTERSECTION 6.1 | Copyright © 2000-2015 Akcelik and Associates Pty Ltd | sidrasolutions.com
Organisation: HATCH MOTT MACDONALD | Processed: Tuesday, January 30, 2018 3:09:34 PM
Project: I:\2016\Jobs\372151 - Monterey Regional Airport\EIR TIA\Sidra\Analysis\- Imps W-o Pro (w GeoMods)\- GeoMods\Cum-O2\CumAM-O2.sip6

G: Intersection Traffic Count Data

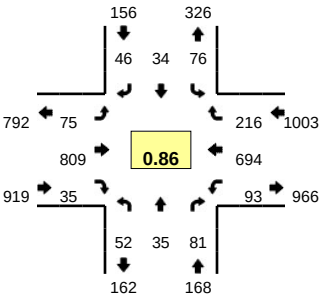
Type of peak hour being reported: Intersection Peak

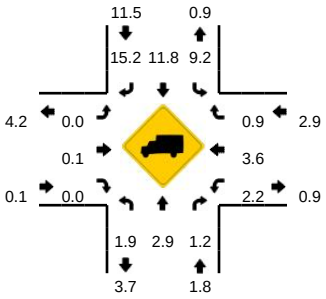
Method for determining peak hour: Total Entering Volume

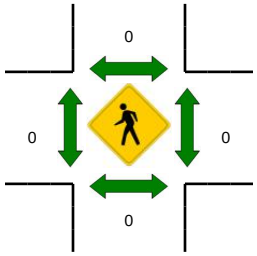
LOCATION: Olmsted Rd -- SR 68
CITY/STATE: Monterey, CA

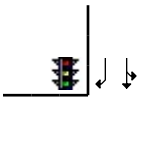
QC JOB #: 13723603
DATE: Wed, Feb 24 2016

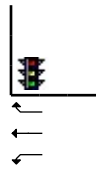
Peak-Hour: 7:35 AM -- 8:35 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

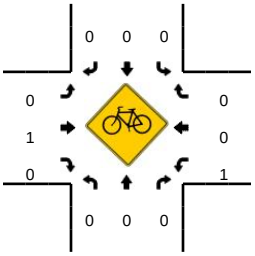


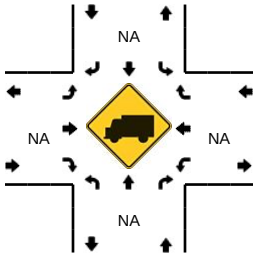


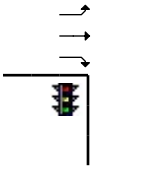


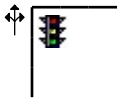


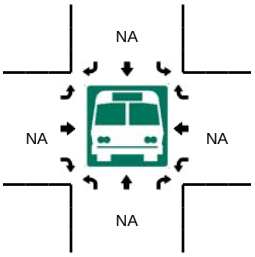












5-Min Count Period Beginning At	Olmsted Rd (Northbound)				Olmsted Rd (Southbound)				SR 68 (Eastbound)				SR 68 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	2	0	1	0	5	0	2	0	6	57	3	0	0	54	11	0	141	
7:05 AM	1	1	1	0	1	0	1	0	3	45	5	0	1	69	7	0	135	
7:10 AM	4	0	4	0	1	0	2	0	6	53	3	0	3	43	7	0	126	
7:15 AM	1	1	2	0	5	2	5	0	7	61	1	0	3	56	15	0	159	
7:20 AM	4	0	2	0	4	1	3	0	2	57	1	0	6	64	13	0	157	
7:25 AM	2	0	8	0	5	1	2	0	7	54	0	0	7	63	13	0	162	
7:30 AM	2	2	4	0	3	1	3	0	7	66	0	0	7	62	18	0	175	
7:35 AM	5	1	8	0	6	4	5	0	2	69	5	0	10	89	11	0	215	
7:40 AM	7	5	10	0	11	7	5	0	1	61	4	0	12	81	15	0	219	
7:45 AM	7	3	6	0	6	10	2	0	6	54	6	0	19	72	20	0	211	
7:50 AM	6	4	8	0	7	4	2	0	1	67	5	0	20	83	19	0	226	
7:55 AM	11	9	12	0	9	1	3	0	7	59	2	0	6	28	21	0	168	2094
8:00 AM	5	5	10	0	5	2	2	0	3	71	1	0	5	45	16	0	170	2123
8:05 AM	3	3	4	0	5	1	5	0	11	76	4	0	3	44	16	0	175	2163
8:10 AM	1	2	2	0	6	0	5	0	6	74	1	0	2	51	19	0	169	2206
8:15 AM	1	1	5	0	5	1	3	0	10	68	3	0	5	48	14	0	164	2211
8:20 AM	2	0	7	0	8	4	8	0	11	70	0	0	2	39	18	0	169	2223
8:25 AM	3	2	7	0	4	0	4	0	10	76	2	0	2	53	18	0	181	2242
8:30 AM	1	0	2	0	4	0	2	0	7	64	2	0	7	61	29	0	179	2246
8:35 AM	1	1	3	0	6	1	4	0	8	61	2	0	2	44	15	0	148	2179
8:40 AM	2	1	1	0	5	0	2	0	8	83	3	0	3	70	22	0	200	2160
8:45 AM	3	4	5	0	7	1	1	0	11	70	2	0	2	50	21	0	177	2126
8:50 AM	0	2	4	0	5	0	5	0	8	58	3	0	3	49	24	0	161	2061
8:55 AM	4	0	0	0	9	0	7	0	16	61	0	0	2	38	19	0	156	2049

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	80	48	96	0	96	84	36	0	32	728	60	0	204	944	216	0	2624
Heavy Trucks	4	4	4		8	4	4		0	4	0		4	32	4		72
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	1	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 3/7/2016 12:39 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

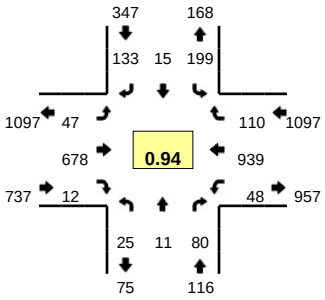
Type of peak hour being reported: Intersection Peak

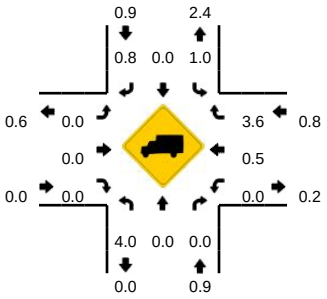
Method for determining peak hour: Total Entering Volume

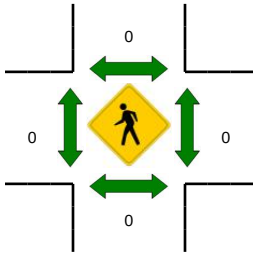
LOCATION: Olmsted Rd -- SR 68
CITY/STATE: Monterey, CA

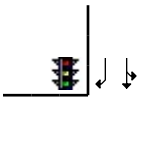
QC JOB #: 13723604
DATE: Tue, Feb 23 2016

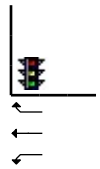
Peak-Hour: 4:35 PM -- 5:35 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

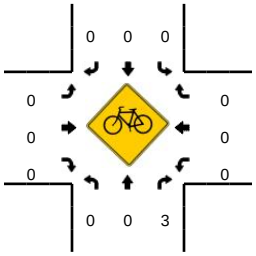


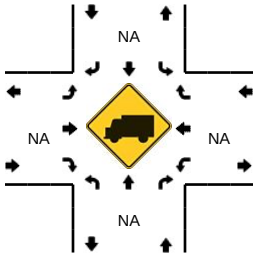


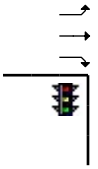


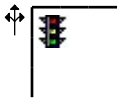


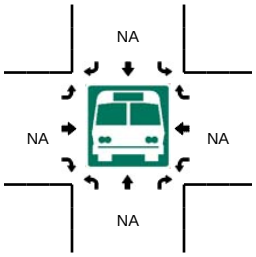












5-Min Count Period Beginning At	Olmsted Rd (Northbound)				Olmsted Rd (Southbound)				SR 68 (Eastbound)				SR 68 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	0	3	0	13	1	16	0	7	71	5	0	1	71	13	0	202	
4:05 PM	3	1	5	0	17	1	12	0	4	63	2	0	4	75	9	0	196	
4:10 PM	2	0	4	0	11	0	11	0	5	64	2	0	3	65	9	0	176	
4:15 PM	4	3	5	0	23	0	12	0	7	47	1	0	8	73	4	0	187	
4:20 PM	3	1	4	0	11	2	10	0	3	71	4	0	2	56	6	0	173	
4:25 PM	1	1	2	0	11	0	8	0	7	61	1	0	6	68	9	0	175	
4:30 PM	8	0	10	0	14	0	9	0	3	50	1	0	0	62	5	0	162	
4:35 PM	1	2	11	0	15	1	10	0	3	48	1	0	3	67	9	0	171	
4:40 PM	5	2	8	0	7	1	3	0	5	60	0	0	7	77	7	0	182	
4:45 PM	4	0	5	0	16	2	5	0	7	48	1	0	2	73	7	0	170	
4:50 PM	3	1	8	0	12	2	2	0	6	63	2	0	4	64	8	0	175	
4:55 PM	1	0	4	0	19	0	13	0	4	61	1	0	3	76	11	0	193	2162
5:00 PM	3	0	4	0	14	0	18	0	1	65	0	0	5	81	6	0	197	2157
5:05 PM	0	2	13	0	25	3	23	0	5	48	0	0	4	78	8	0	209	2170
5:10 PM	2	2	15	0	17	1	14	0	4	54	0	0	0	86	11	0	206	2200
5:15 PM	1	1	2	0	22	1	15	0	2	50	1	0	6	85	12	0	198	2211
5:20 PM	2	1	4	0	16	1	15	0	4	61	2	0	3	85	9	0	203	2241
5:25 PM	1	0	2	0	17	1	8	0	4	59	2	0	6	87	13	0	200	2266
5:30 PM	2	0	4	0	19	2	7	0	2	61	2	0	5	80	9	0	193	2297
5:35 PM	1	3	5	0	18	3	10	0	2	47	0	0	0	69	3	0	161	2287
5:40 PM	0	1	7	0	11	0	9	0	6	44	3	0	5	64	6	0	156	2261
5:45 PM	3	2	5	0	19	1	9	0	3	49	4	0	3	70	7	0	175	2266
5:50 PM	0	2	2	0	11	1	9	0	2	35	1	0	1	65	8	0	137	2228
5:55 PM	2	0	2	0	7	2	9	0	5	46	4	0	0	48	4	0	129	2164

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	12	20	120	0	256	20	208	0	44	608	4	0	40	996	124	0	2452
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	8	0		8
Pedestrians		0				0				0				0			0
Bicycles	0	0	2		0	0	0		0	0	0		0	0	0		2
Railroad																	
Stopped Buses																	

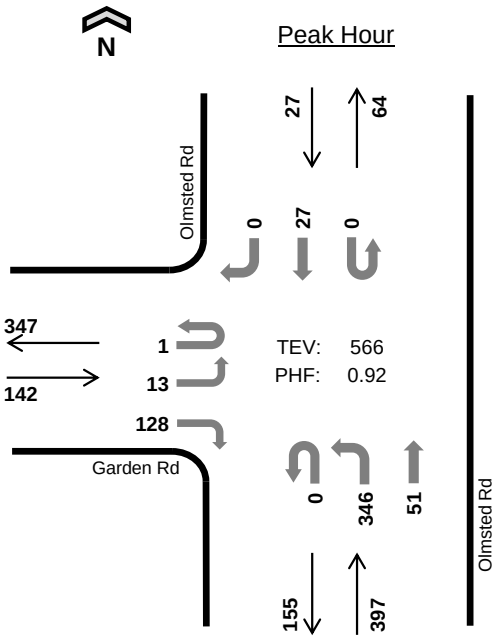
Comments:

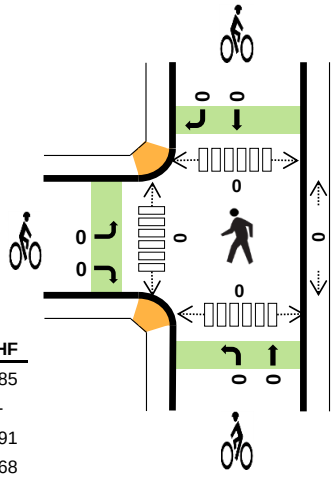
Report generated on 3/7/2016 12:39 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Olmsted Rd
Garden Rd

Date: 11/03/2016
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM





	HV %:	PHF
EB	10.6%	0.85
WB	-	-
NB	2.3%	0.91
SB	11.1%	0.68
TOTAL	4.8%	0.92

Two-Hour Count Summaries

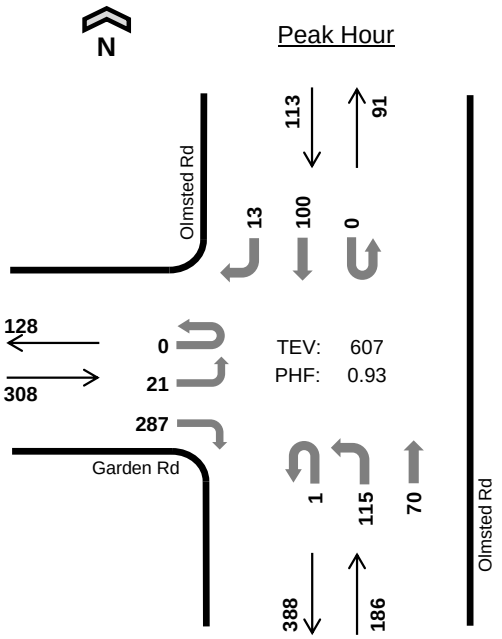
Interval Start	Garden Rd Eastbound				0 Westbound				Olmsted Rd Northbound				Olmsted Rd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	0	22	0	0	0	0	0	48	3	0	0	0	2	0	76	0
7:15 AM	0	1	0	18	0	0	0	0	0	63	4	0	0	0	3	0	89	0
7:30 AM	0	2	0	42	0	0	0	0	0	70	3	0	0	0	2	3	122	0
7:45 AM	0	6	0	51	0	0	0	0	0	76	1	0	0	0	3	1	138	425
8:00 AM	**0**	**2**	**0**	**40**	**0**	**0**	**0**	**0**	**0**	**88**	**12**	**0**	**0**	**0**	**10**	**0**	**152**	501
8:15 AM	**1**	**1**	**0**	**29**	**0**	**0**	**0**	**0**	**0**	**81**	**9**	**0**	**0**	**0**	**5**	**0**	**126**	538
8:30 AM	**0**	**2**	**0**	**30**	**0**	**0**	**0**	**0**	**0**	**88**	**10**	**0**	**0**	**0**	**4**	**0**	**134**	550
8:45 AM	**0**	**8**	**0**	**29**	**0**	**0**	**0**	**0**	**0**	**89**	**20**	**0**	**0**	**0**	**8**	**0**	**154**	**566**
Count Total	1	23	0	261	0	0	0	0	0	603	62	0	0	0	37	4	991	0
Peak Hour All	**1**	**13**	**0**	**128**	**0**	**0**	**0**	**0**	**0**	**346**	**51**	**0**	**0**	**0**	**27**	**0**	**566**	**0**
Peak Hour HV	**0**	**2**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**7**	**2**	**0**	**0**	**0**	**3**	**0**	**27**	**0**
Peak Hour HV%	**0%**	**15%**	**-**	**10%**	**-**	**-**	**-**	**-**	**-**	**2%**	**4%**	**-**	**-**	**-**	**11%**	**-**	**5%**	**0**

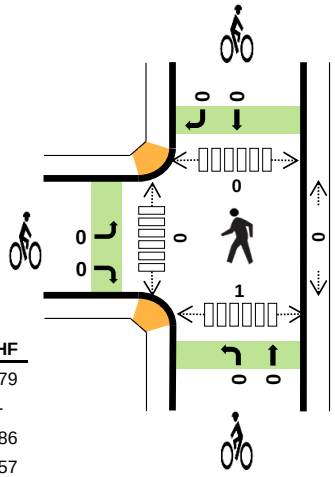
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	6	0	0	0	*6*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	1	0	1	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	5	0	0	0	*5*	0	0	0	0	*0*	0	0	0	0	*0*
7:45 AM	0	0	0	0	*0*	0	0	1	0	*1*	0	0	0	0	*0*
8:00 AM	**1**	**0**	**0**	**2**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:15 AM	**5**	**0**	**3**	**1**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:30 AM	**5**	**0**	**2**	**0**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:45 AM	**4**	**0**	**4**	**0**	***8***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
Count Total	27	0	10	3	*40*	0	0	1	0	*1*	0	0	0	0	*0*
Peak Hr	**15**	**0**	**9**	**3**	***27***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

Olmsted Rd
Garden Rd

Date: 11/03/2016
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM





	HV %:	PHF
EB	1.3%	0.79
WB	-	-
NB	1.6%	0.86
SB	2.7%	0.57
TOTAL	1.6%	0.93

Two-Hour Count Summaries

Interval Start	Garden Rd Eastbound				0 Westbound				Olmsted Rd Northbound				Olmsted Rd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	2	0	106	0	0	0	0	0	29	11	0	0	0	10	1	159	0
4:15 PM	0	5	0	54	0	0	0	0	1	40	9	0	0	0	9	4	122	0
4:30 PM	0	6	0	88	0	0	0	0	0	31	14	0	0	0	15	0	154	0
4:45 PM	**0**	**4**	**0**	**78**	**0**	**0**	**0**	**0**	**1**	**37**	**15**	**0**	**0**	**0**	**9**	**2**	**146**	581
5:00 PM	**0**	**3**	**0**	**95**	**0**	**0**	**0**	**0**	**0**	**25**	**8**	**0**	**0**	**0**	**11**	**3**	**145**	567
5:15 PM	**0**	**6**	**0**	**50**	**0**	**0**	**0**	**0**	**0**	**23**	**23**	**0**	**0**	**0**	**48**	**2**	**152**	597
5:30 PM	**0**	**8**	**0**	**64**	**0**	**0**	**0**	**0**	**0**	**30**	**24**	**0**	**0**	**0**	**32**	**6**	**164**	**607**
5:45 PM	0	4	0	84	0	0	0	0	0	33	10	0	0	0	10	1	142	603
Count Total	0	38	0	619	0	0	0	0	2	248	114	0	0	0	144	19	1,184	0
Peak Hour All	**0**	**21**	**0**	**287**	**0**	**0**	**0**	**0**	**1**	**115**	**70**	**0**	**0**	**0**	**100**	**13**	**607**	**0**
Peak Hour HV	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**2**	**1**	**10**	**0**
Peak Hour HV%	**-**	**5%**	**-**	**1%**	**-**	**-**	**-**	**-**	**0%**	**2%**	**1%**	**-**	**-**	**-**	**2%**	**8%**	**2%**	**0**

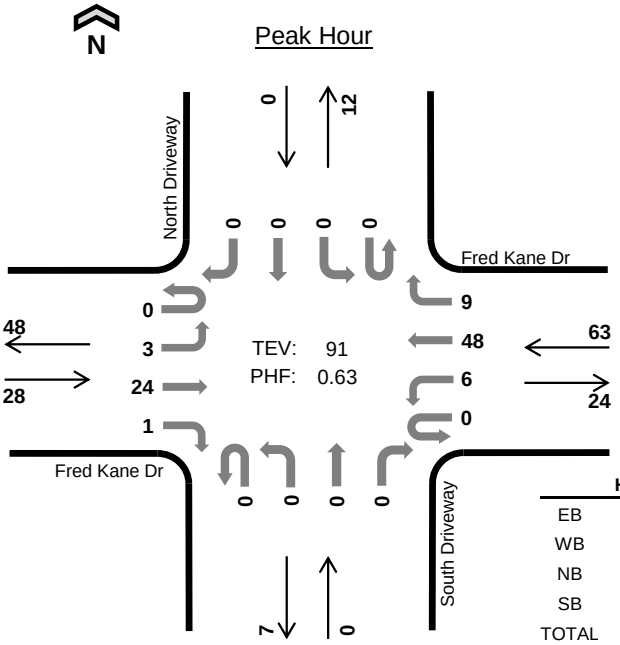
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

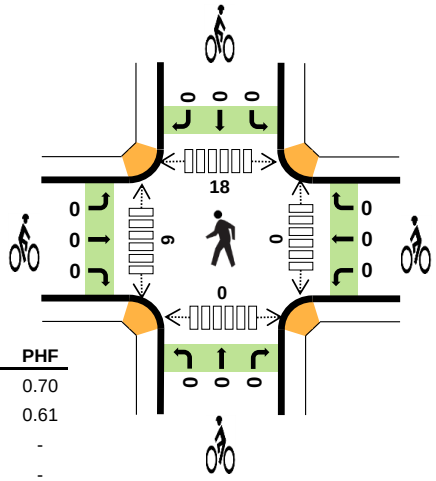
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	2	0	1	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
4:15 PM	0	0	2	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	2	0	1	2	*5*	0	0	0	0	*0*	0	0	0	0	*0*
4:45 PM	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:00 PM	**3**	**0**	**1**	**1**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:15 PM	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:30 PM	**0**	**0**	**2**	**1**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	***1***
5:45 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	8	0	7	5	*20*	0	0	0	0	*0*	0	0	0	1	*1*
Peak Hr	**4**	**0**	**3**	**3**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	***1***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

South Driveway
Fred Kane Dr

Date: 11/03/2016
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM





	HV %:	PHF
EB	0.0%	0.70
WB	6.3%	0.61
NB	-	-
SB	-	-
TOTAL	4.4%	0.63

Two-Hour Count Summaries

Interval Start		Fred Kane Dr Eastbound				Fred Kane Dr Westbound				South Driveway Northbound				North Driveway Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	4	0
7:15 AM		0	0	3	0	0	1	6	0	0	0	0	0	0	0	0	0	10	0
7:30 AM		0	1	1	0	0	1	6	0	0	0	0	0	0	0	0	0	9	0
7:45 AM		0	0	3	0	0	2	5	0	0	0	0	0	0	0	0	0	10	33
8:00 AM		**0**	**0**	**4**	**1**	**0**	**5**	**8**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	48
8:15 AM		**0**	**3**	**4**	**0**	**0**	**1**	**9**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**18**	56
8:30 AM		**0**	**0**	**6**	**0**	**0**	**0**	**8**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**18**	65
8:45 AM		**0**	**0**	**10**	**0**	**0**	**0**	**23**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**36**	**91**
Count Total		0	4	32	1	0	10	68	9	0	0	0	0	0	0	0	0	124	0
Peak Hour	**All**	**0**	**3**	**24**	**1**	**0**	**6**	**48**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**91**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**
	HV%	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**8%**	**0%**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**4%**	**0**

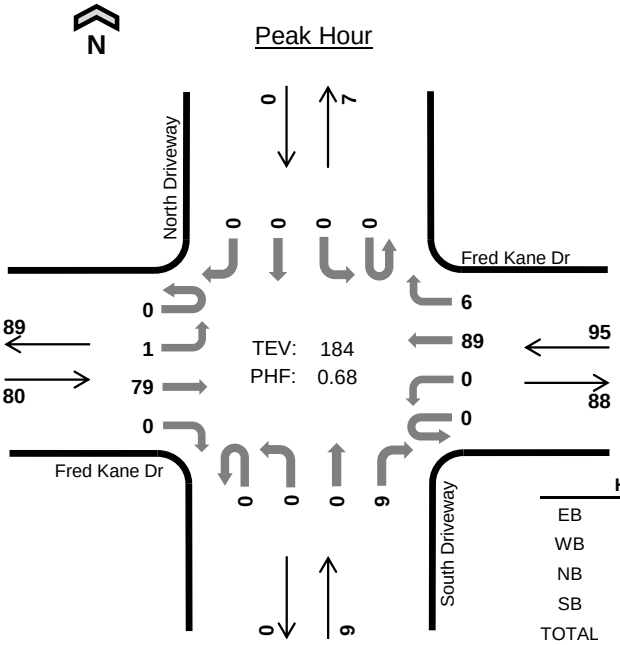
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

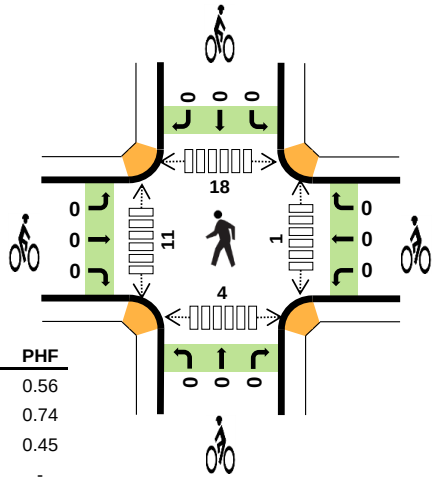
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	0	1	0	0	*1*	0	0	0	0	*0*	0	1	1	0	*2*
7:30 AM	0	0	0	0	*0*	0	0	0	0	*0*	1	4	0	0	*5*
7:45 AM	1	0	0	0	*1*	0	0	0	0	*0*	0	2	0	0	*2*
8:00 AM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**6**	**0**	**0**	*6*
8:15 AM	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**2**	**0**	*3*
8:30 AM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**8**	**0**	*9*
8:45 AM	**0**	**3**	**0**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**8**	**0**	***9***
Count Total	1	6	0	0	*7*	0	0	0	0	*0*	1	16	19	0	*36*
Peak Hour	**0**	**4**	**0**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**9**	**18**	**0**	***27***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

South Driveway
Fred Kane Dr

Date: 11/03/2016
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM





	HV %:	PHF
EB	0.0%	0.56
WB	2.1%	0.74
NB	0.0%	0.45
SB	-	-
TOTAL	1.1%	0.68

Two-Hour Count Summaries

Interval Start		Fred Kane Dr Eastbound				Fred Kane Dr Westbound				South Driveway Northbound				North Driveway Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	1	6	0	0	0	15	1	0	0	0	0	0	0	0	0	23	0
4:15 PM		0	0	6	0	0	3	15	0	0	0	0	2	0	0	0	0	26	0
4:30 PM		0	0	13	0	0	0	15	3	0	0	0	1	0	0	0	0	32	0
4:45 PM		**0**	**0**	**10**	**0**	**0**	**0**	**13**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**26**	107
5:00 PM		**0**	**0**	**8**	**0**	**0**	**0**	**16**	**3**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**32**	116
5:15 PM		**0**	**0**	**36**	**0**	**0**	**0**	**32**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**68**	158
5:30 PM		**0**	**1**	**25**	**0**	**0**	**0**	**28**	**1**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**58**	**184**
5:45 PM		0	0	10	0	0	0	14	0	0	0	0	0	0	0	0	0	24	182
Count Total		0	2	114	0	0	3	148	10	0	0	0	12	0	0	0	0	289	0
Peak Hour	**All**	**0**	**1**	**79**	**0**	**0**	**0**	**89**	**6**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**184**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**
	HV%	**-**	**0%**	**0%**	**-**	**-**	**-**	**2%**	**0%**	**-**	**-**	**-**	**0%**	**-**	**-**	**-**	**-**	**1%**	**0**

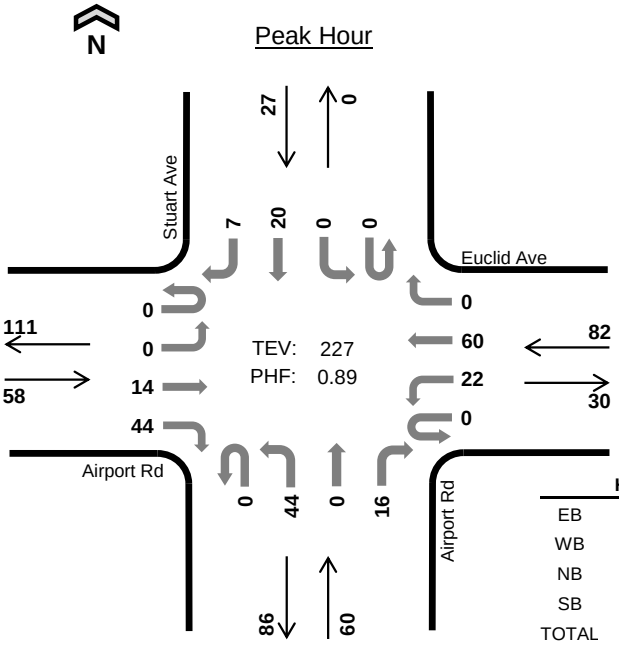
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

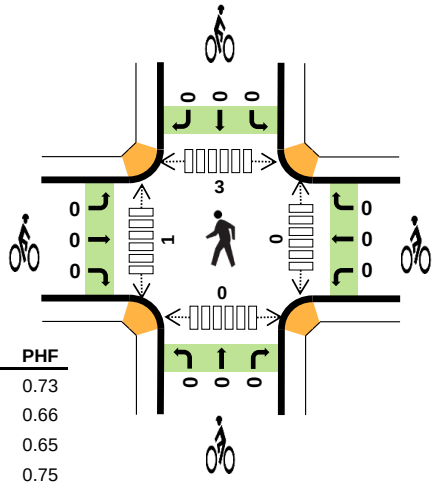
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	1	0	*1*
4:15 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	3	0	2	*5*
4:30 PM	2	2	0	0	*4*	0	0	0	0	*0*	0	0	2	0	*2*
4:45 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**2**	**0**	*4*
5:00 PM	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**4**	**2**	**0**	*6*
5:15 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**1**	**3**	**13**	**3**	*20*
5:30 PM	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**1**	**1**	***4***
5:45 PM	0	0	0	0	*0*	0	0	0	0	*0*	1	0	1	0	*2*
Count Total	2	4	0	0	*6*	0	0	0	0	*0*	2	14	22	6	*44*
Peak Hour	**0**	**2**	**0**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**1**	**11**	**18**	**4**	***34***

Airport Rd
Euclid Ave

Date: 11/03/2016
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM

Peak Hour





	HV %:	PHF
EB	3.4%	0.73
WB	3.7%	0.66
NB	8.3%	0.65
SB	7.4%	0.75
TOTAL	5.3%	0.89

Two-Hour Count Summaries

Interval Start	Airport Rd Eastbound				Euclid Ave Westbound				Airport Rd Northbound				Stuart Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	4	13	0	9	6	0	0	4	0	3	0	0	0	0	39	0
7:15 AM	0	0	4	8	0	3	8	0	0	7	0	2	0	0	6	0	38	0
7:30 AM	**0**	**0**	**1**	**9**	**0**	**5**	**26**	**0**	**0**	**8**	**0**	**4**	**0**	**0**	**7**	**2**	**62**	0
7:45 AM	**0**	**0**	**3**	**10**	**0**	**6**	**13**	**0**	**0**	**10**	**0**	**1**	**0**	**0**	**7**	**0**	**50**	189
8:00 AM	**0**	**0**	**4**	**11**	**0**	**10**	**12**	**0**	**0**	**17**	**0**	**6**	**0**	**0**	**2**	**2**	**64**	214
8:15 AM	**0**	**0**	**6**	**14**	**0**	**1**	**9**	**0**	**0**	**9**	**0**	**5**	**0**	**0**	**4**	**3**	**51**	**227**
8:30 AM	0	0	4	9	0	4	8	0	0	7	0	4	0	0	2	0	38	203
8:45 AM	0	0	1	11	0	2	18	0	0	6	0	3	0	0	5	0	46	199
Count Total	0	0	27	85	0	40	100	0	0	68	0	28	0	0	33	7	388	0
Peak Hour All	**0**	**0**	**14**	**44**	**0**	**22**	**60**	**0**	**0**	**44**	**0**	**16**	**0**	**0**	**20**	**7**	**227**	**0**
Peak Hour HV	**0**	**0**	**0**	**2**	**0**	**0**	**3**	**0**	**0**	**3**	**0**	**2**	**0**	**0**	**2**	**0**	**12**	**0**
Peak Hour HV%	**-**	**-**	**0%**	**5%**	**-**	**0%**	**5%**	**-**	**-**	**7%**	**-**	**13%**	**-**	**-**	**10%**	**0%**	**5%**	**0**

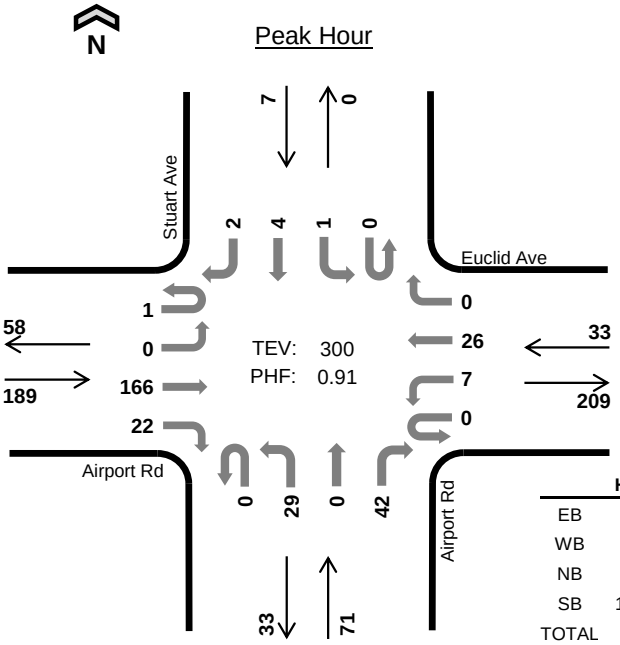
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

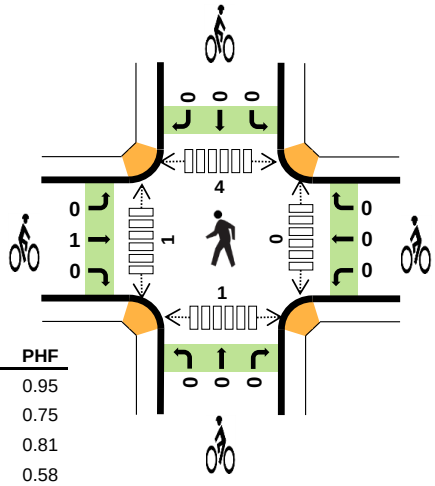
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	1	1	0	*2*	0	0	0	0	*0*	0	0	0	3	*3*
7:15 AM	2	1	1	1	*5*	0	0	0	0	*0*	0	0	0	2	*2*
7:30 AM	**0**	**1**	**2**	**1**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**2**	**0**	*2*
7:45 AM	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
8:00 AM	**1**	**1**	**2**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:15 AM	**1**	**1**	**0**	**1**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	***1***
8:30 AM	0	0	1	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	3	0	1	0	*4*	0	0	0	0	*0*	0	1	0	1	*2*
Count Total	7	5	9	3	*24*	0	0	0	0	*0*	0	2	3	6	*11*
Peak Hour	**2**	**3**	**5**	**2**	***12***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**3**	**0**	***4***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Airport Rd
Euclid Ave

Date: 11/03/2016
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM





	HV %:	PHF
EB	0.5%	0.95
WB	0.0%	0.75
NB	2.8%	0.81
SB	14.3%	0.58
TOTAL	1.3%	0.91

Two-Hour Count Summaries

Interval Start	Airport Rd Eastbound				Euclid Ave Westbound				Airport Rd Northbound				Stuart Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	17	6	0	0	8	0	0	11	0	6	0	0	1	2	51	0
4:15 PM	0	0	24	6	0	2	4	0	0	6	0	10	0	1	2	0	55	0
4:30 PM	0	0	29	8	0	2	5	0	0	9	0	10	0	0	1	1	65	0
4:45 PM	**1**	**0**	**46**	**3**	**0**	**1**	**10**	**0**	**0**	**9**	**0**	**11**	**0**	**0**	**1**	**0**	**82**	253
5:00 PM	**0**	**0**	**40**	**9**	**0**	**2**	**6**	**0**	**0**	**6**	**0**	**16**	**0**	**0**	**1**	**1**	**81**	283
5:15 PM	**0**	**0**	**37**	**4**	**0**	**3**	**4**	**0**	**0**	**7**	**0**	**5**	**0**	**1**	**1**	**1**	**63**	291
5:30 PM	**0**	**0**	**43**	**6**	**0**	**1**	**6**	**0**	**0**	**7**	**0**	**10**	**0**	**0**	**1**	**0**	**74**	**300**
5:45 PM	0	0	16	6	0	4	6	0	0	7	0	4	0	0	0	0	43	261
Count Total	1	0	252	48	0	15	49	0	0	62	0	72	0	2	8	5	514	0
Peak Hour All	**1**	**0**	**166**	**22**	**0**	**7**	**26**	**0**	**0**	**29**	**0**	**42**	**0**	**1**	**4**	**2**	**300**	**0**
Peak Hour HV	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**1**	**0**	**4**	**0**
Peak Hour HV%	**0%**	**-**	**1%**	**0%**	**-**	**0%**	**0%**	**-**	**-**	**0%**	**-**	**5%**	**-**	**0%**	**25%**	**0%**	**1%**	**0**

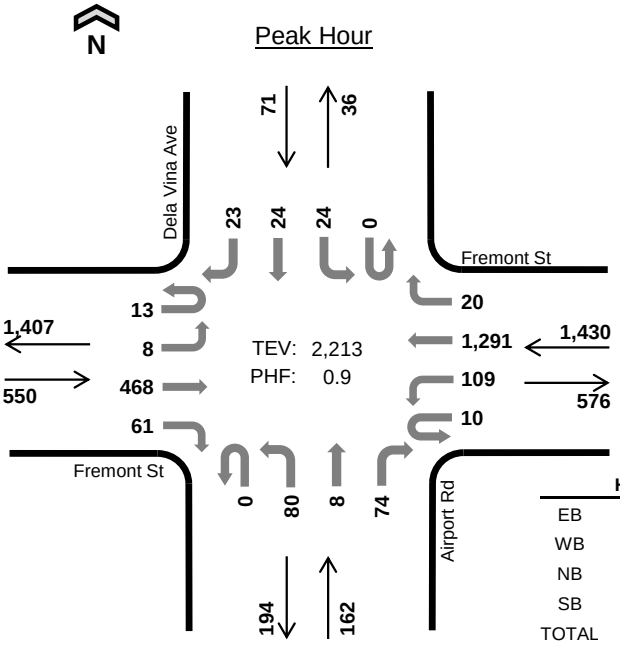
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	1	1	0	0	*2*	1	0	0	0	*1*	0	0	0	0	*0*
4:15 PM	0	0	1	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
4:45 PM	**1**	**0**	**1**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	*1*
5:00 PM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:15 PM	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***	**0**	**1**	**1**	**0**	*2*
5:30 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**2**	**1**	***3***
5:45 PM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	2	2	*4*
Count Total	3	2	3	1	*9*	2	0	0	0	*2*	0	1	6	3	*10*
Peak Hour	**1**	**0**	**2**	**1**	***4***	**1**	**0**	**0**	**0**	***1***	**0**	**1**	**4**	**1**	***6***

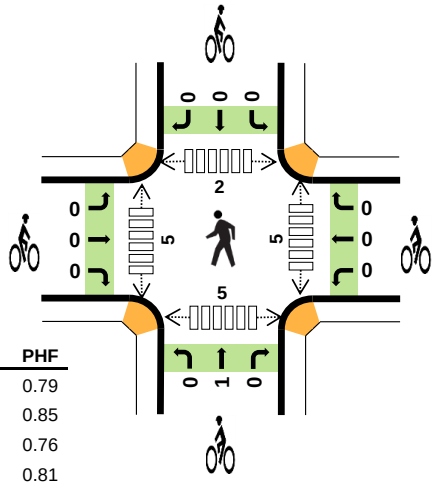
Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Airport Rd
Fremont St

Date: 11/03/2016
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	4.0%	0.79
WB	1.8%	0.85
NB	6.2%	0.76
SB	1.4%	0.81
TOTAL	2.7%	0.90



Two-Hour Count Summaries

Interval Start		Fremont St Eastbound				Fremont St Westbound				Airport Rd Northbound				Dela Vina Ave Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		1	0	57	11	3	13	164	5	0	17	1	6	0	2	7	5	292	0
7:15 AM		4	0	65	15	3	14	254	1	0	11	1	3	0	4	2	14	391	0
7:30 AM		**3**	**1**	**87**	**8**	**2**	**39**	**373**	**6**	**0**	**22**	**0**	**11**	**0**	**10**	**7**	**5**	**574**	0
7:45 AM		**2**	**1**	**131**	**18**	**1**	**25**	**367**	**5**	**0**	**16**	**3**	**23**	**0**	**6**	**9**	**6**	**613**	1,870
8:00 AM		**4**	**5**	**147**	**17**	**5**	**22**	**274**	**3**	**0**	**25**	**5**	**23**	**0**	**7**	**4**	**4**	**545**	2,123
8:15 AM		**4**	**1**	**103**	**18**	**2**	**23**	**277**	**6**	**0**	**17**	**0**	**17**	**0**	**1**	**4**	**8**	**481**	**2,213**
8:30 AM		5	1	93	19	1	16	272	10	0	17	1	25	0	6	1	3	470	2,109
8:45 AM		3	1	93	16	6	24	278	2	0	17	3	14	0	6	2	7	472	1,968
Count Total		26	10	776	122	23	176	2,259	38	0	142	14	122	0	42	36	52	3,838	0
Peak Hour	**All**	**13**	**8**	**468**	**61**	**10**	**109**	**1,291**	**20**	**0**	**80**	**8**	**74**	**0**	**24**	**24**	**23**	**2,213**	**0**
	HV	**0**	**0**	**20**	**2**	**0**	**2**	**23**	**1**	**0**	**3**	**0**	**7**	**0**	**0**	**0**	**1**	**59**	**0**
	HV%	**0%**	**0%**	**4%**	**3%**	**0%**	**2%**	**2%**	**5%**	**-**	**4%**	**0%**	**9%**	**-**	**0%**	**0%**	**4%**	**3%**	**0**

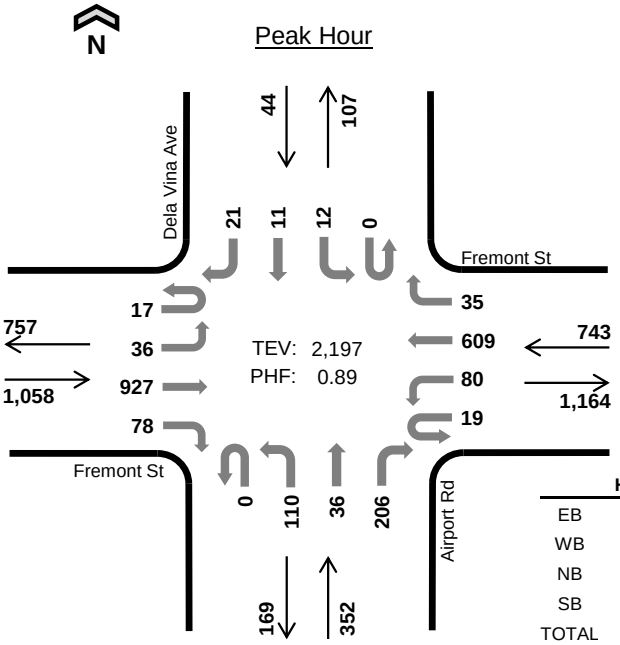
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

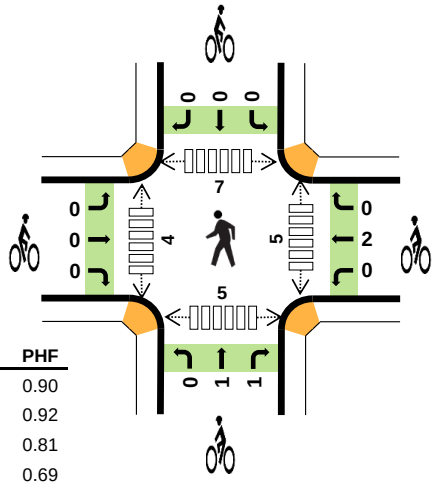
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	1	7	1	0	*9*	0	0	0	0	*0*	0	0	0	2	*2*
7:15 AM	6	6	0	1	*13*	0	0	0	0	*0*	1	2	1	0	*4*
7:30 AM	**3**	**7**	**2**	**0**	***12***	**0**	**0**	**1**	**0**	***1***	**0**	**1**	**0**	**2**	*3*
7:45 AM	**4**	**5**	**2**	**0**	***11***	**0**	**0**	**0**	**0**	***0***	**1**	**2**	**0**	**2**	*5*
8:00 AM	**4**	**7**	**4**	**0**	***15***	**0**	**0**	**0**	**0**	***0***	**2**	**2**	**0**	**1**	*5*
8:15 AM	**11**	**7**	**2**	**1**	***21***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**2**	**0**	***4***
8:30 AM	4	7	2	0	*13*	0	0	0	0	*0*	0	2	0	4	*6*
8:45 AM	4	5	2	0	*11*	0	0	0	0	*0*	0	1	1	1	*3*
Count Total	37	51	15	2	*105*	0	0	1	0	*1*	6	10	4	12	*32*
Peak Hour	**22**	**26**	**10**	**1**	***59***	**0**	**0**	**1**	**0**	***1***	**5**	**5**	**2**	**5**	***17***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Airport Rd
Fremont St

Date: 11/03/2016
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM





	HV %:	PHF
EB	1.5%	0.90
WB	1.3%	0.92
NB	1.1%	0.81
SB	2.3%	0.69
TOTAL	1.4%	0.89

Two-Hour Count Summaries

Interval Start		Fremont St Eastbound				Fremont St Westbound				Airport Rd Northbound				Dela Vina Ave Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		**4**	**5**	**272**	**12**	**9**	**24**	**164**	**4**	**0**	**29**	**15**	**65**	**0**	**4**	**2**	**6**	**615**	0
4:15 PM		**4**	**6**	**250**	**17**	**7**	**18**	**155**	**9**	**0**	**25**	**6**	**50**	**0**	**3**	**2**	**2**	**554**	0
4:30 PM		**3**	**14**	**198**	**22**	**2**	**16**	**143**	**8**	**0**	**28**	**11**	**47**	**0**	**5**	**3**	**8**	**508**	0
4:45 PM		**6**	**11**	**207**	**27**	**1**	**22**	**147**	**14**	**0**	**28**	**4**	**44**	**0**	**0**	**4**	**5**	**520**	**2,197**
5:00 PM		5	18	173	23	3	17	160	15	0	20	17	53	0	5	2	3	514	2,096
5:15 PM		8	15	186	27	7	21	168	13	0	14	17	35	0	4	5	2	522	2,064
5:30 PM		5	13	188	29	5	16	164	11	0	21	15	46	0	2	2	9	526	2,082
5:45 PM		9	12	243	12	6	20	156	19	0	16	9	31	0	3	6	3	545	2,107
Count Total		44	94	1,717	169	40	154	1,257	93	0	181	94	371	0	26	26	38	4,304	0
Peak Hour	**All**	**17**	**36**	**927**	**78**	**19**	**80**	**609**	**35**	**0**	**110**	**36**	**206**	**0**	**12**	**11**	**21**	**2,197**	**0**
	HV	**0**	**0**	**16**	**0**	**0**	**0**	**10**	**0**	**0**	**1**	**3**	**0**	**0**	**0**	**1**	**0**	**31**	**0**
	HV%	**0%**	**0%**	**2%**	**0%**	**0%**	**0%**	**2%**	**0%**	**-**	**1%**	**8%**	**0%**	**-**	**0%**	**9%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	**5**	**2**	**2**	**0**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**1**	**3**	*6*
4:15 PM	**3**	**3**	**0**	**0**	***6***	**0**	**1**	**1**	**0**	***2***	**0**	**1**	**0**	**0**	*1*
4:30 PM	**4**	**3**	**1**	**1**	***9***	**0**	**0**	**0**	**0**	***0***	**3**	**0**	**3**	**2**	*8*
4:45 PM	**4**	**2**	**1**	**0**	***7***	**0**	**1**	**1**	**0**	***2***	**2**	**1**	**3**	**0**	***6***
5:00 PM	5	1	2	0	*8*	0	0	0	0	*0*	0	0	0	1	*1*
5:15 PM	5	2	0	1	*8*	0	0	0	0	*0*	0	0	0	2	*2*
5:30 PM	0	2	1	0	*3*	0	0	0	0	*0*	1	0	0	2	*3*
5:45 PM	0	2	2	1	*5*	0	0	0	1	*1*	4	1	2	1	*8*
Count Total	26	17	9	3	*55*	0	2	2	1	*5*	10	5	9	11	*35*
Peak Hour	**16**	**10**	**4**	**1**	***31***	**0**	**2**	**2**	**0**	***4***	**5**	**4**	**7**	**5**	***21***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Traffic Data Service

Campbell, CA
(408) 377-2988
tdsbay@cs.com

File Name : 1AM FINAL
Site Code : 00000001
Start Date : 6/25/2015
Page No : 1

Groups Printed- Lights - Buses - Trucks

	DEL MONTE BLVD Southbound					CANYON DEL REY BLVD Westbound					DEL MONTE BLVD Northbound					CANYON DEL REY BLVD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	30	95	9	3	137	12	86	55	4	157	20	57	33	5	115	25	73	22	4	124	533
07:15 AM	60	158	8	1	227	29	93	62	6	190	35	53	28	3	119	21	113	29	1	164	700
07:30 AM	85	193	24	0	302	20	101	89	1	211	32	59	39	0	130	29	95	34	1	159	802
07:45 AM	75	191	30	1	297	28	95	95	2	220	53	77	24	4	158	37	113	37	3	190	865
Total	250	637	71	5	963	89	375	301	13	778	140	246	124	12	522	112	394	122	9	637	2900
08:00 AM	59	178	12	4	253	22	85	75	1	183	35	69	28	1	133	24	89	68	2	183	752
08:15 AM	63	118	18	7	206	16	89	76	1	182	39	95	41	2	177	27	110	43	6	186	751
08:30 AM	77	144	21	4	246	20	97	72	0	189	39	80	40	0	159	32	93	54	1	180	774
08:45 AM	75	142	16	6	239	27	102	100	1	230	38	98	32	0	168	22	118	41	1	182	819
Total	274	582	67	21	944	85	373	323	3	784	151	342	141	3	637	105	410	206	10	731	3096
Grand Total	524	1219	138	26	1907	174	748	624	16	1562	291	588	265	15	1159	217	804	328	19	1368	5996
Apprch %	27.5	63.9	7.2	1.4		11.1	47.9	39.9	1		25.1	50.7	22.9	1.3		15.9	58.8	24	1.4		
Total %	8.7	20.3	2.3	0.4	31.8	2.9	12.5	10.4	0.3	26.1	4.9	9.8	4.4	0.3	19.3	3.6	13.4	5.5	0.3	22.8	
Lights	495	1169	127	26	1817	171	719	619	16	1525	282	578	252	15	1127	206	783	318	18	1325	5794
% Lights	94.5	95.9	92	100	95.3	98.3	96.1	99.2	100	97.6	96.9	98.3	95.1	100	97.2	94.9	97.4	97	94.7	96.9	96.6
Buses	3	14	3	0	20	3	6	2	0	11	8	8	0	0	16	0	7	1	0	8	55
% Buses	0.6	1.1	2.2	0	1	1.7	0.8	0.3	0	0.7	2.7	1.4	0	0	1.4	0	0.9	0.3	0	0.6	0.9
Trucks	26	36	8	0	70	0	23	3	0	26	1	2	13	0	16	11	14	9	1	35	147
% Trucks	5	3	5.8	0	3.7	0	3.1	0.5	0	1.7	0.3	0.3	4.9	0	1.4	5.1	1.7	2.7	5.3	2.6	2.5

	DEL MONTE BLVD Southbound				CANYON DEL REY BLVD Westbound				DEL MONTE BLVD Northbound				CANYON DEL REY BLVD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**85**	**193**	24	**302**	20	**101**	89	210	32	59	39	130	29	95	34	158	800
07:45 AM	75	191	**30**	296	**28**	95	**95**	**218**	**53**	77	24	154	**37**	**113**	37	**187**	**855**
08:00 AM	59	178	12	249	22	85	75	182	35	69	28	132	24	89	**68**	181	744
08:15 AM	63	118	18	199	16	89	76	181	39	**95**	**41**	**175**	27	110	43	180	735
Total Volume	282	680	84	1046	86	370	335	791	159	300	132	591	117	407	182	706	3134
% App. Total	27	65	8		10.9	46.8	42.4		26.9	50.8	22.3		16.6	57.6	25.8		
PHF	.829	.881	.700	.866	.768	.916	.882	.907	.750	.789	.805	.844	.791	.900	.669	.944	.916

Traffic Data Service

Campbell, CA

(408) 377-2988

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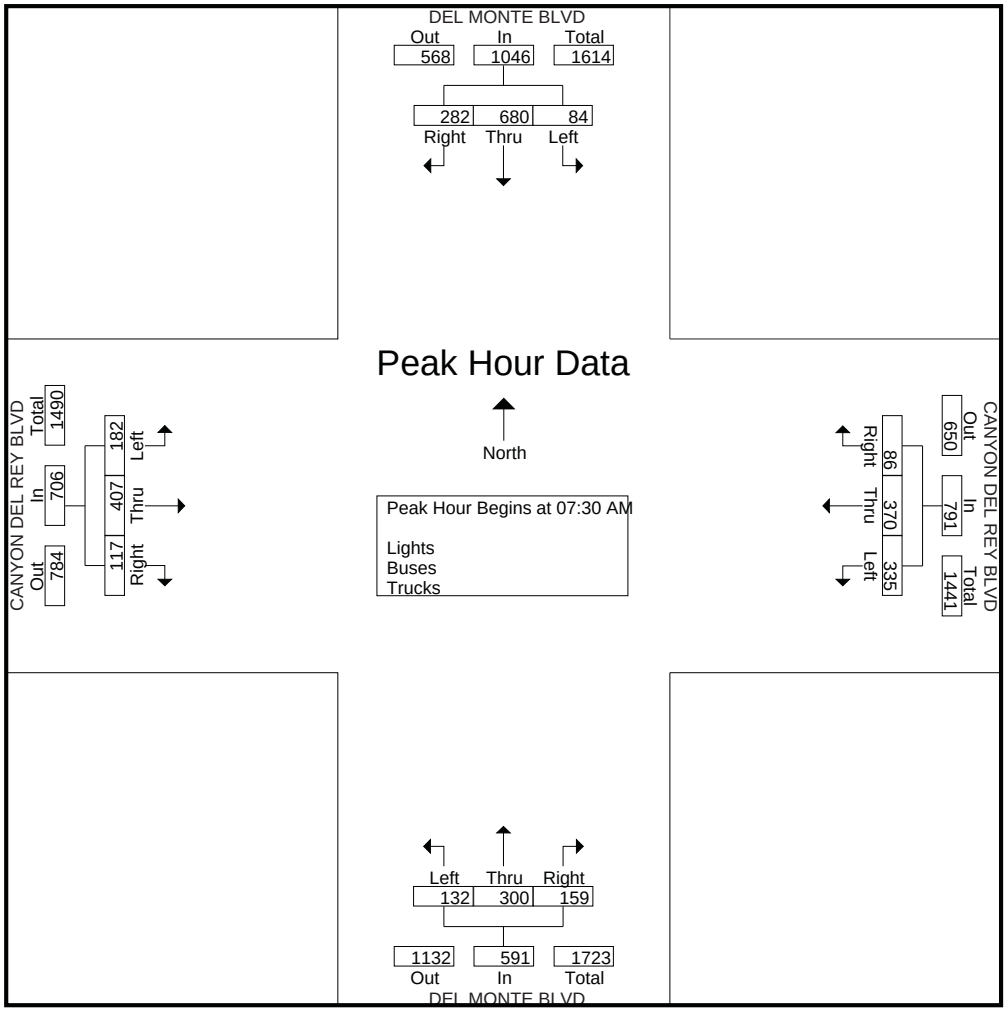
File Name : 1AM FINAL
Site Code : 00000001
Start Date : 6/25/2015
Page No : 2



Traffic Data Service

Campbell, CA
(408) 377-2988
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File Name : 1PM FINAL
Site Code : 00000001
Start Date : 6/25/2015
Page No : 1

Groups Printed- Lights - Buses - Trucks

	DEL MONTE BLVD Southbound					CANYON DEL REY BLVD Westbound					DEL MONTE BLVD Northbound					CANYON DEL REY BLVD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	62	132	39	3	236	36	144	60	2	242	114	245	62	8	429	24	87	55	4	170	1077
04:15 PM	77	109	35	5	226	55	127	45	3	230	95	229	75	4	403	32	80	49	3	164	1023
04:30 PM	72	114	40	2	228	44	128	62	4	238	119	231	62	4	416	23	85	49	2	159	1041
04:45 PM	81	114	26	4	225	35	154	56	2	247	82	250	80	6	418	17	110	40	12	179	1069
Total	292	469	140	14	915	170	553	223	11	957	410	955	279	22	1666	96	362	193	21	672	4210
05:00 PM	82	120	49	0	251	29	136	55	3	223	89	242	88	3	422	10	105	41	3	159	1055
05:15 PM	52	88	38	0	178	40	155	62	8	265	84	227	73	13	397	20	102	45	2	169	1009
05:30 PM	61	119	29	0	209	40	141	53	8	242	112	248	81	4	445	27	103	38	2	170	1066
05:45 PM	51	105	21	1	178	37	102	54	3	196	105	246	85	10	446	23	95	57	2	177	997
Total	246	432	137	1	816	146	534	224	22	926	390	963	327	30	1710	80	405	181	9	675	4127
Grand Total	538	901	277	15	1731	316	1087	447	33	1883	800	1918	606	52	3376	176	767	374	30	1347	8337
Apprch %	31.1	52.1	16	0.9		16.8	57.7	23.7	1.8		23.7	56.8	18	1.5		13.1	56.9	27.8	2.2		
Total %	6.5	10.8	3.3	0.2	20.8	3.8	13	5.4	0.4	22.6	9.6	23	7.3	0.6	40.5	2.1	9.2	4.5	0.4	16.2	
Lights	527	891	270	15	1703	306	1069	444	33	1852	791	1897	597	52	3337	174	762	372	30	1338	8230
% Lights	98	98.9	97.5	100	98.4	96.8	98.3	99.3	100	98.4	98.9	98.9	98.5	100	98.8	98.9	99.3	99.5	100	99.3	98.7
Buses	0	5	3	0	8	5	1	2	0	8	3	9	2	0	14	0	3	0	0	3	33
% Buses	0	0.6	1.1	0	0.5	1.6	0.1	0.4	0	0.4	0.4	0.5	0.3	0	0.4	0	0.4	0	0	0.2	0.4
Trucks	11	5	4	0	20	5	17	1	0	23	6	12	7	0	25	2	2	2	0	6	74
% Trucks	2	0.6	1.4	0	1.2	1.6	1.6	0.2	0	1.2	0.8	0.6	1.2	0	0.7	1.1	0.3	0.5	0	0.4	0.9

	DEL MONTE BLVD Southbound				CANYON DEL REY BLVD Westbound				DEL MONTE BLVD Northbound				CANYON DEL REY BLVD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	62	**132**	39	**233**	36	144	60	240	114	245	62	**421**	24	87	**55**	166	**1060**
04:15 PM	77	109	35	221	**55**	127	45	227	95	229	75	399	**32**	80	49	161	1008
04:30 PM	72	114	**40**	226	44	128	**62**	234	**119**	231	62	412	23	85	49	157	1029
04:45 PM	**81**	114	26	221	35	**154**	56	**245**	82	**250**	**80**	412	17	**110**	40	**167**	1045
Total Volume	292	469	140	901	170	553	223	946	410	955	279	1644	96	362	193	651	4142
% App. Total	32.4	52.1	15.5		18	58.5	23.6		24.9	58.1	17		14.7	55.6	29.6		
PHF	.901	.888	.875	.967	.773	.898	.899	.965	.861	.955	.872	.976	.750	.823	.877	.975	.977

Traffic Data Service

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File Name : 1PM FINAL
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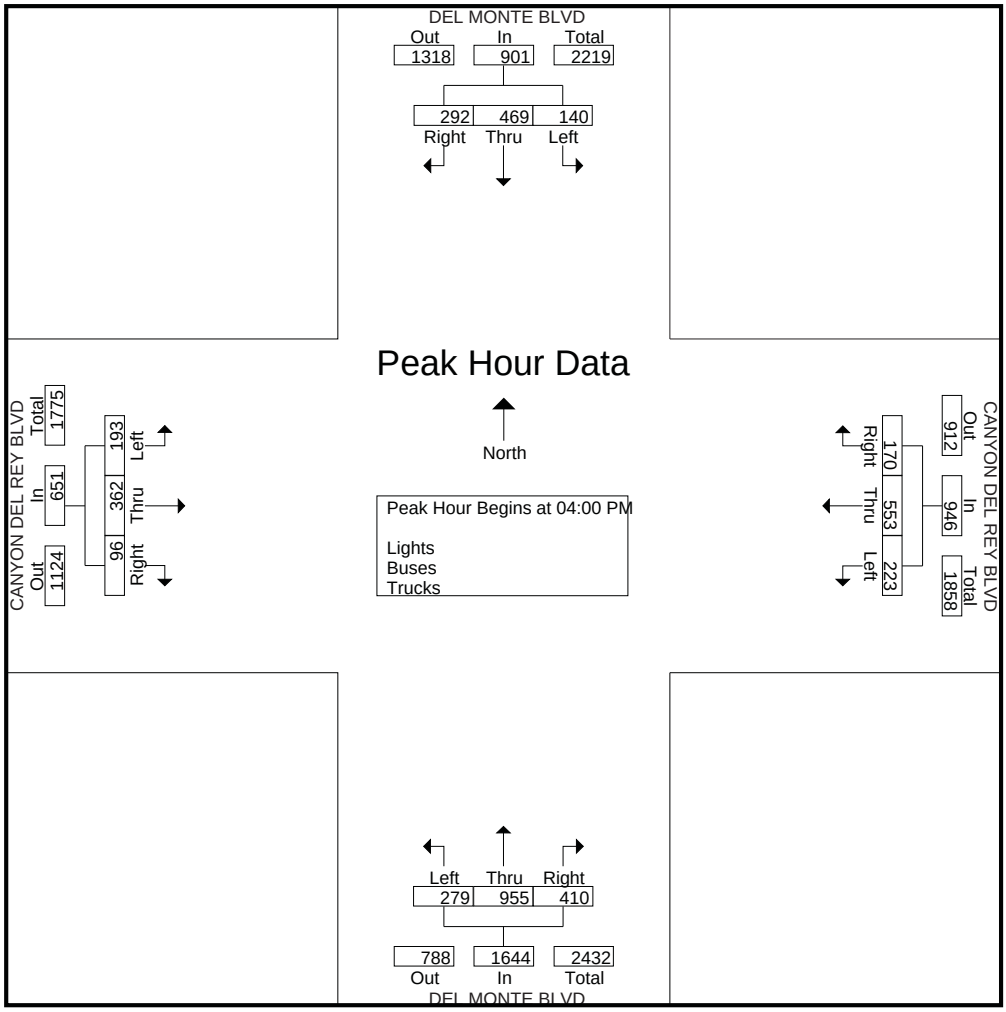

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File Name : 14AM FINAL
Site Code : 00000014
Start Date : 1/13/2015
Page No : 1

Groups Printed- Vehicles - Buses - Trucks

	SR-218 Southbound					FREMONT BLVD Westbound					SR-218 Northbound					FREMONT BLVD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	21	41	9	0	71	5	105	18	0	128	15	36	44	1	96	17	49	15	0	81	376
07:15 AM	19	55	12	1	87	15	165	32	0	212	14	52	64	3	133	46	62	23	3	134	566
07:30 AM	28	60	16	0	104	13	234	27	0	274	20	55	84	0	159	51	88	34	0	173	710
07:45 AM	22	86	27	0	135	20	188	42	0	250	15	68	78	3	164	52	106	30	0	188	737
Total	90	242	64	1	397	53	692	119	0	864	64	211	270	7	552	166	305	102	3	576	2389
08:00 AM	23	56	10	2	91	14	177	47	0	238	25	58	74	4	161	59	134	27	2	222	712
08:15 AM	30	74	14	2	120	17	159	46	2	224	16	41	43	4	104	41	91	25	2	159	607
08:30 AM	37	63	16	1	117	9	171	36	2	218	27	48	40	0	115	44	85	21	2	152	602
08:45 AM	42	71	21	1	135	15	166	33	0	214	31	44	59	4	138	34	76	21	3	134	621
Total	132	264	61	6	463	55	673	162	4	894	99	191	216	12	518	178	386	94	9	667	2542
Grand Total	222	506	125	7	860	108	1365	281	4	1758	163	402	486	19	1070	344	691	196	12	1243	4931
Apprch %	25.8	58.8	14.5	0.8		6.1	77.6	16	0.2		15.2	37.6	45.4	1.8		27.7	55.6	15.8	1		
Total %	4.5	10.3	2.5	0.1	17.4	2.2	27.7	5.7	0.1	35.7	3.3	8.2	9.9	0.4	21.7	7	14	4	0.2	25.2	
Vehicles	207	476	123	7	813	108	1337	273	4	1722	155	390	479	19	1043	323	672	186	12	1193	4771
% Vehicles	93.2	94.1	98.4	100	94.5	100	97.9	97.2	100	98	95.1	97	98.6	100	97.5	93.9	97.3	94.9	100	96	96.8
Buses	5	13	1	0	19	0	20	2	0	22	1	7	4	0	12	9	10	1	0	20	73
% Buses	2.3	2.6	0.8	0	2.2	0	1.5	0.7	0	1.3	0.6	1.7	0.8	0	1.1	2.6	1.4	0.5	0	1.6	1.5
Trucks	10	17	1	0	28	0	8	6	0	14	7	5	3	0	15	12	9	9	0	30	87
% Trucks	4.5	3.4	0.8	0	3.3	0	0.6	2.1	0	0.8	4.3	1.2	0.6	0	1.4	3.5	1.3	4.6	0	2.4	1.8

	SR-218 Southbound				FREMONT BLVD Westbound				SR-218 Northbound				FREMONT BLVD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	28	60	16	104	13	**234**	27	**274**	20	55	**84**	159	51	88	**34**	173	710
07:45 AM	22	**86**	**27**	**135**	**20**	188	42	250	15	**68**	78	**161**	52	106	30	188	**734**
08:00 AM	23	56	10	89	14	177	**47**	238	**25**	58	74	157	**59**	**134**	27	**220**	704
08:15 AM	**30**	74	14	118	17	159	46	222	16	41	43	100	41	91	25	157	597
Total Volume	103	276	67	446	64	758	162	984	76	222	279	577	203	419	116	738	2745
% App. Total	23.1	61.9	15		6.5	77	16.5		13.2	38.5	48.4		27.5	56.8	15.7		
PHF	.858	.802	.620	.826	.800	.810	.862	.898	.760	.816	.830	.896	.860	.782	.853	.839	.935

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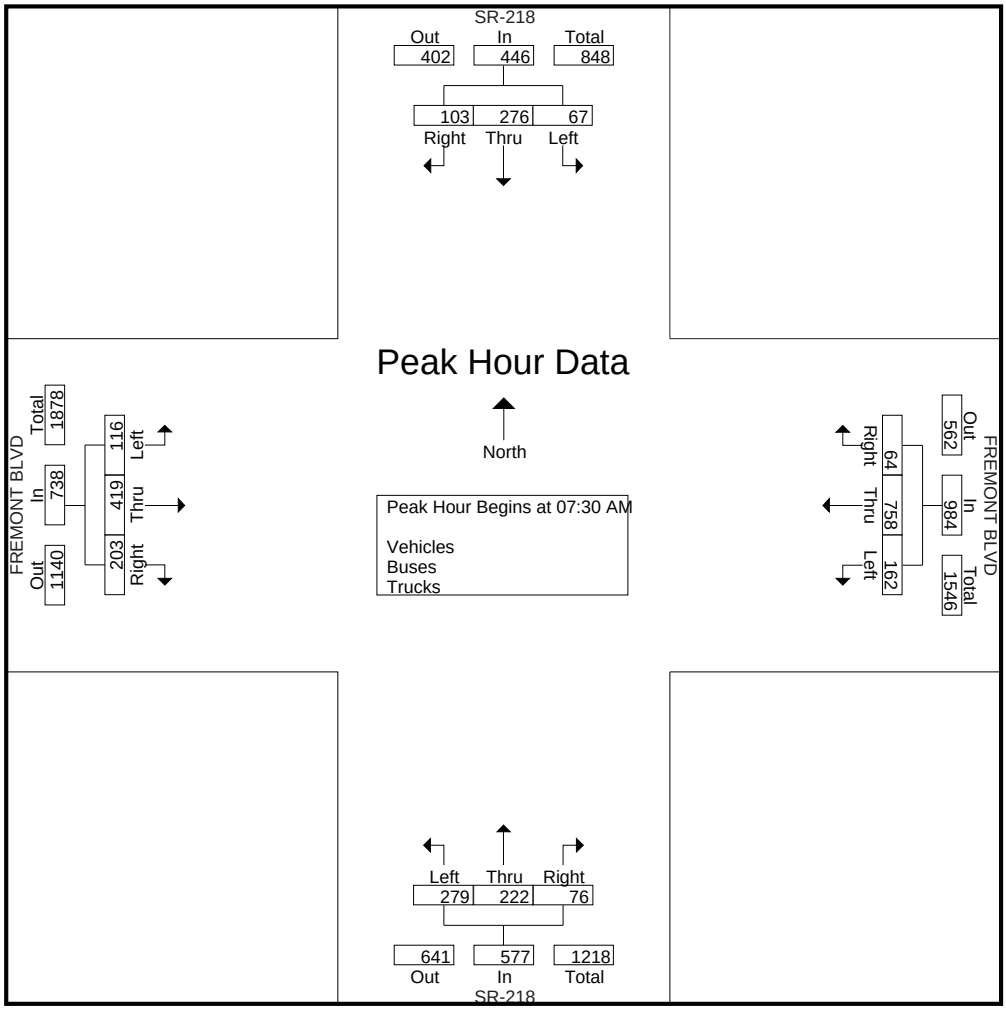

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File Name : 14PM FINAL
Site Code : 00000014
Start Date : 1/13/2015
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Groups Printed- Vehicles - Buses - Trucks

	SR-218 Southbound					FREMONT BLVD Westbound					SR-218 Northbound					FREMONT BLVD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	33	63	25	1	122	16	125	43	1	185	51	93	54	0	198	71	197	53	3	324	829
04:15 PM	33	58	35	1	127	18	137	39	2	196	54	70	61	7	192	46	209	44	3	302	817
04:30 PM	45	44	22	0	111	15	138	40	0	193	50	81	64	3	198	72	178	38	1	289	791
04:45 PM	38	60	32	0	130	19	136	28	2	185	43	84	58	15	200	50	214	48	1	313	828
Total	149	225	114	2	490	68	536	150	5	759	198	328	237	25	788	239	798	183	8	1228	3265
05:00 PM	39	77	38	6	160	12	130	44	0	186	52	98	78	3	231	61	175	40	5	281	858
05:15 PM	49	58	35	5	147	11	134	51	1	197	48	72	60	3	183	52	221	50	6	329	856
05:30 PM	28	51	34	5	118	9	142	47	2	200	52	71	61	11	195	57	212	46	5	320	833
05:45 PM	35	65	46	0	146	2	141	34	4	181	44	60	51	9	164	60	206	35	1	302	793
Total	151	251	153	16	571	34	547	176	7	764	196	301	250	26	773	230	814	171	17	1232	3340
Grand Total	300	476	267	18	1061	102	1083	326	12	1523	394	629	487	51	1561	469	1612	354	25	2460	6605
Apprch %	28.3	44.9	25.2	1.7		6.7	71.1	21.4	0.8		25.2	40.3	31.2	3.3		19.1	65.5	14.4	1		
Total %	4.5	7.2	4	0.3	16.1	1.5	16.4	4.9	0.2	23.1	6	9.5	7.4	0.8	23.6	7.1	24.4	5.4	0.4	37.2	
Vehicles	296	463	264	18	1041	101	1073	323	12	1509	389	622	484	51	1546	464	1589	346	25	2424	6520
% Vehicles	98.7	97.3	98.9	100	98.1	99	99.1	99.1	100	99.1	98.7	98.9	99.4	100	99	98.9	98.6	97.7	100	98.5	98.7
Buses	2	7	1	0	10	0	10	1	0	11	1	3	1	0	5	4	18	3	0	25	51
% Buses	0.7	1.5	0.4	0	0.9	0	0.9	0.3	0	0.7	0.3	0.5	0.2	0	0.3	0.9	1.1	0.8	0	1	0.8
Trucks	2	6	2	0	10	1	0	2	0	3	4	4	2	0	10	1	5	5	0	11	34
% Trucks	0.7	1.3	0.7	0	0.9	1	0	0.6	0	0.2	1	0.6	0.4	0	0.6	0.2	0.3	1.4	0	0.4	0.5

	SR-218 Southbound				FREMONT BLVD Westbound				SR-218 Northbound				FREMONT BLVD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	38	60	32	130	**19**	136	28	183	43	84	58	185	50	214	48	312	810
05:00 PM	39	**77**	**38**	**154**	12	130	44	186	**52**	**98**	**78**	**228**	**61**	175	40	276	**844**
05:15 PM	**49**	58	35	142	11	134	**51**	196	48	72	60	180	52	**221**	**50**	**323**	841
05:30 PM	28	51	34	113	9	**142**	47	**198**	52	71	61	184	57	212	46	315	810
Total Volume	154	246	139	539	51	542	170	763	195	325	257	777	220	822	184	1226	3305
% App. Total	28.6	45.6	25.8		6.7	71	22.3		25.1	41.8	33.1		17.9	67	15		
PHF	.786	.799	.914	.875	.671	.954	.833	.963	.938	.829	.824	.852	.902	.930	.920	.949	.979

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File Name : 14PM FINAL
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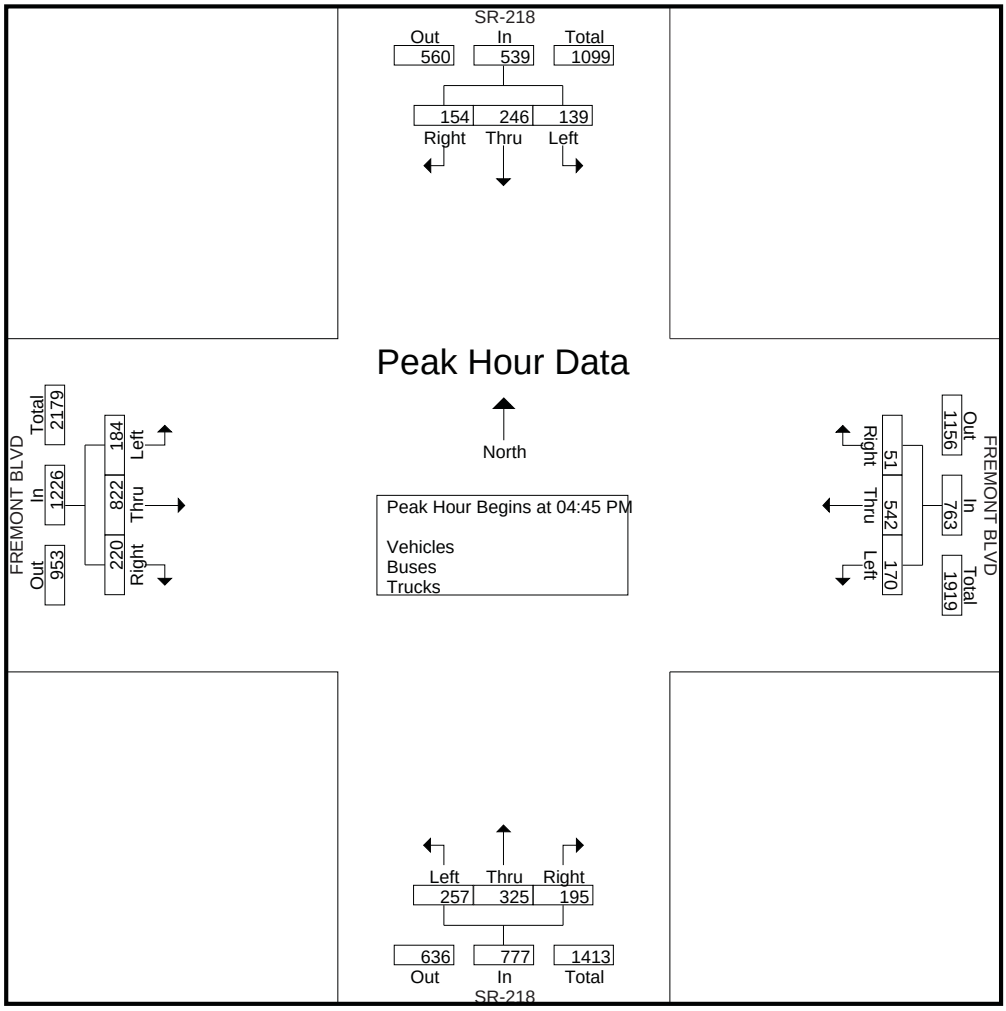

Traffic Data Service

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File Name : 13AM FINAL
Site Code : 00000013
Start Date : 1/13/2015
Page No : 1

Groups Printed- Vehicles - Buses - Trucks

	SR-218 Southbound					GENERAL JIM MOORE BLVD Westbound					SR-218 Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	83	15	0	98	17	0	50	0	67	17	58	0	0	75	0	0	0	0	0	240
07:15 AM	0	103	28	0	131	27	0	81	0	108	18	51	0	0	69	0	0	0	0	0	308
07:30 AM	0	122	30	0	152	48	0	104	1	153	25	62	0	0	87	0	0	0	0	0	392
07:45 AM	0	146	41	0	187	42	0	121	0	163	31	78	0	0	109	0	0	0	0	0	459
Total	0	454	114	0	568	134	0	356	1	491	91	249	0	0	340	0	0	0	0	0	1399
08:00 AM	0	134	31	0	165	39	0	127	0	166	16	78	0	0	94	0	0	0	0	0	425
08:15 AM	0	130	17	1	148	16	0	92	0	108	20	57	0	0	77	0	0	0	0	0	333
08:30 AM	0	113	18	0	131	15	0	68	0	83	13	76	0	0	89	0	0	0	0	0	303
08:45 AM	0	120	13	0	133	21	0	71	0	92	26	89	0	0	115	0	0	0	0	0	340
Total	0	497	79	1	577	91	0	358	0	449	75	300	0	0	375	0	0	0	0	0	1401
Grand Total	0	951	193	1	1145	225	0	714	1	940	166	549	0	0	715	0	0	0	0	0	2800
Apprch %	0	83.1	16.9	0.1		23.9	0	76	0.1		23.2	76.8	0	0		0	0	0	0		
Total %	0	34	6.9	0	40.9	8	0	25.5	0	33.6	5.9	19.6	0	0	25.5	0	0	0	0	0	
Vehicles	0	895	193	1	1089	222	0	706	1	929	164	525	0	0	689	0	0	0	0	0	2707
% Vehicles	0	94.1	100	100	95.1	98.7	0	98.9	100	98.8	98.8	95.6	0	0	96.4	0	0	0	0	0	96.7
Buses	0	23	0	0	23	1	0	5	0	6	1	8	0	0	9	0	0	0	0	0	38
% Buses	0	2.4	0	0	2	0.4	0	0.7	0	0.6	0.6	1.5	0	0	1.3	0	0	0	0	0	1.4
Trucks	0	33	0	0	33	2	0	3	0	5	1	16	0	0	17	0	0	0	0	0	55
% Trucks	0	3.5	0	0	2.9	0.9	0	0.4	0	0.5	0.6	2.9	0	0	2.4	0	0	0	0	0	2

	SR-218 Southbound				GENERAL JIM MOORE BLVD Westbound				SR-218 Northbound				Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	122	30	152	**48**	0	104	152	25	62	0	87	0	0	0	0	391
07:45 AM	0	**146**	**41**	**187**	42	0	121	163	**31**	**78**	0	**109**	0	0	0	0	**459**
08:00 AM	0	134	31	165	39	0	**127**	**166**	16	78	0	94	0	0	0	0	425
08:15 AM	0	130	17	147	16	0	92	108	20	57	0	77	0	0	0	0	332
Total Volume	0	532	119	651	145	0	444	589	92	275	0	367	0	0	0	0	1607
% App. Total	0	81.7	18.3		24.6	0	75.4		25.1	74.9	0		0	0	0		
PHF	.000	.911	.726	.870	.755	.000	.874	.887	.742	.881	.000	.842	.000	.000	.000	.000	.875

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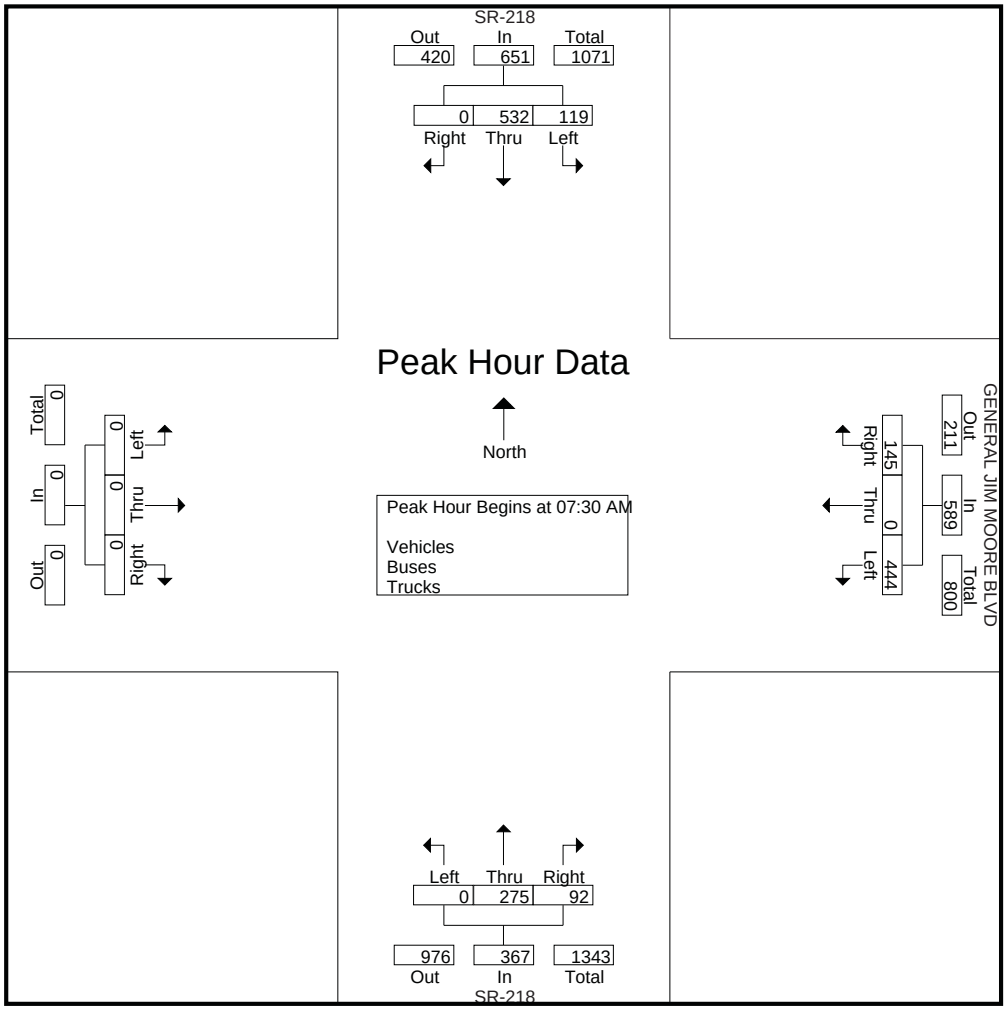

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File Name : 13PM FINAL
Site Code : 00000013
Start Date : 1/13/2015
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Groups Printed- Vehicles - Buses - Trucks

	SR-218 Southbound					GENERAL JIM MOORE BLVD Westbound					SR-218 Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	79	27	0	106	19	0	38	0	57	59	127	0	0	186	0	0	0	0	0	349
04:15 PM	0	71	22	0	93	15	0	28	0	43	66	129	0	0	195	0	0	0	0	0	331
04:30 PM	0	74	36	1	111	21	0	30	0	51	98	148	0	0	246	0	0	0	0	0	408
04:45 PM	0	67	42	0	109	24	0	27	0	51	99	161	0	0	260	0	0	0	0	0	420
Total	0	291	127	1	419	79	0	123	0	202	322	565	0	0	887	0	0	0	0	0	1508
05:00 PM	0	72	35	0	107	22	0	23	0	45	112	163	0	0	275	0	0	0	0	0	427
05:15 PM	0	58	35	0	93	16	0	19	0	35	105	127	0	0	232	0	0	0	0	0	360
05:30 PM	0	60	40	0	100	20	0	17	0	37	69	144	0	0	213	0	0	0	0	0	350
05:45 PM	0	56	25	0	81	14	0	30	0	44	52	120	0	0	172	0	0	0	0	0	297
Total	0	246	135	0	381	72	0	89	0	161	338	554	0	0	892	0	0	0	0	0	1434
Grand Total	0	537	262	1	800	151	0	212	0	363	660	1119	0	0	1779	0	0	0	0	0	2942
Apprch %	0	67.1	32.8	0.1		41.6	0	58.4	0		37.1	62.9	0	0		0	0	0	0		
Total %	0	18.3	8.9	0	27.2	5.1	0	7.2	0	12.3	22.4	38	0	0	60.5	0	0	0	0	0	
Vehicles	0	510	259	1	770	151	0	202	0	353	656	1101	0	0	1757	0	0	0	0	0	2880
% Vehicles	0	95	98.9	100	96.2	100	0	95.3	0	97.2	99.4	98.4	0	0	98.8	0	0	0	0	0	97.9
Buses	0	17	1	0	18	0	0	9	0	9	2	6	0	0	8	0	0	0	0	0	35
% Buses	0	3.2	0.4	0	2.2	0	0	4.2	0	2.5	0.3	0.5	0	0	0.4	0	0	0	0	0	1.2
Trucks	0	10	2	0	12	0	0	1	0	1	2	12	0	0	14	0	0	0	0	0	27
% Trucks	0	1.9	0.8	0	1.5	0	0	0.5	0	0.3	0.3	1.1	0	0	0.8	0	0	0	0	0	0.9

	SR-218 Southbound				GENERAL JIM MOORE BLVD Westbound				SR-218 Northbound				Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	**74**	36	**110**	21	0	**30**	**51**	98	148	0	246	0	0	0	0	407
04:45 PM	0	67	**42**	109	**24**	0	27	51	99	161	0	260	0	0	0	0	420
05:00 PM	0	72	35	107	22	0	23	45	**112**	**163**	0	**275**	0	0	0	0	**427**
05:15 PM	0	58	35	93	16	0	19	35	105	127	0	232	0	0	0	0	360
Total Volume	0	271	148	419	83	0	99	182	414	599	0	1013	0	0	0	0	1614
% App. Total	0	64.7	35.3		45.6	0	54.4		40.9	59.1	0		0	0	0		
PHF	.000	.916	.881	.952	.865	.000	.825	.892	.924	.919	.000	.921	.000	.000	.000	.000	.945

Traffic Data Service

Campbell, CA
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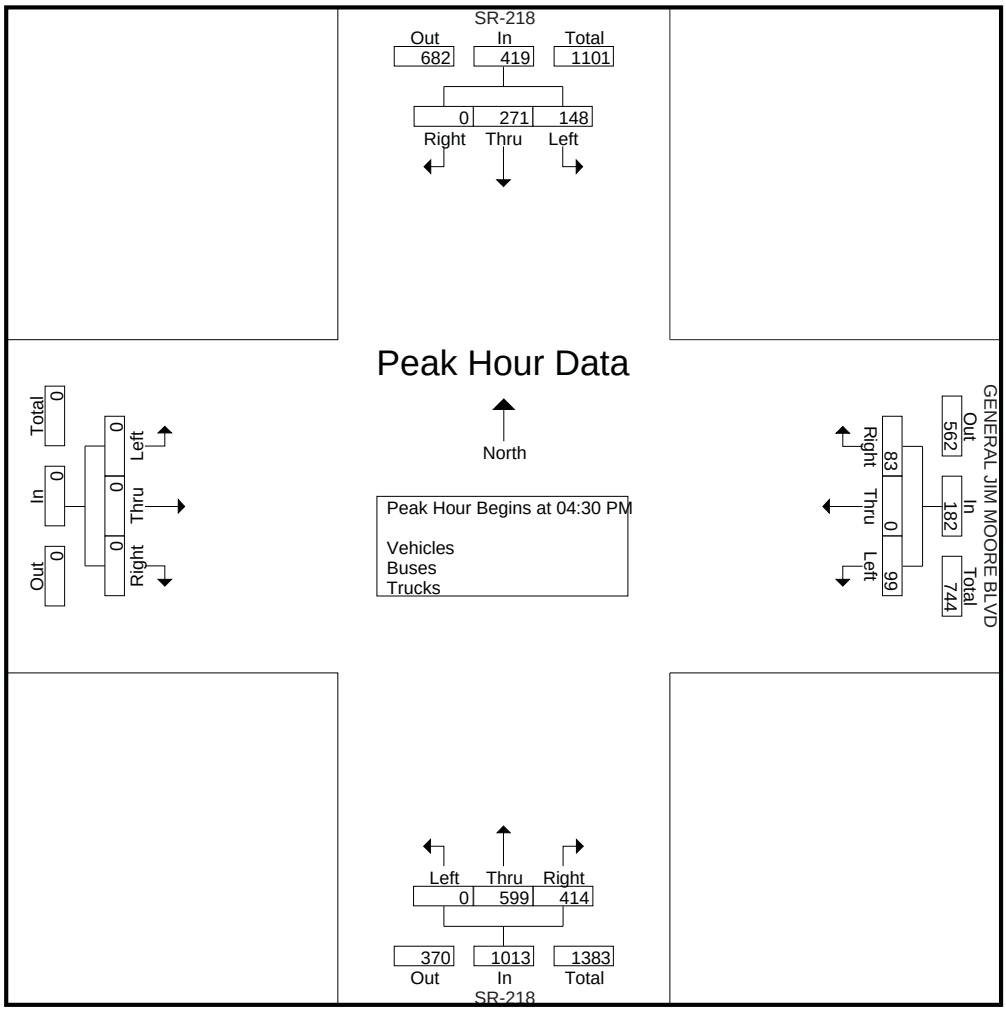
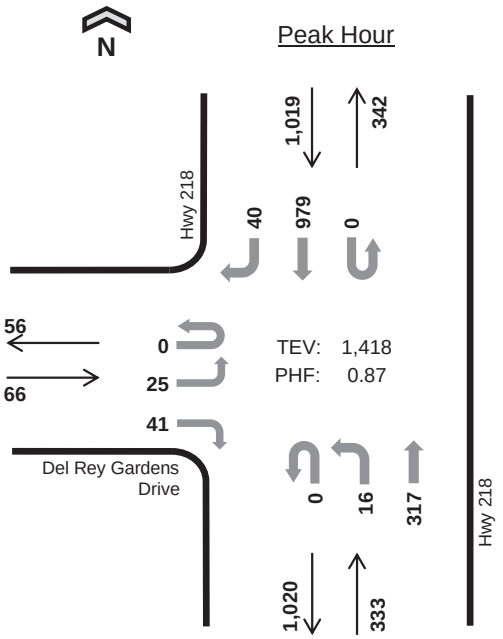
File Name : 13PM FINAL
Site Code : 00000013
Start Date : 1/13/2015
Page No : 2

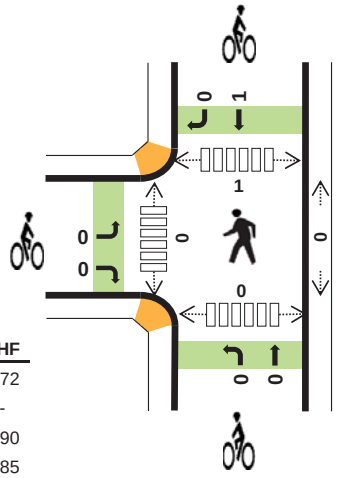


Hwy 218
Del Rey Gardens Drive

Date: 11/03/2016
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	16.7%	0.72
WB	-	-
NB	3.9%	0.90
SB	3.1%	0.85
TOTAL	3.9%	0.87



Two-Hour Count Summaries

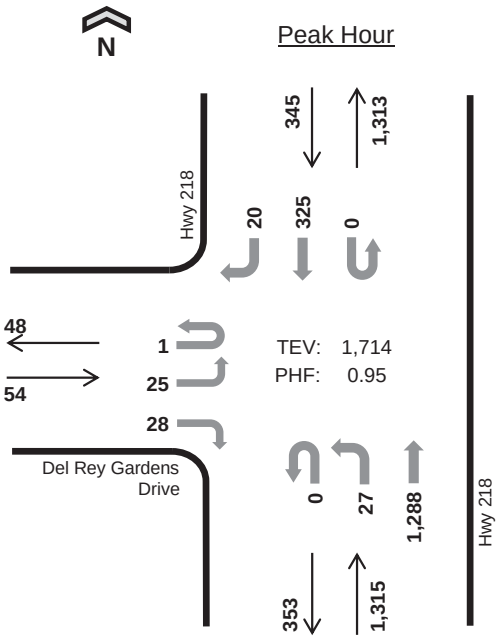
Interval Start	Del Rey Gardens Drive				0				Hwy 218				Hwy 218				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	6	0	3	0	0	0	0	0	2	53	0	0	0	143	7	214	0
7:15 AM	0	3	0	10	0	0	0	0	0	4	54	0	0	0	209	14	294	0
7:30 AM	**0**	**7**	**0**	**12**	**0**	**0**	**0**	**0**	**0**	**4**	**70**	**0**	**0**	**0**	**250**	**13**	**356**	0
7:45 AM	**0**	**10**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**3**	**82**	**0**	**0**	**0**	**288**	**12**	**408**	1,272
8:00 AM	**0**	**5**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**2**	**79**	**0**	**0**	**0**	**221**	**8**	**322**	1,380
8:15 AM	**0**	**3**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**7**	**86**	**0**	**0**	**0**	**220**	**7**	**332**	**1,418**
8:30 AM	0	5	0	8	0	0	0	0	0	3	77	0	0	0	223	8	324	1,386
8:45 AM	0	3	0	3	0	0	0	0	0	4	80	0	0	0	184	8	282	1,260
Count Total	0	42	0	65	0	0	0	0	0	29	581	0	0	0	1,738	77	2,532	0
Peak Hour All	**0**	**25**	**0**	**41**	**0**	**0**	**0**	**0**	**0**	**16**	**317**	**0**	**0**	**0**	**979**	**40**	**1,418**	**0**
Peak Hour HV	**0**	**3**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**3**	**10**	**0**	**0**	**0**	**30**	**2**	**56**	**0**
Peak Hour HV%	**-**	**12%**	**-**	**20%**	**-**	**-**	**-**	**-**	**-**	**19%**	**3%**	**-**	**-**	**-**	**3%**	**5%**	**4%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

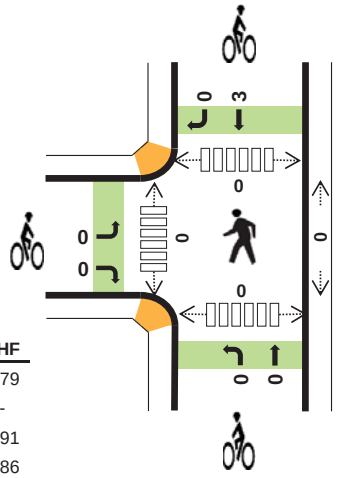
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	4	0	6	3	*13*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	0	0	5	2	*7*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	**2**	**0**	**1**	**3**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**6**	**0**	**6**	**8**	***20***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:00 AM	**0**	**0**	**1**	**6**	***7***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**1**	**0**	*1*
8:15 AM	**3**	**0**	**5**	**15**	***23***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
8:30 AM	2	0	1	18	*21*	0	0	0	2	*2*	0	0	0	0	*0*
8:45 AM	1	0	6	9	*16*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	18	0	31	64	*113*	0	0	0	3	*3*	0	0	1	0	*1*
Peak Hr	**11**	**0**	**13**	**32**	***56***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**1**	**0**	***1***

Hwy 218
Del Rey Gardens Drive

Date: 11/03/2016
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM



	HV %:	PHF
EB	0.0%	0.79
WB	-	-
NB	2.0%	0.91
SB	4.3%	0.86
TOTAL	2.4%	0.95



Two-Hour Count Summaries

Interval Start	Del Rey Gardens Drive Eastbound				0 Westbound				Hwy 218 Northbound				Hwy 218 Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	10	0	9	0	0	0	0	0	4	224	0	0	0	93	1	341	0
4:15 PM	0	2	0	3	0	0	0	0	0	5	268	0	0	0	81	5	364	0
4:30 PM	**0**	**5**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**9**	**297**	**0**	**0**	**0**	**83**	**6**	**409**	0
4:45 PM	**0**	**8**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**2**	**298**	**0**	**0**	**0**	**97**	**3**	**417**	1,531
5:00 PM	**1**	**9**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**5**	**355**	**0**	**0**	**0**	**71**	**1**	**449**	1,639
5:15 PM	**0**	**3**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**11**	**338**	**0**	**0**	**0**	**74**	**10**	**439**	**1,714**
5:30 PM	0	5	0	4	0	0	0	0	0	7	260	0	0	0	66	10	352	1,657
5:45 PM	1	5	0	1	0	0	0	0	0	7	186	0	0	0	82	7	289	1,529
Count Total	2	47	0	45	0	0	0	0	0	50	2,226	0	0	0	647	43	3,060	0
Peak Hour All	**1**	**25**	**0**	**28**	**0**	**0**	**0**	**0**	**0**	**27**	**1,288**	**0**	**0**	**0**	**325**	**20**	**1,714**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**22**	**0**	**0**	**0**	**15**	**0**	**41**	**0**
Peak Hour HV%	**0%**	**0%**	**-**	**0%**	**-**	**-**	**-**	**-**	**-**	**15%**	**2%**	**-**	**-**	**-**	**5%**	**0%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	5	7	*12*	0	0	0	0	*0*	0	0	0	0	*0*
4:15 PM	0	0	3	10	*13*	0	0	0	1	*1*	0	1	0	0	*1*
4:30 PM	**0**	**0**	**6**	**5**	***11***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**0**	**0**	**7**	**3**	***10***	**0**	**0**	**0**	**2**	***2***	**0**	**0**	**0**	**0**	*0*
5:00 PM	**0**	**0**	**4**	**6**	***10***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	*0*
5:15 PM	**0**	**0**	**9**	**1**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
5:30 PM	0	0	0	3	*3*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	0	0	0	8	*8*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	0	0	34	43	*77*	0	0	0	4	*4*	0	1	0	0	*1*
Peak Hr	**0**	**0**	**26**	**15**	***41***	**0**	**0**	**0**	**3**	***3***	**0**	**0**	**0**	**0**	***0***

Traffic Data Service

Campbell, CA
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File Name : 11AM FINAL
Site Code : 00000011
Start Date : 1/13/2015
Page No : 1

Groups Printed- Vehicles - Buses - Trucks

	SR-218 Southbound					RYAN RANCH RD Westbound					SR-218 Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	120	8	0	128	4	0	2	0	6	10	72	0	0	82	0	0	0	0	0	216
07:15 AM	0	166	11	0	177	0	0	0	0	0	5	57	0	0	62	0	0	0	0	0	239
07:30 AM	0	211	18	0	229	0	0	2	1	3	4	84	0	0	88	0	0	0	0	0	320
07:45 AM	0	235	28	0	263	3	0	1	0	4	17	90	0	0	107	0	0	0	0	0	374
Total	0	732	65	0	797	7	0	5	1	13	36	303	0	0	339	0	0	0	0	0	1149
08:00 AM	0	235	29	0	264	10	0	6	0	16	14	80	0	0	94	0	0	0	0	0	374
08:15 AM	0	197	19	0	216	4	0	3	0	7	9	72	0	0	81	0	0	0	0	0	304
08:30 AM	0	154	16	0	170	10	0	3	0	13	11	73	0	0	84	0	0	0	0	0	267
08:45 AM	0	167	15	0	182	4	0	8	0	12	12	112	0	0	124	0	0	0	0	0	318
Total	0	753	79	0	832	28	0	20	0	48	46	337	0	0	383	0	0	0	0	0	1263
Grand Total	0	1485	144	0	1629	35	0	25	1	61	82	640	0	0	722	0	0	0	0	0	2412
Apprch %	0	91.2	8.8	0		57.4	0	41	1.6		11.4	88.6	0	0		0	0	0	0		
Total %	0	61.6	6	0	67.5	1.5	0	1	0	2.5	3.4	26.5	0	0	29.9	0	0	0	0	0	
Vehicles	0	1448	127	0	1575	28	0	19	1	48	77	621	0	0	698	0	0	0	0	0	2321
% Vehicles	0	97.5	88.2	0	96.7	80	0	76	100	78.7	93.9	97	0	0	96.7	0	0	0	0	0	96.2
Buses	0	4	10	0	14	2	0	4	0	6	4	6	0	0	10	0	0	0	0	0	30
% Buses	0	0.3	6.9	0	0.9	5.7	0	16	0	9.8	4.9	0.9	0	0	1.4	0	0	0	0	0	1.2
Trucks	0	33	7	0	40	5	0	2	0	7	1	13	0	0	14	0	0	0	0	0	61
% Trucks	0	2.2	4.9	0	2.5	14.3	0	8	0	11.5	1.2	2	0	0	1.9	0	0	0	0	0	2.5

	SR-218 Southbound				RYAN RANCH RD Westbound				SR-218 Northbound				Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	211	18	229	0	0	2	2	4	84	0	88	0	0	0	0	319
07:45 AM	0	**235**	28	263	3	0	1	4	**17**	**90**	0	**107**	0	0	0	0	**374**
08:00 AM	0	235	**29**	**264**	**10**	0	**6**	**16**	14	80	0	94	0	0	0	0	374
08:15 AM	0	197	19	216	4	0	3	7	9	72	0	81	0	0	0	0	304
Total Volume	0	878	94	972	17	0	12	29	44	326	0	370	0	0	0	0	1371
% App. Total	0	90.3	9.7		58.6	0	41.4		11.9	88.1	0		0	0	0		
PHF	.000	.934	.810	.920	.425	.000	.500	.453	.647	.906	.000	.864	.000	.000	.000	.000	.916

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File Name : 11AM FINAL
Site Code : 00000011
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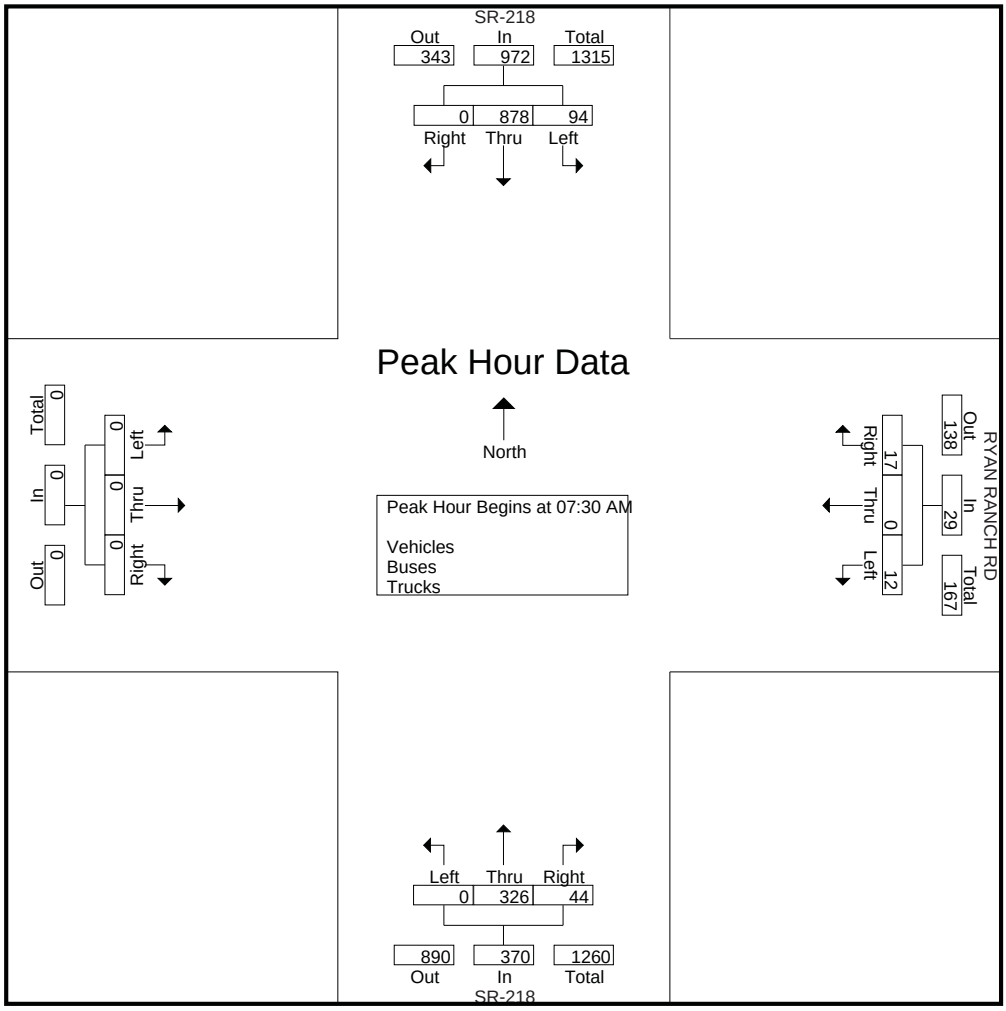

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File Name : 11PM FINAL
Site Code : 00000011
Start Date : 1/13/2015
Page No : 1

Groups Printed- Vehicles - Buses - Trucks

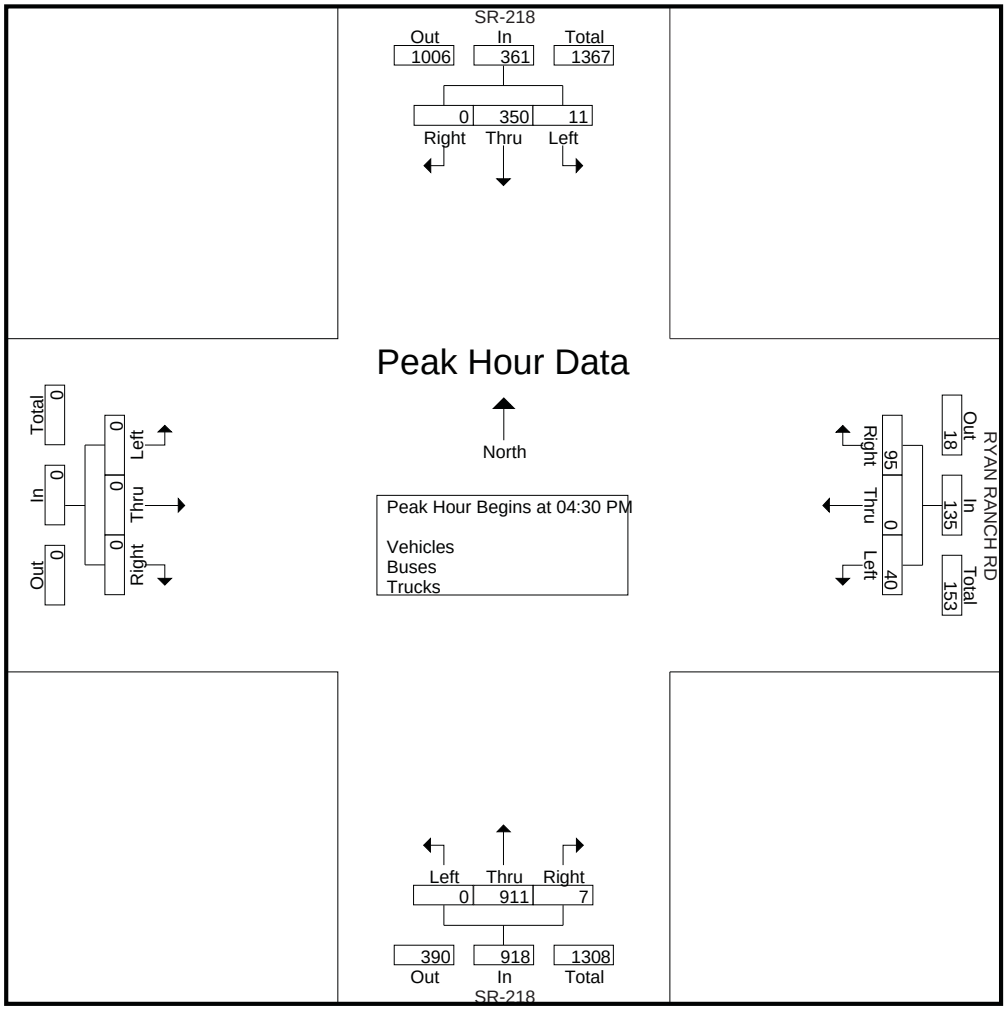
	SR-218 Southbound					RYAN RANCH RD Westbound					SR-218 Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	97	8	0	105	13	0	14	0	27	6	166	0	0	172	0	0	0	0	0	304
04:15 PM	0	83	3	0	86	13	0	10	0	23	4	184	0	0	188	0	0	0	0	0	297
04:30 PM	0	101	2	0	103	25	0	16	0	41	1	213	0	0	214	0	0	0	0	0	358
04:45 PM	0	87	5	0	92	24	0	5	0	29	3	220	0	0	223	0	0	0	0	0	344
Total	0	368	18	0	386	75	0	45	0	120	14	783	0	0	797	0	0	0	0	0	1303
05:00 PM	0	89	2	0	91	28	0	10	0	38	3	253	0	0	256	0	0	0	0	0	385
05:15 PM	0	73	2	0	75	18	0	9	0	27	0	225	0	0	225	0	0	0	0	0	327
05:30 PM	0	72	1	0	73	17	0	9	0	26	1	179	0	0	180	0	0	0	0	0	279
05:45 PM	0	79	4	0	83	12	0	2	0	14	1	162	0	0	163	0	0	0	0	0	260
Total	0	313	9	0	322	75	0	30	0	105	5	819	0	0	824	0	0	0	0	0	1251
Grand Total	0	681	27	0	708	150	0	75	0	225	19	1602	0	0	1621	0	0	0	0	0	2554
Apprch %	0	96.2	3.8	0		66.7	0	33.3	0		1.2	98.8	0	0		0	0	0	0		
Total %	0	26.7	1.1	0	27.7	5.9	0	2.9	0	8.8	0.7	62.7	0	0	63.5	0	0	0	0	0	
Vehicles	0	674	20	0	694	145	0	71	0	216	12	1585	0	0	1597	0	0	0	0	0	2507
% Vehicles	0	99	74.1	0	98	96.7	0	94.7	0	96	63.2	98.9	0	0	98.5	0	0	0	0	0	98.2
Buses	0	3	5	0	8	3	0	1	0	4	4	5	0	0	9	0	0	0	0	0	21
% Buses	0	0.4	18.5	0	1.1	2	0	1.3	0	1.8	21.1	0.3	0	0	0.6	0	0	0	0	0	0.8
Trucks	0	4	2	0	6	2	0	3	0	5	3	12	0	0	15	0	0	0	0	0	26
% Trucks	0	0.6	7.4	0	0.8	1.3	0	4	0	2.2	15.8	0.7	0	0	0.9	0	0	0	0	0	1

	SR-218 Southbound				RYAN RANCH RD Westbound				SR-218 Northbound				Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	**101**	2	**103**	25	0	**16**	**41**	1	213	0	214	0	0	0	0	358
04:45 PM	0	87	**5**	92	24	0	5	29	**3**	220	0	223	0	0	0	0	344
05:00 PM	0	89	2	91	**28**	0	10	38	3	**253**	0	**256**	0	0	0	0	**385**
05:15 PM	0	73	2	75	18	0	9	27	0	225	0	225	0	0	0	0	327
Total Volume	0	350	11	361	95	0	40	135	7	911	0	918	0	0	0	0	1414
% App. Total	0	97	3		70.4	0	29.6		0.8	99.2	0		0	0	0		
PHF	.000	.866	.550	.876	.848	.000	.625	.823	.583	.900	.000	.896	.000	.000	.000	.000	.918

Traffic Data Service

Campbell, CA
(408) 377-2988
tdsbay@cs.com

File Name : 11PM FINAL
Site Code : 00000011
Start Date : 1/13/2015
Page No : 2



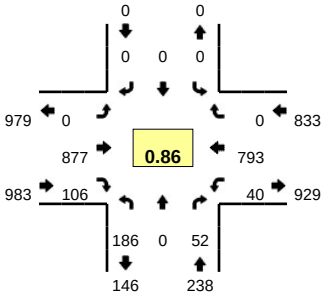
Type of peak hour being reported: Intersection Peak

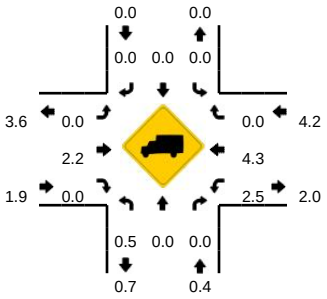
Method for determining peak hour: Total Entering Volume

LOCATION: Josselyn Canyon Rd -- SR 68
CITY/STATE: Monterey, CA

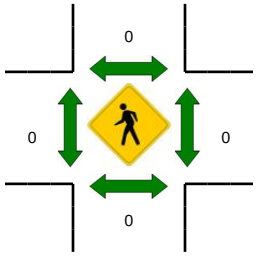
QC JOB #: 13723601
DATE: Wed, Feb 24 2016

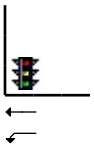
Peak-Hour: 7:25 AM -- 8:25 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

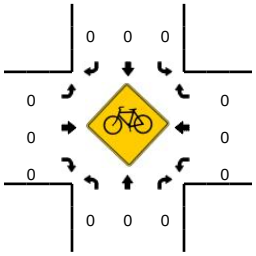


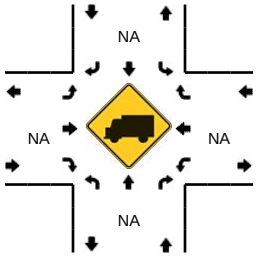


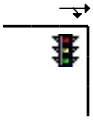
Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

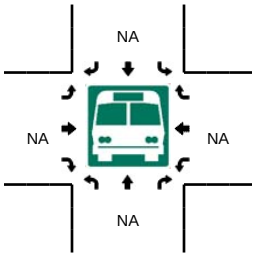












5-Min Count Period Beginning At	Josselyn Canyon Rd (Northbound)				Josselyn Canyon Rd (Southbound)				SR 68 (Eastbound)				SR 68 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	4	0	4	0	0	0	0	0	0	62	7	0	2	59	0	0	138	
7:05 AM	3	0	4	0	0	0	0	0	0	46	7	0	2	64	0	0	126	
7:10 AM	2	0	2	0	0	0	0	0	0	63	4	0	2	51	0	0	124	
7:15 AM	7	0	1	0	0	0	0	0	0	70	2	0	2	55	0	0	137	
7:20 AM	7	0	0	0	0	0	0	0	0	66	4	0	1	57	0	0	135	
7:25 AM	11	0	2	0	0	0	0	0	0	61	8	0	3	76	0	0	161	
7:30 AM	10	0	5	0	0	0	0	0	0	73	7	0	3	77	0	0	175	
7:35 AM	15	0	8	0	0	0	0	0	0	80	8	0	2	75	0	0	188	
7:40 AM	15	0	5	0	0	0	0	0	0	68	22	0	5	91	0	0	206	
7:45 AM	16	0	4	0	0	0	0	0	0	71	19	0	2	89	0	0	201	
7:50 AM	15	0	4	0	0	0	0	0	0	77	14	0	7	76	0	0	193	
7:55 AM	25	0	6	0	0	0	0	0	0	50	9	0	9	52	0	0	151	1935
8:00 AM	28	0	8	0	0	0	0	0	0	71	6	0	1	50	0	0	164	1961
8:05 AM	17	0	2	0	0	0	0	0	0	81	5	0	3	47	0	0	155	1990
8:10 AM	11	0	4	0	0	0	0	0	0	90	0	0	3	60	0	0	168	2034
8:15 AM	14	0	2	0	0	0	0	0	0	79	3	0	0	45	0	0	143	2040
8:20 AM	9	0	2	0	0	0	0	0	0	76	5	0	2	55	0	0	149	2054
8:25 AM	7	0	2	0	0	0	0	0	0	91	3	0	0	52	0	0	155	2048
8:30 AM	5	0	2	0	0	0	0	0	0	63	5	0	1	60	0	0	136	2009
8:35 AM	10	0	0	0	0	0	0	0	0	81	5	0	2	48	0	0	146	1967
8:40 AM	4	0	5	0	0	0	0	0	0	78	2	0	3	71	0	0	163	1924
8:45 AM	7	0	3	0	0	0	0	0	0	88	2	0	2	66	0	0	168	1891
8:50 AM	4	0	2	0	0	0	0	0	0	64	3	0	2	55	0	0	130	1828
8:55 AM	8	0	3	0	0	0	0	0	0	79	7	0	2	52	0	0	151	1828

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	184	0	52	0	0	0	0	0	0	864	220	0	56	1024	0	0	2400
Heavy Trucks	0	0	0		0	0	0		0	24	0		0	40	0		64
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

Comments:

Report generated on 3/7/2016 12:39 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

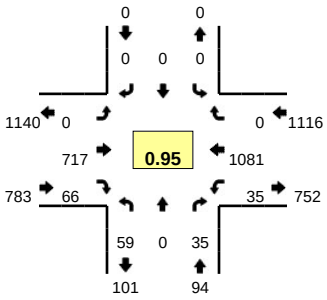
Type of peak hour being reported: Intersection Peak

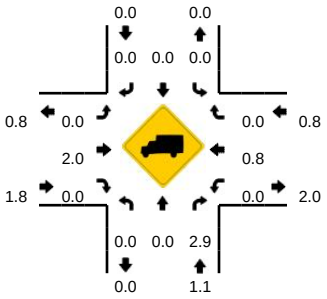
Method for determining peak hour: Total Entering Volume

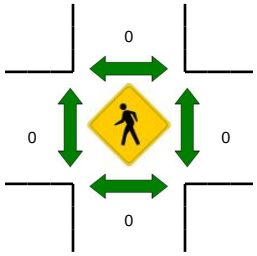
LOCATION: Josselyn Canyon Rd -- SR 68
CITY/STATE: Monterey, CA

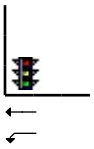
QC JOB #: 13723602
DATE: Tue, Feb 23 2016

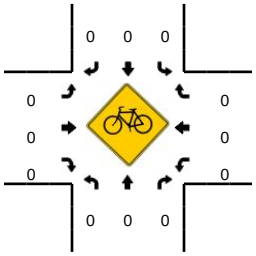
Peak-Hour: 4:35 PM -- 5:35 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

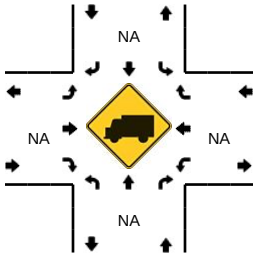


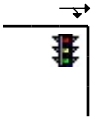


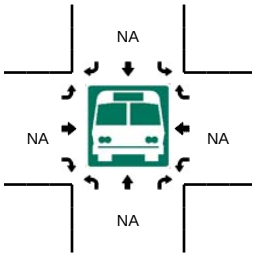












5-Min Count Period Beginning At	Josselyn Canyon Rd (Northbound)				Josselyn Canyon Rd (Southbound)				SR 68 (Eastbound)				SR 68 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	11	0	4	0	0	0	0	0	0	67	5	0	6	79	0	0	172	
4:05 PM	3	0	5	0	0	0	0	0	0	71	5	0	1	86	0	0	171	
4:10 PM	6	0	4	0	0	0	0	0	0	79	8	0	2	80	0	0	179	
4:15 PM	12	0	6	0	0	0	0	0	0	52	6	0	3	79	0	0	158	
4:20 PM	6	0	5	0	0	0	0	0	0	62	6	0	5	82	0	0	166	
4:25 PM	2	0	4	0	0	0	0	0	0	69	4	0	0	74	0	0	153	
4:30 PM	4	0	4	0	0	0	0	0	0	55	1	0	2	69	0	0	135	
4:35 PM	8	0	5	0	0	0	0	0	0	51	3	0	4	80	0	0	151	
4:40 PM	6	0	5	0	0	0	0	0	0	54	8	0	1	84	0	0	158	
4:45 PM	5	0	2	0	0	0	0	0	0	58	7	0	3	72	0	0	147	
4:50 PM	1	0	4	0	0	0	0	0	0	63	4	0	3	81	0	0	156	
4:55 PM	6	0	3	0	0	0	0	0	0	70	8	0	2	75	0	0	164	1910
5:00 PM	3	0	2	0	0	0	0	0	0	57	9	0	5	94	0	0	170	1908
5:05 PM	3	0	4	0	0	0	0	0	0	63	5	0	3	104	0	0	182	1919
5:10 PM	3	0	3	0	0	0	0	0	0	48	5	0	1	107	0	0	167	1907
5:15 PM	5	0	3	0	0	0	0	0	0	61	6	0	1	98	0	0	174	1923
5:20 PM	3	0	1	0	0	0	0	0	0	57	2	0	5	99	0	0	167	1924
5:25 PM	8	0	1	0	0	0	0	0	0	73	4	0	1	99	0	0	186	1957
5:30 PM	8	0	2	0	0	0	0	0	0	62	5	0	6	88	0	0	171	1993
5:35 PM	2	0	0	0	0	0	0	0	0	47	4	0	2	67	0	0	122	1964
5:40 PM	5	0	2	0	0	0	0	0	0	49	5	0	2	74	0	0	137	1943
5:45 PM	5	0	4	0	0	0	0	0	0	52	7	0	1	78	0	0	147	1943
5:50 PM	6	0	2	0	0	0	0	0	0	40	3	0	2	82	0	0	135	1922
5:55 PM	5	0	2	0	0	0	0	0	0	51	7	0	1	78	0	0	144	1902

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	64	0	20	0	0	0	0	0	0	764	48	0	28	1184	0	0	2108
Heavy Trucks	0	0	0		0	0	0		0	20	0		0	24	0		44
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 3/7/2016 12:39 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

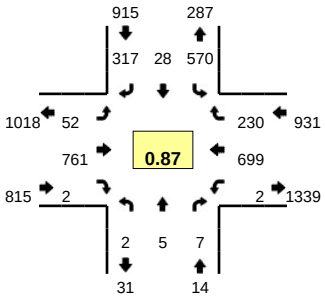
Method for determining peak hour: Total Entering Volume

LOCATION: SR 218/Monterra Rd -- SR 68

CITY/STATE: Monterey, CA

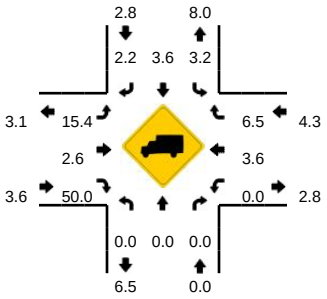
QC JOB #: 13723605

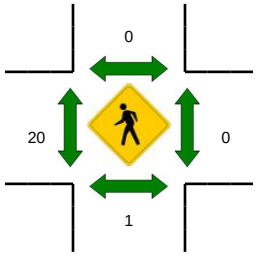
DATE: Wed, Feb 24 2016

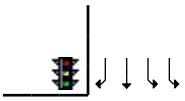


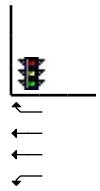
Peak-Hour: 7:20 AM -- 8:20 AM

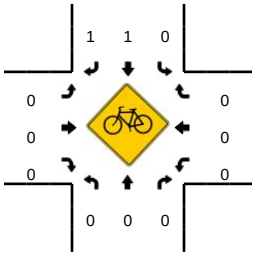
Peak 15-Min: 7:35 AM -- 7:50 AM

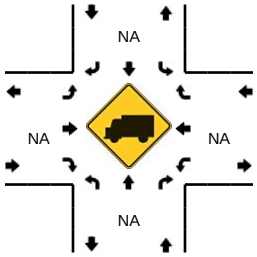


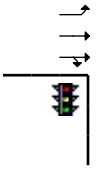


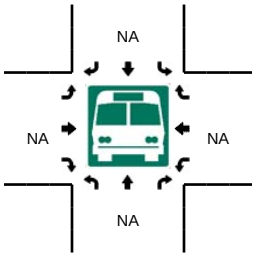












5-Min Count Period Beginning At	SR 218/Monterra Rd (Northbound)				SR 218/Monterra Rd (Southbound)				SR 68 (Eastbound)				SR 68 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	1	0	30	2	8	0	6	38	0	0	0	50	14	0	149	
7:05 AM	0	1	0	0	34	2	15	0	1	34	0	0	0	69	14	0	170	
7:10 AM	1	0	0	0	31	1	13	0	2	48	0	0	1	56	16	0	169	
7:15 AM	2	0	0	0	42	5	15	0	0	47	0	0	1	42	17	0	171	
7:20 AM	0	0	0	0	35	1	14	0	1	59	0	0	0	86	15	0	211	
7:25 AM	0	0	0	0	47	1	18	0	1	61	0	0	0	70	17	0	215	
7:30 AM	0	0	1	0	38	1	26	0	1	49	0	0	0	59	21	0	196	
7:35 AM	0	1	1	0	25	9	36	0	4	77	0	0	0	70	29	0	252	
7:40 AM	0	0	0	0	57	2	46	0	8	56	0	0	0	63	21	0	253	
7:45 AM	0	2	1	0	45	1	44	0	8	65	0	0	0	74	21	0	261	
7:50 AM	1	0	2	0	45	2	34	0	4	63	0	0	1	66	19	0	237	
7:55 AM	1	2	0	0	65	5	27	0	7	61	0	0	0	34	19	0	221	2505
8:00 AM	0	0	0	0	53	1	16	0	4	61	1	0	0	38	19	1	194	2550
8:05 AM	0	0	2	0	40	0	16	0	9	82	0	0	0	54	16	0	219	2599
8:10 AM	0	0	0	0	63	5	19	0	3	58	1	0	0	40	14	0	203	2633
8:15 AM	0	0	0	0	57	0	21	0	2	69	0	0	0	45	19	0	213	2675
8:20 AM	0	0	0	0	39	1	19	0	2	68	1	0	0	52	14	0	196	2660
8:25 AM	1	0	1	0	51	3	20	0	4	57	0	0	0	40	18	0	195	2640
8:30 AM	1	0	0	0	36	1	20	0	6	64	2	0	0	72	20	0	222	2666
8:35 AM	1	1	0	0	35	0	13	0	5	61	0	0	0	74	18	0	208	2622
8:40 AM	3	0	1	0	43	0	22	0	8	56	1	0	0	50	30	0	214	2583
8:45 AM	0	1	0	0	36	0	16	0	3	64	0	0	0	48	29	0	197	2519
8:50 AM	0	0	0	0	30	0	12	0	8	66	0	0	0	65	22	0	203	2485
8:55 AM	0	0	1	0	24	0	7	0	9	55	0	0	0	57	31	0	184	2448

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	12	8	0	508	48	504	0	80	792	0	0	0	828	284	0	3064
Heavy Trucks	0	0	0		12	0	12		8	28	0		0	36	24		120
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 3/7/2016 12:39 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: SR 218/Monterra Rd -- SR 68

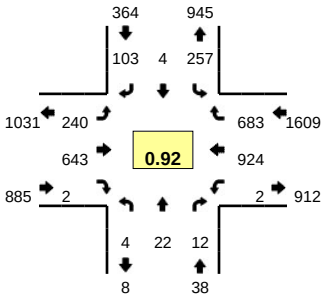
CITY/STATE: Monterey, CA

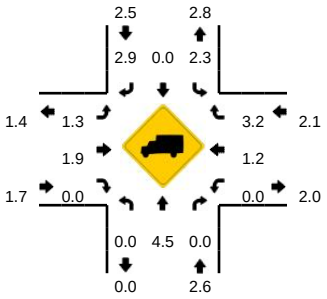
QC JOB #: 13723606

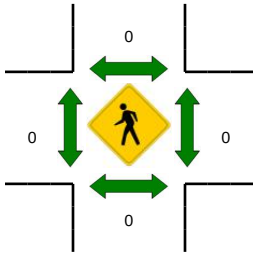
DATE: Tue, Feb 23 2016

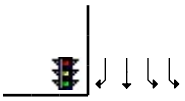
Peak-Hour: 4:35 PM -- 5:35 PM

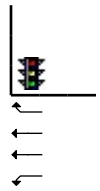
Peak 15-Min: 5:00 PM -- 5:15 PM

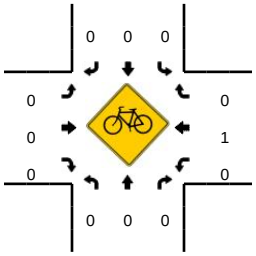


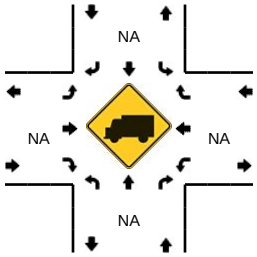


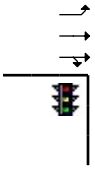


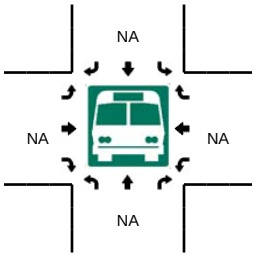












5-Min Count Period Beginning At	SR 218/Monterra Rd (Northbound)				SR 218/Monterra Rd (Southbound)				SR 68 (Eastbound)				SR 68 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	5	5	0	26	1	5	0	10	68	1	0	2	73	47	0	243	
4:05 PM	0	2	1	0	39	0	10	0	8	65	0	0	0	69	46	0	240	
4:10 PM	0	3	1	0	38	6	6	0	18	63	0	0	0	69	41	0	245	
4:15 PM	0	0	0	0	19	0	11	0	14	70	0	0	0	69	41	0	224	
4:20 PM	0	1	0	0	10	0	11	0	15	52	0	0	0	42	44	0	175	
4:25 PM	0	2	1	0	29	1	6	0	16	59	0	0	0	64	39	0	217	
4:30 PM	0	2	1	0	30	0	11	0	20	51	2	0	2	54	32	0	205	
4:35 PM	0	2	1	0	14	0	9	0	8	62	0	0	0	90	68	0	254	
4:40 PM	0	6	2	0	25	3	9	0	19	48	0	0	0	64	64	0	240	
4:45 PM	1	1	3	0	26	0	5	0	21	55	0	0	0	65	50	0	227	
4:50 PM	1	0	0	0	23	0	8	0	18	52	0	0	0	46	58	0	206	
4:55 PM	0	1	0	0	23	0	7	0	11	65	0	0	0	83	58	0	248	2724
5:00 PM	0	0	2	0	19	1	7	0	20	57	0	0	0	95	54	0	255	2736
5:05 PM	0	0	1	0	25	0	11	0	15	47	0	0	0	73	63	0	235	2731
5:10 PM	2	8	1	0	17	0	8	0	32	62	1	0	0	99	68	0	298	2784
5:15 PM	0	3	2	0	19	0	11	0	22	36	1	0	0	88	55	0	237	2797
5:20 PM	0	0	0	0	20	0	6	0	24	49	0	0	1	85	56	0	241	2863
5:25 PM	0	0	0	0	24	0	11	0	25	47	0	0	1	66	45	0	219	2865
5:30 PM	0	1	0	0	22	0	11	0	25	63	0	0	0	70	44	0	236	2896
5:35 PM	0	1	0	0	20	0	6	0	19	54	0	0	0	61	49	0	210	2852
5:40 PM	0	0	1	0	16	0	8	0	20	43	0	0	1	71	38	0	198	2810
5:45 PM	0	0	0	0	21	0	10	0	12	43	1	0	0	55	31	0	173	2756
5:50 PM	0	0	0	0	27	1	7	0	17	45	0	0	0	61	29	0	187	2737
5:55 PM	2	2	0	0	10	0	6	0	6	32	0	0	0	44	29	0	131	2620

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	32	16	0	244	4	104	0	268	664	4	0	0	1068	740	0	3152
Heavy Trucks	0	0	0		8	0	4		4	12	0		0	8	24		60
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 3/7/2016 12:39 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

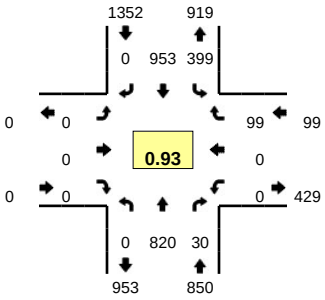
Type of peak hour being reported: Intersection Peak

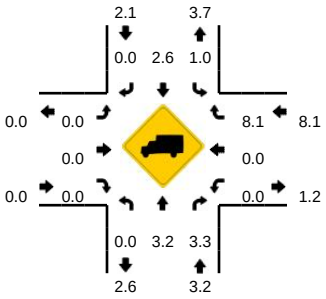
Method for determining peak hour: Total Entering Volume

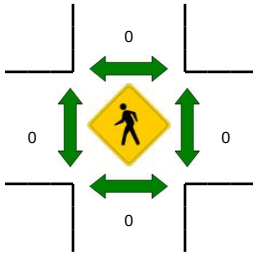
LOCATION: SR 68 -- Ragsdale Dr
CITY/STATE: Monterey, CA

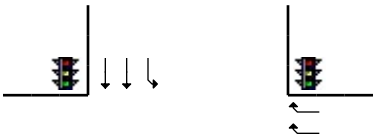
QC JOB #: 13723607
DATE: Wed, Feb 24 2016

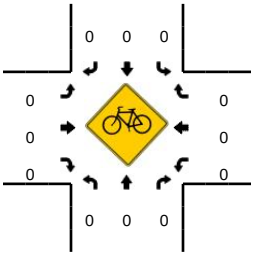
Peak-Hour: 7:20 AM -- 8:20 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

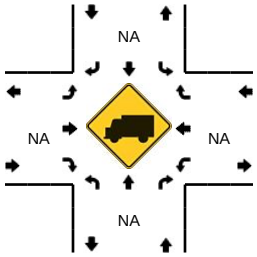


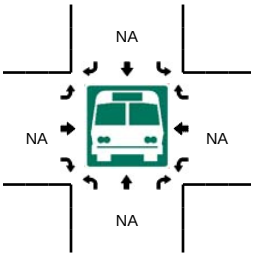












5-Min Count Period Beginning At	SR 68 (Northbound)				SR 68 (Southbound)				Ragsdale Dr (Eastbound)				Ragsdale Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	71	1	0	18	47	0	0	0	0	0	0	0	0	11	0	148	
7:05 AM	0	65	1	0	25	48	0	0	0	0	0	0	0	0	7	0	146	
7:10 AM	0	65	1	0	20	58	0	0	0	0	0	0	0	0	1	0	145	
7:15 AM	0	56	4	0	17	70	0	0	0	0	0	0	0	0	8	0	155	
7:20 AM	0	84	4	0	28	73	0	0	0	0	0	0	0	0	5	0	194	
7:25 AM	0	77	1	0	29	75	0	0	0	0	0	0	0	0	10	0	192	
7:30 AM	0	73	0	0	31	61	0	0	0	0	0	0	0	0	9	0	174	
7:35 AM	0	94	3	0	22	89	0	0	0	0	0	0	0	0	9	0	217	
7:40 AM	0	91	4	0	30	76	0	0	0	0	0	0	0	0	3	0	204	
7:45 AM	0	81	1	0	28	79	0	0	0	0	0	0	0	0	10	0	199	
7:50 AM	0	69	4	0	34	88	0	0	0	0	0	0	0	0	4	0	199	
7:55 AM	0	49	5	0	43	80	0	0	0	0	0	0	0	0	11	0	188	2161
8:00 AM	0	42	2	0	51	70	0	0	0	0	0	0	0	0	12	0	177	2190
8:05 AM	0	64	1	0	29	93	0	0	0	0	0	0	0	0	10	0	197	2241
8:10 AM	0	49	4	0	40	83	0	0	0	0	0	0	0	0	6	0	182	2278
8:15 AM	0	47	1	0	34	86	0	0	0	0	0	0	0	0	10	0	178	2301
8:20 AM	0	50	1	0	46	63	0	0	0	0	0	0	0	0	14	0	174	2281
8:25 AM	0	64	3	0	37	67	0	0	0	0	0	0	0	0	14	0	185	2274
8:30 AM	0	62	2	0	42	73	0	0	0	0	0	0	0	0	16	0	195	2295
8:35 AM	0	70	2	0	37	55	0	0	0	0	0	0	0	0	16	0	180	2258
8:40 AM	0	74	2	0	36	66	0	0	0	0	0	0	0	0	15	0	193	2247
8:45 AM	0	64	1	0	34	61	0	0	0	0	0	0	0	0	20	0	180	2228
8:50 AM	0	60	4	0	43	64	0	0	0	0	0	0	0	0	17	0	188	2217
8:55 AM	0	67	3	0	27	51	0	0	0	0	0	0	0	0	18	0	166	2195

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	1064	32	0	320	976	0	0	0	0	0	0	0	0	88	0	2480
Heavy Trucks	0	52	0		12	24	0		0	0	0		0	0	4		92
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 3/7/2016 12:39 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

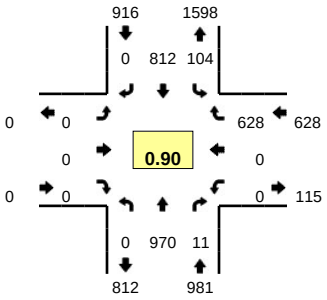
Type of peak hour being reported: Intersection Peak

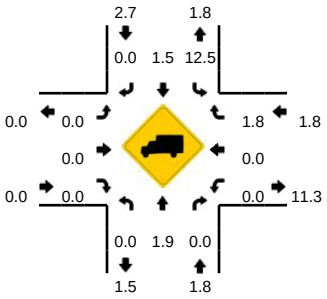
Method for determining peak hour: Total Entering Volume

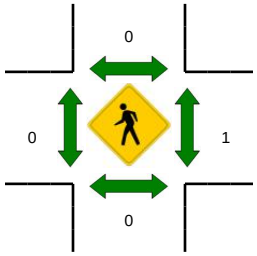
LOCATION: SR 68 -- Ragsdale Dr
CITY/STATE: Monterey, CA

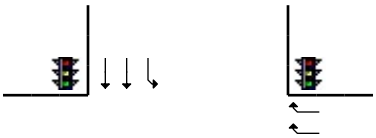
QC JOB #: 13723608
DATE: Tue, Feb 23 2016

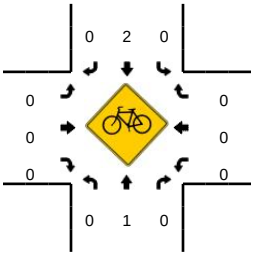
Peak-Hour: 4:35 PM -- 5:35 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

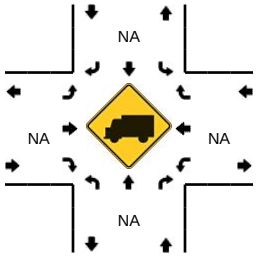


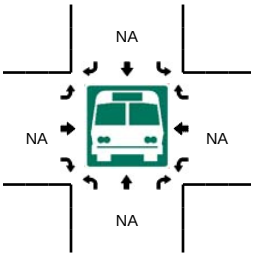












5-Min Count Period Beginning At	SR 68 (Northbound)				SR 68 (Southbound)				Ragsdale Dr (Eastbound)				Ragsdale Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	79	3	0	20	84	0	0	0	0	0	0	0	0	43	0	229	
4:05 PM	0	61	0	0	22	75	0	0	0	0	0	0	0	0	56	0	214	
4:10 PM	0	75	0	0	19	90	0	0	0	0	0	0	0	0	31	0	215	
4:15 PM	0	65	0	0	17	76	0	0	0	0	0	0	0	0	40	0	198	
4:20 PM	0	74	1	0	13	52	0	0	0	0	0	0	0	0	20	0	160	
4:25 PM	0	77	0	0	11	71	0	0	0	0	0	0	0	0	26	0	185	
4:30 PM	0	73	1	0	9	71	0	0	0	0	0	0	0	0	34	0	188	
4:35 PM	0	81	2	0	5	79	0	0	0	0	0	0	0	0	60	0	227	
4:40 PM	0	70	2	0	18	65	0	0	0	0	0	0	0	0	59	0	214	
4:45 PM	0	78	0	0	6	73	0	0	0	0	0	0	0	0	39	0	196	
4:50 PM	0	77	0	0	15	56	0	0	0	0	0	0	0	0	48	0	196	
4:55 PM	0	95	1	0	12	72	0	0	0	0	0	0	0	0	36	0	216	2438
5:00 PM	0	64	0	0	9	75	0	0	0	0	0	0	0	0	71	0	219	2428
5:05 PM	0	93	0	0	5	59	0	0	0	0	0	0	0	0	65	0	222	2436
5:10 PM	0	80	1	0	14	73	0	0	0	0	0	0	0	0	89	0	257	2478
5:15 PM	0	83	1	0	4	55	0	0	0	0	0	0	0	0	54	0	197	2477
5:20 PM	0	82	1	0	3	66	0	0	0	0	0	0	0	0	49	0	201	2518
5:25 PM	0	89	2	0	5	62	0	0	0	0	0	0	0	0	25	0	183	2516
5:30 PM	0	78	1	0	8	77	0	0	0	0	0	0	0	0	33	0	197	2525
5:35 PM	0	83	0	0	5	71	0	0	0	0	0	0	0	0	30	0	189	2487
5:40 PM	0	77	0	0	5	57	0	0	0	0	0	0	0	0	26	0	165	2438
5:45 PM	0	68	0	0	5	65	0	0	0	0	0	0	0	0	19	0	157	2399
5:50 PM	0	69	0	0	2	66	0	0	0	0	0	0	0	0	19	0	156	2359
5:55 PM	0	64	0	0	2	45	0	0	0	0	0	0	0	0	18	0	129	2272

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	948	4	0	112	828	0	0	0	0	0	0	0	0	900	0	2792
Heavy Trucks	0	16	0		20	4	0		0	0	0		0	0	24		64
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	1	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 3/7/2016 12:39 PM

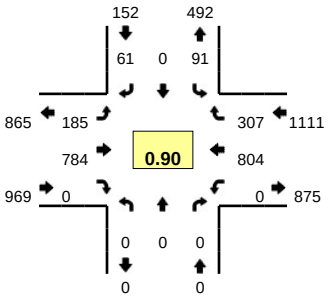
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

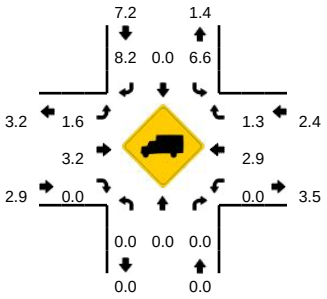
Method for determining peak hour: Total Entering Volume

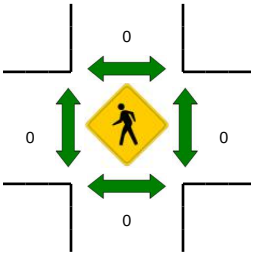
LOCATION: York Rd -- SR 68
CITY/STATE: Monterey, CA

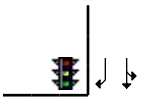
QC JOB #: 13723609
DATE: Wed, Feb 24 2016

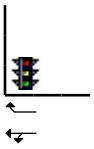


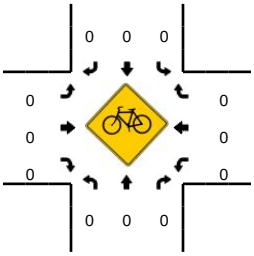
Peak-Hour: 7:20 AM -- 8:20 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

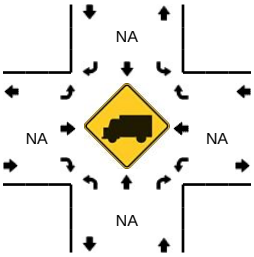


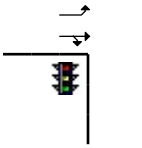


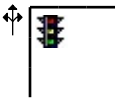


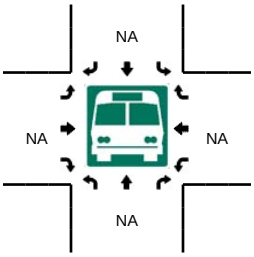












5-Min Count Period Beginning At	York Rd (Northbound)				York Rd (Southbound)				SR 68 (Eastbound)				SR 68 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	7	0	2	0	5	41	0	0	3	90	39	0	187	
7:05 AM	0	0	0	0	1	0	3	0	7	46	0	0	0	62	28	0	147	
7:10 AM	0	0	0	0	9	0	1	0	1	46	0	0	0	62	20	0	139	
7:15 AM	0	0	0	0	2	0	3	0	7	60	0	0	0	66	20	0	158	
7:20 AM	0	0	0	0	5	0	3	0	12	61	0	0	0	82	26	0	189	
7:25 AM	0	0	0	0	7	0	3	0	8	50	0	0	0	84	31	0	183	
7:30 AM	0	0	0	0	9	0	5	0	11	70	0	0	0	65	29	0	189	
7:35 AM	0	0	0	0	7	0	9	0	20	66	0	0	0	77	26	0	205	
7:40 AM	0	0	0	0	10	0	8	0	9	78	0	0	0	90	29	0	224	
7:45 AM	0	0	0	0	13	0	4	0	7	56	0	0	0	81	33	0	194	
7:50 AM	0	0	0	0	5	0	2	0	18	78	0	0	0	77	25	0	205	
7:55 AM	0	0	0	0	9	0	7	0	17	59	0	0	0	48	31	0	171	2191
8:00 AM	0	0	0	0	10	0	1	0	17	63	0	0	0	48	16	0	155	2159
8:05 AM	0	0	0	0	3	0	10	0	22	67	0	0	0	53	17	0	172	2184
8:10 AM	0	0	0	0	8	0	5	0	15	64	0	0	0	55	22	0	169	2214
8:15 AM	0	0	0	0	5	0	4	0	29	72	0	0	0	44	22	0	176	2232
8:20 AM	0	0	0	0	16	0	10	0	20	46	0	0	0	39	19	0	150	2193
8:25 AM	0	0	0	0	11	0	7	0	14	44	0	0	0	60	29	0	165	2175
8:30 AM	0	0	0	0	8	0	6	0	18	55	0	0	0	70	39	0	196	2182
8:35 AM	0	0	0	0	18	0	14	0	9	57	0	0	0	53	22	0	173	2150
8:40 AM	0	0	0	0	9	0	10	0	10	52	0	0	0	56	22	0	159	2085
8:45 AM	0	0	0	0	4	0	6	0	13	49	1	0	0	67	18	0	158	2049
8:50 AM	0	0	0	0	12	0	11	0	11	56	0	0	0	58	21	0	169	2013
8:55 AM	0	0	0	0	6	0	6	0	12	39	0	0	0	57	19	0	139	1981

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	120	0	84	0	144	800	0	0	0	992	352	0	2492
Heavy Trucks	0	0	0		12	0	0		0	16	0		0	52	4		84
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 3/7/2016 12:39 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

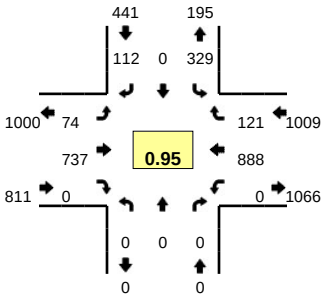
Type of peak hour being reported: Intersection Peak

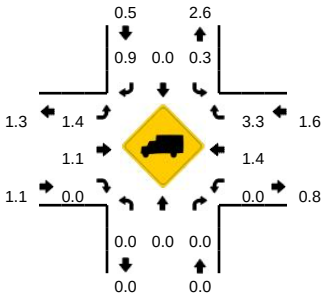
Method for determining peak hour: Total Entering Volume

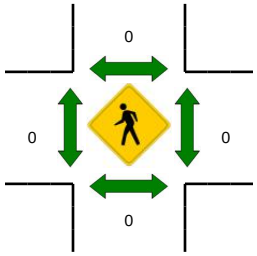
LOCATION: York Rd -- SR 68
CITY/STATE: Monterey, CA

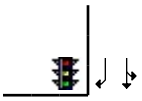
QC JOB #: 13723610
DATE: Tue, Feb 23 2016

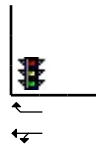
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 4:50 PM -- 5:05 PM

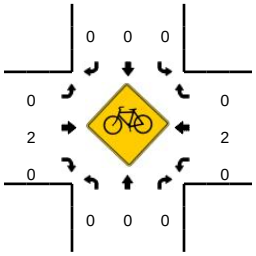


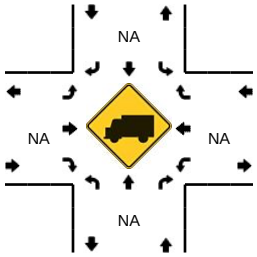


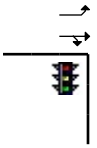


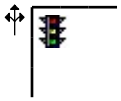


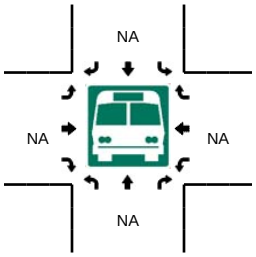












5-Min Count Period Beginning At	York Rd (Northbound)				York Rd (Southbound)				SR 68 (Eastbound)				SR 68 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	25	0	13	0	7	69	0	0	0	53	14	0	181	
4:05 PM	0	0	0	0	22	0	8	0	7	80	0	0	0	69	7	0	193	
4:10 PM	0	0	0	0	40	0	9	0	3	83	0	0	0	68	4	0	207	
4:15 PM	0	0	0	0	31	0	11	0	10	60	0	0	0	48	7	0	167	
4:20 PM	0	0	0	0	22	0	8	0	3	65	0	0	0	72	4	0	174	
4:25 PM	0	0	0	0	14	0	4	0	8	42	0	0	0	75	9	0	152	
4:30 PM	0	0	0	0	19	0	4	0	6	50	0	0	0	74	16	0	169	
4:35 PM	0	0	0	0	35	0	6	0	8	55	0	0	0	66	12	0	182	
4:40 PM	0	0	0	0	24	0	7	0	5	62	0	0	0	78	12	0	188	
4:45 PM	0	0	0	0	31	0	5	0	5	64	0	0	0	65	9	0	179	
4:50 PM	0	0	0	0	22	0	15	0	13	73	0	0	0	70	10	0	203	
4:55 PM	0	0	0	0	26	0	11	0	7	66	0	0	0	86	16	0	212	2207
5:00 PM	0	0	0	0	35	0	10	0	7	70	0	0	0	57	3	0	182	2208
5:05 PM	0	0	0	0	36	0	12	0	5	61	0	0	0	75	5	0	194	2209
5:10 PM	0	0	0	0	22	0	15	0	6	61	0	0	0	77	10	0	191	2193
5:15 PM	0	0	0	0	27	0	12	0	5	59	0	0	0	73	11	0	187	2213
5:20 PM	0	0	0	0	35	0	10	0	3	61	0	0	0	81	8	0	198	2237
5:25 PM	0	0	0	0	17	0	5	0	4	55	0	0	0	86	9	0	176	2261
5:30 PM	0	0	0	0	18	0	10	0	2	71	0	0	0	59	6	0	166	2258
5:35 PM	0	0	0	0	16	0	11	0	4	76	0	0	0	69	7	0	183	2259
5:40 PM	0	0	0	0	17	0	5	0	3	43	0	0	0	77	5	0	150	2221
5:45 PM	0	0	0	0	13	0	5	0	3	63	0	0	0	73	5	0	162	2204
5:50 PM	0	0	0	0	10	0	2	0	5	67	0	0	0	70	6	0	160	2161
5:55 PM	0	0	0	0	14	0	8	0	4	45	0	0	0	42	5	0	118	2067

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	332	0	144	0	108	836	0	0	0	852	116	0	2388
Heavy Trucks	0	0	0		0	0	4		4	8	0		0	16	0		32
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	1	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 3/7/2016 12:39 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Boots Rd/Pasadera Dr -- SR 68

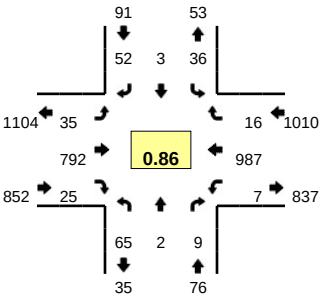
QC JOB #: 13723611

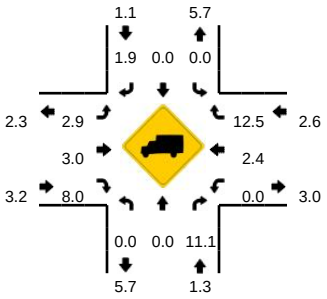
CITY/STATE: Monterey, CA

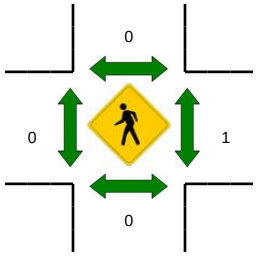
DATE: Wed, Feb 24 2016

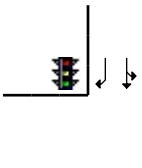
Peak-Hour: 7:15 AM -- 8:15 AM

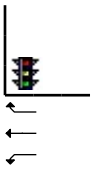
Peak 15-Min: 7:35 AM -- 7:50 AM

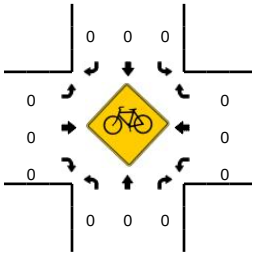


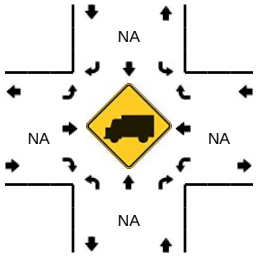


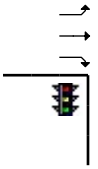


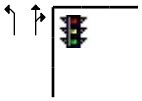


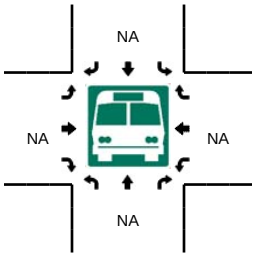












5-Min Count Period Beginning At	Boots Rd/Pasadera Dr (Northbound)				Boots Rd/Pasadera Dr (Southbound)				SR 68 (Eastbound)				SR 68 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	2	0	2	0	0	0	0	0	1	59	0	0	1	102	0	0	167	
7:05 AM	0	0	3	0	1	0	1	0	1	34	0	0	2	83	4	0	129	
7:10 AM	0	0	0	0	0	1	2	0	0	47	0	0	1	90	0	0	141	
7:15 AM	6	0	0	0	1	0	3	0	1	62	1	0	0	96	1	0	171	
7:20 AM	2	0	0	0	3	0	8	0	2	65	1	0	1	86	0	0	168	
7:25 AM	3	0	1	0	0	0	1	0	1	62	1	0	1	113	2	0	185	
7:30 AM	4	0	0	0	3	0	8	0	5	66	1	0	1	83	1	0	172	
7:35 AM	4	0	1	0	4	0	5	0	1	57	2	0	1	117	0	0	192	
7:40 AM	4	0	1	0	2	3	11	0	1	79	3	0	0	103	1	0	208	
7:45 AM	11	0	5	0	5	0	1	0	2	68	4	0	0	92	2	0	190	
7:50 AM	7	0	1	0	4	0	2	0	2	79	4	0	2	62	2	0	165	
7:55 AM	9	1	0	0	5	0	1	0	8	54	2	0	0	58	0	0	138	2026
8:00 AM	2	0	0	0	1	0	3	0	4	70	2	0	1	63	2	0	148	2007
8:05 AM	4	1	0	0	4	0	6	0	3	53	0	0	0	67	2	0	140	2018
8:10 AM	9	0	0	0	4	0	3	0	5	77	4	0	0	47	3	0	152	2029
8:15 AM	1	0	1	0	1	0	2	0	1	76	3	0	1	72	1	0	159	2017
8:20 AM	3	0	1	0	1	1	6	0	3	66	3	0	0	52	0	0	136	1985
8:25 AM	10	0	1	0	1	0	5	0	5	42	3	0	1	87	1	0	156	1956
8:30 AM	3	0	2	0	1	0	1	0	4	57	0	0	0	93	3	0	164	1948
8:35 AM	3	0	1	0	1	0	7	0	2	62	4	0	0	71	0	0	151	1907
8:40 AM	4	0	0	0	2	1	5	0	5	61	3	0	2	69	3	0	155	1854
8:45 AM	7	0	0	0	1	0	3	0	7	49	2	0	1	77	0	0	147	1811
8:50 AM	2	0	0	0	0	0	2	0	5	51	3	0	0	70	1	0	134	1780
8:55 AM	3	0	3	0	3	0	3	0	2	54	3	0	0	56	2	0	129	1771

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	76	0	28	0	44	12	68	0	16	816	36	0	4	1248	12	0	2360
Heavy Trucks	0	0	4		0	0	0		0	20	4		0	40	0		68
Pedestrians		0				0				0				4			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

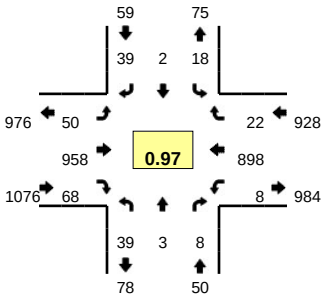
Report generated on 3/7/2016 12:39 PM

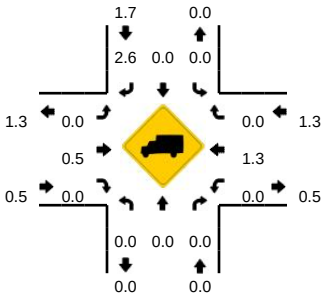
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

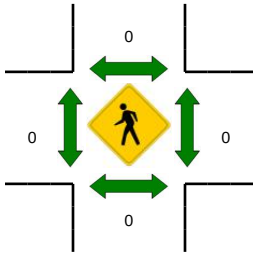
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

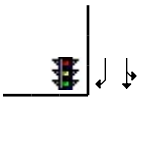
LOCATION: Boots Rd/Pasadera Dr -- SR 68 | **QC JOB #:** 13723612
CITY/STATE: Monterey, CA | **DATE:** Tue, Feb 23 2016

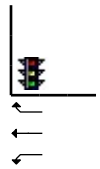
Peak-Hour: 4:20 PM -- 5:20 PM
Peak 15-Min: 4:20 PM -- 4:35 PM

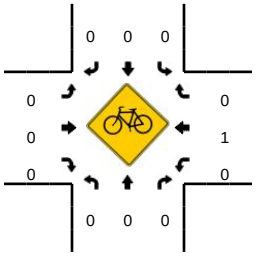


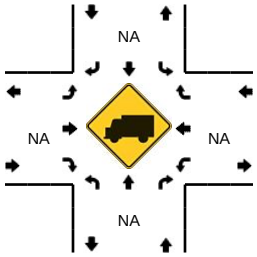


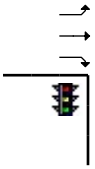


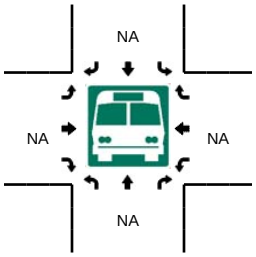












5-Min Count Period Beginning At	Boots Rd/Pasadera Dr (Northbound)				Boots Rd/Pasadera Dr (Southbound)				SR 68 (Eastbound)				SR 68 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	1	1	0	0	0	3	0	6	72	1	0	0	64	0	0	149	
4:05 PM	2	0	0	0	1	0	6	0	4	90	1	0	0	65	2	0	171	
4:10 PM	2	0	0	0	4	0	3	0	2	69	1	0	4	53	1	0	139	
4:15 PM	0	1	0	0	2	1	4	0	1	59	4	0	0	56	1	0	129	
4:20 PM	3	0	0	0	1	0	3	0	3	81	3	0	0	94	3	0	191	
4:25 PM	1	0	0	0	1	0	0	0	7	86	4	0	2	68	0	0	169	
4:30 PM	4	1	2	0	0	0	2	0	2	85	2	0	0	83	4	0	185	
4:35 PM	4	0	0	0	4	1	10	0	5	78	11	0	0	67	3	0	183	
4:40 PM	1	0	1	0	3	0	3	0	7	73	3	0	0	81	1	0	173	
4:45 PM	3	2	1	0	1	0	2	0	4	79	6	0	0	68	1	0	167	
4:50 PM	1	0	0	0	0	0	1	0	2	90	10	0	0	92	2	0	198	
4:55 PM	5	0	1	0	1	0	1	0	3	73	5	0	0	69	2	0	160	2014
5:00 PM	4	0	0	0	3	0	4	0	7	78	5	0	2	55	0	0	158	2023
5:05 PM	5	0	1	0	0	0	4	0	6	89	8	0	0	73	0	0	186	2038
5:10 PM	4	0	1	0	3	1	0	0	4	85	9	0	2	73	2	0	184	2083
5:15 PM	4	0	1	0	1	0	9	0	0	61	2	0	2	75	4	0	159	2113
5:20 PM	1	1	2	0	0	0	4	0	9	61	6	0	0	79	3	0	166	2088
5:25 PM	0	0	0	0	0	1	2	0	1	73	5	0	2	95	1	0	180	2099
5:30 PM	1	0	2	0	1	0	4	0	4	62	4	0	2	63	1	0	144	2058
5:35 PM	2	0	0	0	2	0	3	0	4	80	6	0	2	64	2	0	165	2040
5:40 PM	2	0	1	0	2	0	2	0	4	64	3	0	3	61	1	0	143	2010
5:45 PM	0	0	1	0	1	0	2	0	5	85	10	0	0	84	0	0	188	2031
5:50 PM	2	0	1	0	0	0	1	0	3	64	10	0	1	60	0	0	142	1975
5:55 PM	1	0	0	0	1	0	1	0	2	82	7	0	3	64	0	0	161	1976

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	32	4	8	0	8	0	20	0	48	1008	36	0	8	980	28	0	2180
Heavy Trucks	0	0	0		0	0	0		0	8	0		0	12	0		20
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 3/7/2016 12:39 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

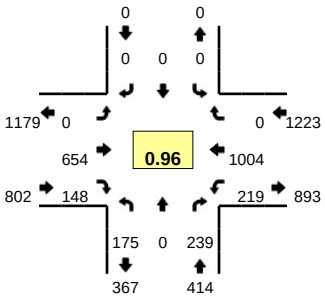
Type of peak hour being reported: Intersection Peak

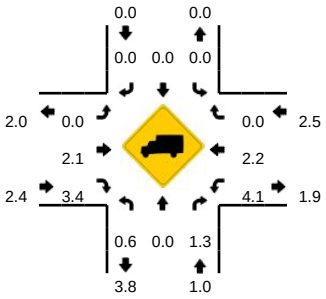
Method for determining peak hour: Total Entering Volume

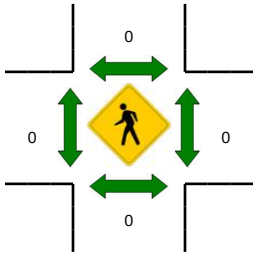
LOCATION: Laureles Grade -- SR 68
CITY/STATE: Monterey, CA

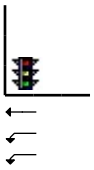
QC JOB #: 13723613
DATE: Wed, Feb 24 2016

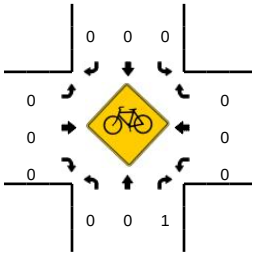
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

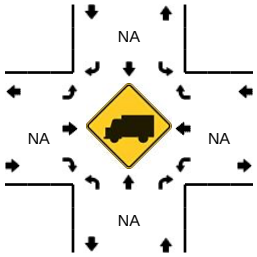


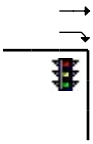


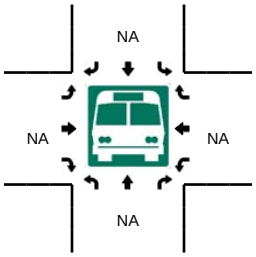












5-Min Count Period Beginning At	Laureles Grade (Northbound)				Laureles Grade (Southbound)				SR 68 (Eastbound)				SR 68 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	10	0	10	0	0	0	0	0	0	47	5	0	9	74	0	0	155	
7:05 AM	6	0	14	0	0	0	0	0	0	36	9	0	32	87	0	0	184	
7:10 AM	9	0	14	0	0	0	0	0	0	32	4	0	24	72	0	0	155	
7:15 AM	11	0	19	0	0	0	0	0	0	68	7	0	19	80	0	0	204	
7:20 AM	14	0	12	0	0	0	0	0	0	60	8	0	23	83	0	0	200	
7:25 AM	12	0	22	0	0	0	0	0	0	77	7	0	21	83	0	0	222	
7:30 AM	18	0	14	0	0	0	0	0	0	47	10	0	18	79	0	0	186	
7:35 AM	18	0	27	0	0	0	0	0	0	41	10	0	11	80	0	0	187	
7:40 AM	10	0	17	0	0	0	0	0	0	55	21	0	21	94	0	0	218	
7:45 AM	11	0	23	0	0	0	0	0	0	55	22	0	25	75	0	0	211	
7:50 AM	16	0	21	0	0	0	0	0	0	59	11	0	14	86	0	0	207	
7:55 AM	22	0	24	0	0	0	0	0	0	50	15	0	20	89	0	0	220	2349
8:00 AM	17	0	24	0	0	0	0	0	0	43	7	0	15	85	0	0	191	2385
8:05 AM	13	0	18	0	0	0	0	0	0	55	19	0	21	98	0	0	224	2425
8:10 AM	13	0	18	0	0	0	0	0	0	44	11	0	11	72	0	0	169	2439
8:15 AM	15	0	7	0	0	0	0	0	0	50	11	0	15	85	0	0	183	2418
8:20 AM	17	0	10	0	0	0	0	0	0	38	9	0	14	78	0	0	166	2384
8:25 AM	4	0	12	0	0	0	0	0	0	50	12	0	14	93	0	0	185	2347
8:30 AM	6	0	17	0	0	0	0	0	0	50	11	0	17	83	0	0	184	2345
8:35 AM	22	0	8	0	0	0	0	0	0	37	12	0	16	78	0	0	173	2331
8:40 AM	10	0	10	0	0	0	0	0	0	56	9	0	12	87	0	0	184	2297
8:45 AM	19	0	15	0	0	0	0	0	0	67	14	0	12	66	0	0	193	2279
8:50 AM	14	0	16	0	0	0	0	0	0	53	12	0	28	74	0	0	197	2269
8:55 AM	12	0	16	0	0	0	0	0	0	49	13	0	20	68	0	0	178	2227

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	196	0	272	0	0	0	0	0	0	656	192	0	236	1000	0	0	2552
Heavy Trucks	0	0	4		0	0	0		0	20	8		24	28	0		84
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 3/7/2016 12:39 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

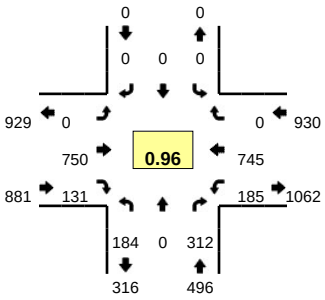
Type of peak hour being reported: Intersection Peak

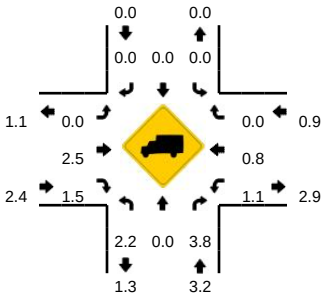
Method for determining peak hour: Total Entering Volume

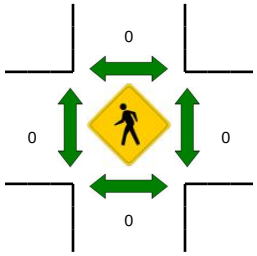
LOCATION: Laureles Grade -- SR 68
CITY/STATE: Monterey, CA

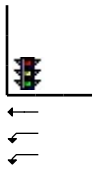
QC JOB #: 13723614
DATE: Tue, Feb 23 2016

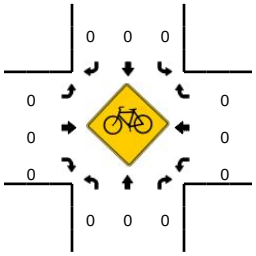
Peak-Hour: 4:25 PM -- 5:25 PM
Peak 15-Min: 5:10 PM -- 5:25 PM

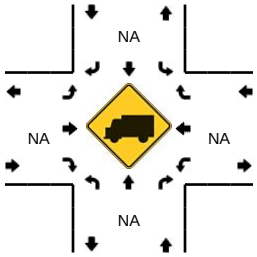


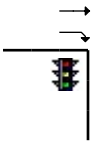


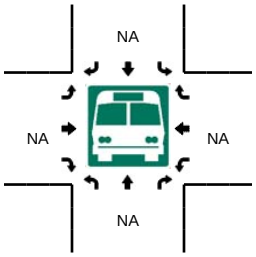












5-Min Count Period Beginning At	Laureles Grade (Northbound)				Laureles Grade (Southbound)				SR 68 (Eastbound)				SR 68 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	17	0	29	0	0	0	0	0	0	71	11	0	6	48	0	0	182	
4:05 PM	4	0	22	0	0	0	0	0	0	76	11	0	14	66	0	0	193	
4:10 PM	16	0	23	0	0	0	0	0	0	58	10	0	12	65	0	0	184	
4:15 PM	19	0	37	0	0	0	0	0	0	58	15	0	20	50	0	0	199	
4:20 PM	17	0	15	0	0	0	0	0	0	67	3	0	7	56	0	0	165	
4:25 PM	8	0	39	0	0	0	0	0	0	60	14	0	26	66	0	0	213	
4:30 PM	27	0	14	0	0	0	0	0	0	54	5	0	19	59	0	0	178	
4:35 PM	16	0	22	0	0	0	0	0	0	76	17	0	10	57	0	0	198	
4:40 PM	13	0	27	0	0	0	0	0	0	70	11	0	19	40	0	0	180	
4:45 PM	12	0	32	0	0	0	0	0	0	47	9	0	17	66	0	0	183	
4:50 PM	24	0	31	0	0	0	0	0	0	58	10	0	19	65	0	0	207	
4:55 PM	15	0	26	0	0	0	0	0	0	73	10	0	11	58	0	0	193	2275
5:00 PM	14	0	19	0	0	0	0	0	0	54	15	0	15	57	0	0	174	2267
5:05 PM	6	0	21	0	0	0	0	0	0	76	10	0	7	63	0	0	183	2257
5:10 PM	8	0	21	0	0	0	0	0	0	79	10	0	10	70	0	0	198	2271
5:15 PM	24	0	35	0	0	0	0	0	0	41	11	0	16	66	0	0	193	2265
5:20 PM	17	0	25	0	0	0	0	0	0	62	9	0	16	78	0	0	207	2307
5:25 PM	9	0	21	0	0	0	0	0	0	76	17	0	14	46	0	0	183	2277
5:30 PM	7	0	8	0	0	0	0	0	0	76	10	0	27	67	0	0	195	2294
5:35 PM	11	0	25	0	0	0	0	0	0	67	13	0	12	63	0	0	191	2287
5:40 PM	10	0	12	0	0	0	0	0	0	80	13	0	13	49	0	0	177	2284
5:45 PM	10	0	18	0	0	0	0	0	0	58	4	0	8	52	0	0	150	2251
5:50 PM	6	0	17	0	0	0	0	0	0	80	9	0	11	49	0	0	172	2216
5:55 PM	7	0	9	0	0	0	0	0	0	78	14	0	17	53	0	0	178	2201

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	196	0	324	0	0	0	0	0	0	728	120	0	168	856	0	0	2392
Heavy Trucks	4	0	24		0	0	0		0	32	4		0	0	0		64
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 3/7/2016 12:39 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Corral De Tierra Rd -- SR 68

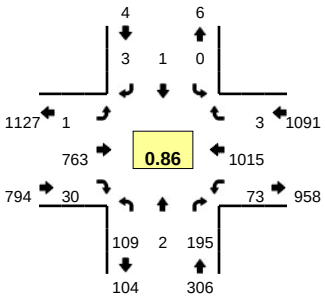
CITY/STATE: Monterey, CA

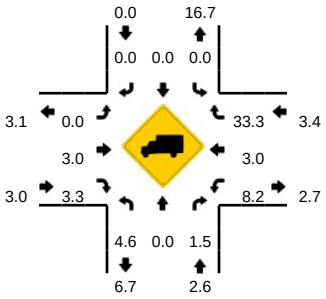
QC JOB #: 13723615

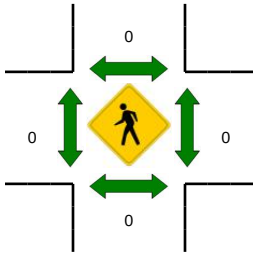
DATE: Wed, Feb 24 2016

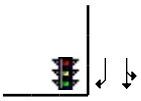
Peak-Hour: 7:00 AM -- 8:00 AM

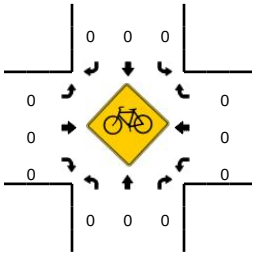
Peak 15-Min: 7:30 AM -- 7:45 AM

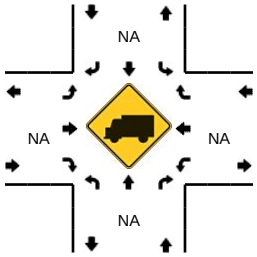


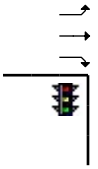


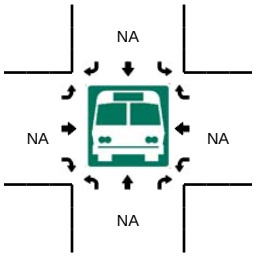












5-Min Count Period Beginning At	Corral De Tierra Rd (Northbound)				Corral De Tierra Rd (Southbound)				SR 68 (Eastbound)				SR 68 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	4	0	16	0	0	0	0	0	0	51	1	0	3	88	0	0	163	
7:05 AM	16	0	12	0	0	0	0	0	0	48	1	0	4	90	0	0	171	
7:10 AM	9	1	17	0	0	0	0	0	0	58	1	0	4	100	0	0	190	
7:15 AM	6	0	9	0	0	0	0	0	0	68	1	0	4	100	0	0	188	
7:20 AM	5	0	11	0	0	0	0	0	0	72	1	0	4	98	1	0	192	
7:25 AM	11	0	12	0	0	1	1	0	0	56	3	0	5	94	1	0	184	
7:30 AM	13	0	19	0	0	0	0	0	0	59	4	0	9	95	0	0	199	
7:35 AM	8	0	15	0	0	0	0	0	0	94	2	0	5	111	0	0	235	
7:40 AM	13	1	23	0	0	0	0	0	0	72	5	0	5	86	0	0	205	
7:45 AM	9	0	19	0	0	0	2	0	0	82	4	0	7	62	1	0	186	
7:50 AM	4	0	19	0	0	0	0	0	0	67	4	0	13	50	0	0	157	
7:55 AM	11	0	23	0	0	0	0	0	1	36	3	0	10	41	0	0	125	2195
8:00 AM	9	0	29	0	0	0	0	0	0	46	7	0	5	58	0	0	154	2186
8:05 AM	10	1	18	0	0	0	0	0	0	47	0	0	8	45	3	0	132	2147
8:10 AM	6	0	18	0	0	0	1	0	0	71	4	0	13	61	0	0	174	2131
8:15 AM	11	0	19	0	0	0	0	0	0	57	6	0	10	46	1	0	150	2093
8:20 AM	9	1	18	0	0	0	0	0	0	74	9	0	12	70	0	0	193	2094
8:25 AM	11	0	19	0	0	0	0	0	0	73	5	0	10	65	1	0	184	2094
8:30 AM	22	0	14	0	0	0	0	0	0	52	7	0	5	54	0	0	154	2049
8:35 AM	15	0	12	0	0	0	0	0	0	86	7	0	5	48	0	0	173	1987
8:40 AM	5	0	17	0	0	0	0	0	0	92	7	0	4	66	0	0	191	1973
8:45 AM	16	0	17	0	0	0	1	0	0	45	7	0	12	50	0	0	148	1935
8:50 AM	13	0	14	0	0	0	0	0	0	55	7	0	5	57	1	0	152	1930
8:55 AM	9	0	17	0	0	0	1	0	1	46	4	0	8	68	0	0	154	1959

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	136	4	228	0	0	0	0	0	0	900	44	0	76	1168	0	0	2556
Heavy Trucks	4	0	0		0	0	0		0	8	0		4	52	0		68
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 3/7/2016 12:39 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

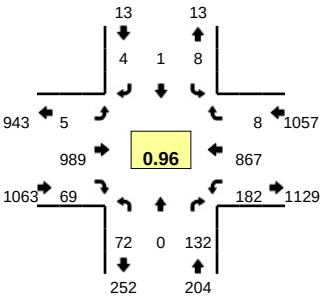
Method for determining peak hour: Total Entering Volume

LOCATION: Corral De Tierra Rd -- SR 68

QC JOB #: 13723616

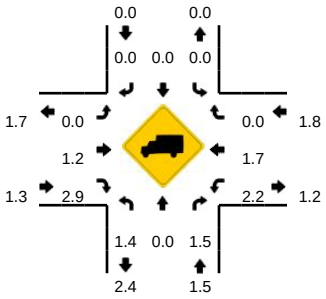
CITY/STATE: Monterey, CA

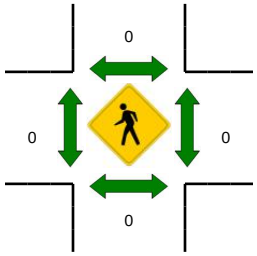
DATE: Tue, Feb 23 2016

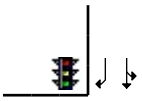


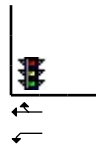
Peak-Hour: 4:35 PM -- 5:35 PM

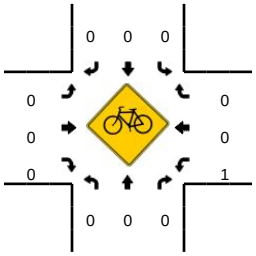
Peak 15-Min: 5:20 PM -- 5:35 PM

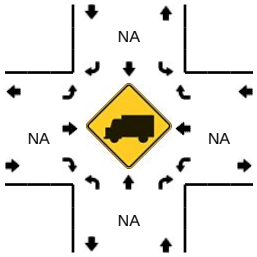


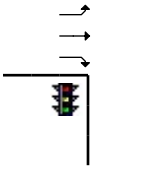


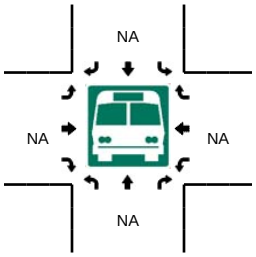












5-Min Count Period Beginning At	Corral De Tierra Rd (Northbound)				Corral De Tierra Rd (Southbound)				SR 68 (Eastbound)				SR 68 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	4	0	9	0	0	0	1	0	1	98	7	0	7	68	0	0	195	
4:05 PM	7	0	14	0	0	0	0	0	0	85	9	0	13	50	0	0	178	
4:10 PM	5	0	15	0	0	0	0	0	0	85	4	0	10	59	0	0	178	
4:15 PM	5	0	9	0	0	0	0	0	0	82	8	0	17	79	1	0	201	
4:20 PM	5	0	6	0	0	0	0	0	0	82	4	0	21	78	0	0	196	
4:25 PM	13	0	9	0	1	0	0	0	0	92	6	0	10	76	0	0	207	
4:30 PM	7	0	10	0	0	0	0	0	0	86	4	0	8	67	0	0	182	
4:35 PM	7	0	9	0	0	0	0	0	0	87	6	0	13	77	0	0	199	
4:40 PM	3	0	12	0	1	0	0	0	0	74	10	0	17	76	0	0	193	
4:45 PM	2	0	14	0	0	0	0	0	0	93	9	0	18	67	1	0	204	
4:50 PM	7	0	16	0	0	0	0	0	0	84	7	0	16	65	1	0	196	
4:55 PM	3	0	8	0	0	0	0	0	1	93	3	0	11	73	3	0	195	2324
5:00 PM	8	0	5	0	2	1	2	0	0	78	5	0	11	70	0	0	182	2311
5:05 PM	10	0	7	0	2	0	1	0	0	77	2	0	13	71	0	0	183	2316
5:10 PM	10	0	12	0	1	0	0	0	0	69	3	0	17	71	0	0	183	2321
5:15 PM	5	0	17	0	1	0	0	0	1	78	12	0	12	69	0	0	195	2315
5:20 PM	6	0	7	0	1	0	0	0	0	80	7	0	19	81	0	0	201	2320
5:25 PM	4	0	12	0	0	0	0	0	3	86	4	0	19	70	2	0	200	2313
5:30 PM	7	0	13	0	0	0	1	0	0	90	1	0	16	77	1	0	206	2337
5:35 PM	6	0	8	0	1	0	0	0	0	84	4	0	14	74	0	0	191	2329
5:40 PM	2	0	13	0	0	0	0	0	2	86	7	0	11	76	1	0	198	2334
5:45 PM	4	1	7	0	1	0	0	0	0	79	8	0	14	56	0	0	170	2300
5:50 PM	1	0	13	0	0	0	0	0	3	81	16	0	10	70	0	0	194	2298
5:55 PM	3	0	7	0	0	0	0	0	2	85	12	0	13	56	2	0	180	2283

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	68	0	128	0	4	0	4	0	12	1024	48	0	216	912	12	0	2428
Heavy Trucks	0	0	0		0	0	0		0	12	0		0	12	0		24
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		1	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 3/7/2016 12:39 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

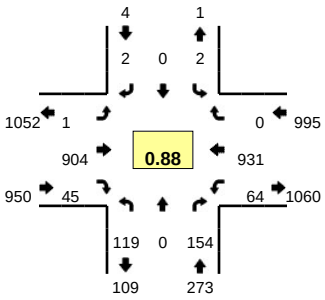
Type of peak hour being reported: Intersection Peak

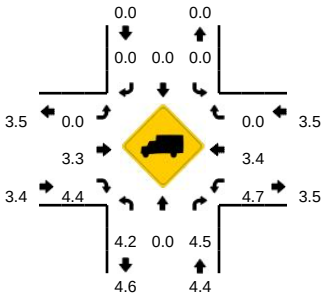
Method for determining peak hour: Total Entering Volume

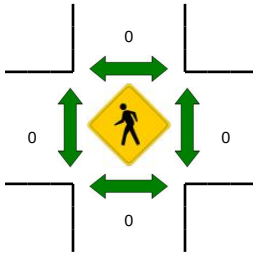
LOCATION: San Benancio Rd -- SR 68
CITY/STATE: Monterey, CA

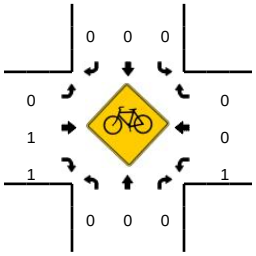
QC JOB #: 13723617
DATE: Wed, Feb 24 2016

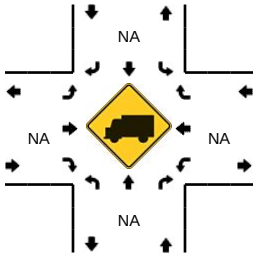
Peak-Hour: 7:05 AM -- 8:05 AM
Peak 15-Min: 7:25 AM -- 7:40 AM

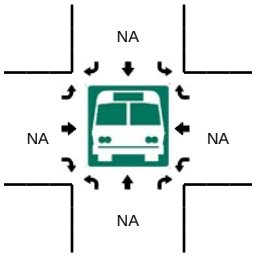












5-Min Count Period Beginning At	San Benancio Rd (Northbound)				San Benancio Rd (Southbound)				SR 68 (Eastbound)				SR 68 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	5	0	12	0	0	0	0	0	0	59	3	0	5	89	0	0	173	
7:05 AM	8	0	10	0	0	0	0	0	0	58	3	0	3	92	0	0	174	
7:10 AM	10	0	13	0	1	0	0	0	0	72	4	0	3	88	0	0	191	
7:15 AM	12	0	6	0	0	0	0	0	0	64	1	0	6	92	0	0	181	
7:20 AM	12	0	9	0	0	0	0	0	0	90	4	0	3	94	0	0	212	
7:25 AM	9	0	9	0	0	0	0	0	0	70	1	0	3	104	0	0	196	
7:30 AM	9	0	13	0	0	0	0	0	0	76	3	0	3	102	0	0	206	
7:35 AM	9	0	15	0	0	0	0	0	0	101	4	0	5	96	0	0	230	
7:40 AM	15	0	15	0	0	0	0	0	0	74	3	0	8	47	0	0	162	
7:45 AM	7	0	11	0	0	0	0	0	0	103	5	0	4	67	0	0	197	
7:50 AM	8	0	17	0	1	0	2	0	1	56	2	0	8	41	0	0	136	
7:55 AM	4	0	16	0	0	0	0	0	0	74	8	0	9	51	0	0	162	2220
8:00 AM	16	0	20	0	0	0	0	0	0	66	7	0	9	57	0	0	175	2222
8:05 AM	9	0	26	0	0	0	0	0	0	57	9	0	5	44	0	0	150	2198
8:10 AM	12	0	13	0	0	0	0	0	0	80	14	0	16	57	0	0	192	2199
8:15 AM	20	0	13	0	0	0	1	0	1	68	15	0	3	38	0	0	159	2177
8:20 AM	25	0	15	0	0	0	0	0	0	79	11	0	15	65	0	0	210	2175
8:25 AM	18	0	19	0	0	0	0	0	0	68	9	0	21	45	0	0	180	2159
8:30 AM	12	0	18	0	0	0	0	0	0	95	3	0	14	58	0	0	200	2153
8:35 AM	8	0	19	0	1	0	0	0	0	93	2	0	12	40	0	0	175	2098
8:40 AM	12	1	17	0	0	0	0	0	0	91	3	0	6	62	0	0	192	2128
8:45 AM	7	0	19	0	0	0	0	0	0	84	3	0	15	54	0	0	182	2113
8:50 AM	4	0	14	0	1	1	0	0	0	66	3	0	8	56	0	0	153	2130
8:55 AM	11	0	16	0	0	0	0	0	0	61	2	0	0	61	1	0	152	2120

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	108	0	148	0	0	0	0	0	0	988	32	0	44	1208	0	0	2528
Heavy Trucks	4	0	8		0	0	0		0	36	0		4	68	0		120
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		1	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 3/7/2016 12:39 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: San Benancio Rd -- SR 68

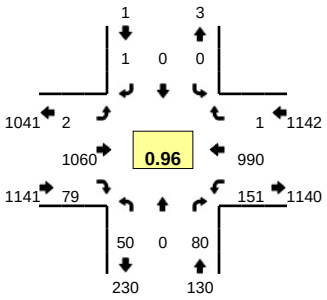
QC JOB #: 13723618

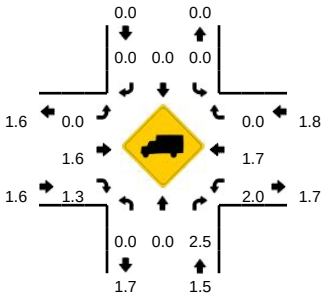
CITY/STATE: Monterey, CA

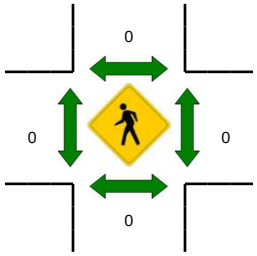
DATE: Tue, Feb 23 2016

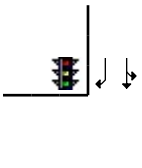
Peak-Hour: 4:45 PM -- 5:45 PM

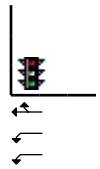
Peak 15-Min: 5:30 PM -- 5:45 PM

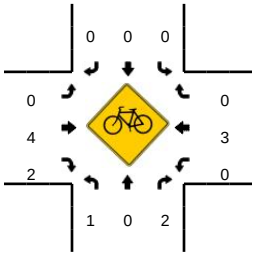


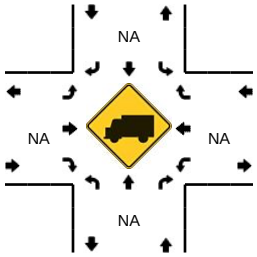


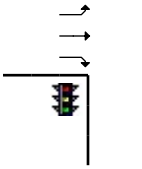


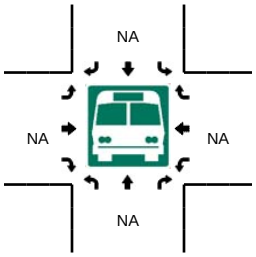












5-Min Count Period Beginning At	San Benancio Rd (Northbound)				San Benancio Rd (Southbound)				SR 68 (Eastbound)				SR 68 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	3	0	8	0	0	0	0	0	0	88	9	0	5	67	0	0	180	
4:05 PM	7	0	7	0	0	0	0	0	0	91	5	0	13	52	0	0	175	
4:10 PM	7	0	6	0	0	0	0	0	0	93	7	0	8	81	1	0	203	
4:15 PM	8	0	5	0	0	0	0	0	0	91	6	0	7	84	0	0	201	
4:20 PM	5	0	8	0	0	0	0	0	0	84	6	0	13	89	0	0	205	
4:25 PM	2	0	4	0	0	0	1	0	0	95	6	0	10	75	1	0	194	
4:30 PM	4	0	4	0	0	0	0	0	0	90	6	0	18	95	0	0	217	
4:35 PM	7	0	3	0	0	0	0	0	1	88	6	0	11	76	1	0	193	
4:40 PM	5	0	16	0	0	0	0	0	0	84	4	0	5	96	0	0	210	
4:45 PM	8	0	4	0	0	0	0	0	0	95	10	0	11	76	0	0	204	
4:50 PM	2	0	5	0	0	0	0	0	0	90	9	0	16	64	0	0	186	
4:55 PM	1	0	12	0	0	0	0	0	0	98	7	0	16	77	0	0	211	2379
5:00 PM	5	0	6	0	0	0	0	0	0	78	8	0	15	83	0	0	195	2394
5:05 PM	10	0	9	0	0	0	0	0	0	80	5	0	9	75	0	0	188	2407
5:10 PM	4	0	12	0	0	0	0	0	0	75	6	0	9	83	0	0	189	2393
5:15 PM	7	0	5	0	0	0	0	0	1	86	9	0	11	91	0	0	210	2402
5:20 PM	1	0	3	0	0	0	0	0	0	84	4	0	11	89	0	0	192	2389
5:25 PM	3	0	7	0	0	0	0	0	1	93	7	0	12	87	0	0	210	2405
5:30 PM	2	0	6	0	0	0	0	0	0	89	7	0	15	90	0	0	209	2397
5:35 PM	3	0	5	0	0	0	0	0	0	93	4	0	17	84	0	0	206	2410
5:40 PM	4	0	6	0	0	0	1	0	0	99	3	0	9	91	1	0	214	2414
5:45 PM	3	0	7	0	0	0	0	0	0	74	9	0	10	51	0	0	154	2364
5:50 PM	8	0	5	0	0	0	0	0	0	87	11	0	12	77	0	0	200	2378
5:55 PM	1	0	2	0	0	0	0	0	0	85	5	0	9	70	0	0	172	2339

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	36	0	68	0	0	0	4	0	0	1124	56	0	164	1060	4	0	2516
Heavy Trucks	0	0	0		0	0	0		0	20	0		8	12	0		40
Pedestrians		0				0				0				0			0
Bicycles	1	0	2		0	0	0		0	0	2		0	0	0		5
Railroad																	
Stopped Buses																	

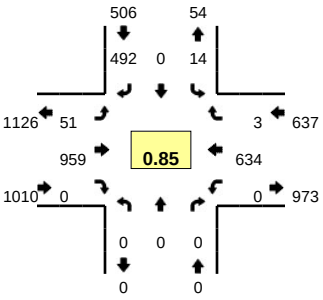
Comments:

Report generated on 3/7/2016 12:39 PM

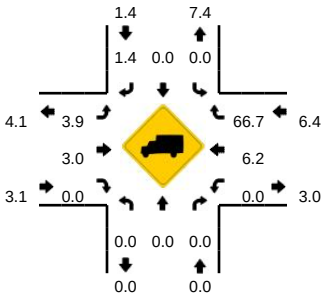
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

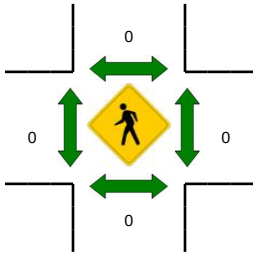
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

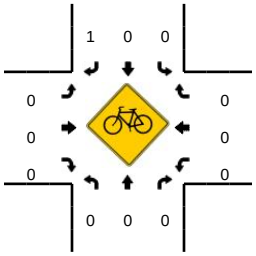
LOCATION: Torero Dr -- SR 68 | **QC JOB #:** 13723619
CITY/STATE: Monterey, CA | **DATE:** Wed, Feb 24 2016

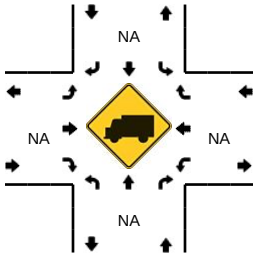


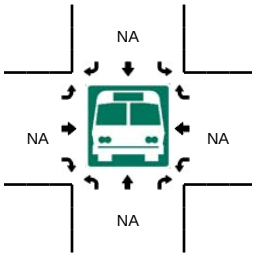
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:35 AM -- 7:50 AM











5-Min Count Period Beginning At	Torero Dr (Northbound)				Torero Dr (Southbound)				SR 68 (Eastbound)				SR 68 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	40	0	2	66	0	0	0	64	0	0	172	
7:05 AM	0	0	0	0	1	0	46	0	4	78	0	0	0	48	0	0	177	
7:10 AM	0	0	0	0	0	0	44	0	4	59	0	0	0	54	0	0	161	
7:15 AM	0	0	0	0	1	0	44	0	1	79	0	0	0	52	0	0	177	
7:20 AM	0	0	0	0	3	0	45	0	4	78	0	0	0	50	0	0	180	
7:25 AM	0	0	0	0	3	0	47	0	3	91	0	0	0	54	0	0	198	
7:30 AM	0	0	0	0	1	0	49	0	3	75	0	0	0	58	0	0	186	
7:35 AM	0	0	0	0	3	0	45	0	2	103	0	0	0	58	0	0	211	
7:40 AM	0	0	0	0	2	0	46	0	2	90	0	0	0	71	0	0	211	
7:45 AM	0	0	0	0	0	0	41	0	7	94	0	0	0	66	2	0	210	
7:50 AM	0	0	0	0	0	0	19	0	10	92	0	0	0	20	1	0	142	
7:55 AM	0	0	0	0	0	0	26	0	9	54	0	0	0	39	0	0	128	2153
8:00 AM	0	0	0	0	1	0	22	0	22	66	0	0	0	28	0	0	139	2120
8:05 AM	0	0	0	0	1	0	29	0	12	66	0	0	0	27	0	0	135	2078
8:10 AM	0	0	0	0	0	0	32	0	28	83	0	0	0	33	1	0	177	2094
8:15 AM	0	0	0	0	0	0	17	1	3	77	0	0	0	24	2	0	124	2041
8:20 AM	0	0	0	0	0	0	31	0	11	80	0	0	0	42	0	0	164	2025
8:25 AM	0	0	0	0	0	0	27	0	5	104	0	0	0	32	2	0	170	1997
8:30 AM	0	0	0	0	0	0	33	0	6	72	0	0	0	43	1	0	155	1966
8:35 AM	0	0	0	0	1	0	31	0	5	104	0	0	0	41	1	0	183	1938
8:40 AM	0	0	0	0	0	0	20	0	3	102	0	0	0	26	0	0	151	1878
8:45 AM	0	0	0	0	0	0	30	0	5	114	0	0	0	31	2	0	182	1850
8:50 AM	0	0	0	0	1	0	30	0	7	83	0	0	0	46	3	0	170	1878
8:55 AM	0	0	0	0	1	0	28	0	7	71	0	0	0	35	1	0	143	1893

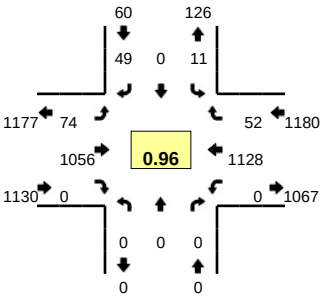
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	20	0	528	0	44	1148	0	0	0	780	8	0	2528
Heavy Trucks	0	0	0		0	0	16		0	28	0		0	36	4		84
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

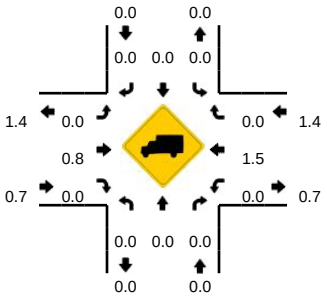
Report generated on 3/7/2016 12:39 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

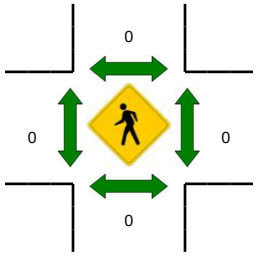
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

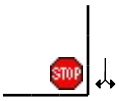
LOCATION: Torero Dr -- SR 68 | **QC JOB #:** 13723620
CITY/STATE: Monterey, CA | **DATE:** Tue, Feb 23 2016

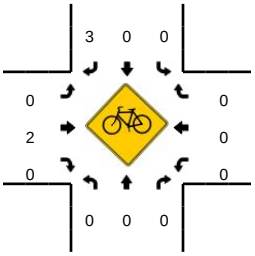


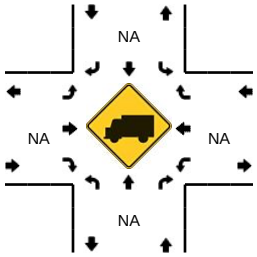
Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 5:10 PM -- 5:25 PM

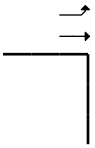


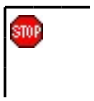


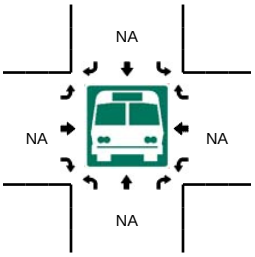












5-Min Count Period Beginning At	Torero Dr (Northbound)				Torero Dr (Southbound)				SR 68 (Eastbound)				SR 68 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	0	8	0	12	95	0	0	0	68	4	0	187	
4:05 PM	0	0	0	0	0	0	8	0	3	85	0	0	0	54	5	0	155	
4:10 PM	0	0	0	0	1	0	4	0	5	91	0	0	0	99	5	0	205	
4:15 PM	0	0	0	0	1	0	5	0	8	88	0	0	0	89	8	0	199	
4:20 PM	0	0	0	0	0	0	7	0	2	96	0	0	0	97	7	0	209	
4:25 PM	0	0	0	0	2	0	6	0	6	94	0	0	0	77	9	1	195	
4:30 PM	0	0	0	0	1	0	6	0	6	90	0	0	0	101	5	0	209	
4:35 PM	0	0	0	0	0	0	3	0	10	77	0	0	0	82	3	0	175	
4:40 PM	0	0	0	0	2	0	5	0	6	95	0	0	0	98	6	0	212	
4:45 PM	0	0	0	0	2	0	3	0	8	85	0	0	0	97	2	0	197	
4:50 PM	0	0	0	0	0	0	6	0	4	96	0	0	0	71	0	0	177	
4:55 PM	0	0	0	0	0	0	3	0	9	83	0	0	0	91	2	0	188	2308
5:00 PM	0	0	0	0	1	0	1	0	7	93	0	0	0	88	7	0	197	2318
5:05 PM	0	0	0	0	1	0	4	0	10	72	0	0	0	79	4	0	170	2333
5:10 PM	0	0	0	0	3	0	7	0	12	89	0	0	0	99	3	0	213	2341
5:15 PM	0	0	0	0	1	0	5	0	6	80	0	0	0	116	8	0	216	2358
5:20 PM	0	0	0	0	0	0	3	0	3	81	0	0	0	90	9	0	186	2335
5:25 PM	0	0	0	0	0	0	6	0	1	94	0	0	0	105	4	0	210	2350
5:30 PM	0	0	0	0	1	0	3	0	2	102	0	0	0	98	5	0	211	2352
5:35 PM	0	0	0	0	0	0	3	0	6	86	0	0	0	96	2	0	193	2370
5:40 PM	0	0	0	0	1	0	3	0	7	92	0	0	0	72	8	0	183	2341
5:45 PM	0	0	0	0	1	0	1	0	9	89	0	0	0	61	3	0	164	2308
5:50 PM	0	0	0	0	0	0	3	0	10	82	0	0	0	78	4	0	177	2308
5:55 PM	0	0	0	0	0	0	4	0	5	93	0	0	0	83	2	0	187	2307

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	16	0	60	0	84	1000	0	0	0	1220	80	0	2460
Heavy Trucks	0	0	0		0	0	0		0	8	0		0	20	0		28
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	2	0		0	0	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 3/7/2016 12:39 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

H: Intersection LOS Calculation Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	799	30	93	737	258	40	25	74	99	21	56
Future Volume (veh/h)	69	799	30	93	737	258	40	25	74	99	21	56
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1900	1863	1600	1881	1900	1869	1900	1900	1735	1652
Adj Flow Rate, veh/h	80	929	35	108	857	300	47	29	86	115	24	65
Adj No. of Lanes	1	1	1	1	1	1	0	1	0	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	2	0	1	3	3	3	12	12	15
Cap, veh/h	120	903	893	129	913	894	55	43	63	181	32	334
Arrive On Green	0.07	0.56	0.56	0.07	0.57	0.57	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1810	1600	1582	1774	1600	1566	54	181	265	508	134	1404
Grp Volume(v), veh/h	80	929	35	108	857	300	162	0	0	139	0	65
Grp Sat Flow(s),veh/h/ln	1810	1600	1582	1774	1600	1566	500	0	0	642	0	1404
Q Serve(g_s), s	4.8	62.1	1.1	6.6	54.4	11.2	3.1	0.0	0.0	0.0	0.0	4.1
Cycle Q Clear(g_c), s	4.8	62.1	1.1	6.6	54.4	11.2	26.2	0.0	0.0	23.1	0.0	4.1
Prop In Lane	1.00		1.00	1.00		1.00	0.29		0.53	0.83		1.00
Lane Grp Cap(c), veh/h	120	903	893	129	913	894	161	0	0	213	0	334
V/C Ratio(X)	0.67	1.03	0.04	0.84	0.94	0.34	1.00	0.00	0.00	0.65	0.00	0.19
Avail Cap(c_a), veh/h	132	903	893	129	913	894	161	0	0	213	0	334
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.2	24.0	10.7	50.4	21.8	12.5	43.5	0.0	0.0	40.4	0.0	33.5
Incr Delay (d2), s/veh	11.6	37.4	0.0	36.4	16.9	0.3	72.0	0.0	0.0	7.9	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	36.5	0.5	4.5	28.1	4.9	8.1	0.0	0.0	4.6	0.0	1.6
LnGrp Delay(d),s/veh	61.8	61.4	10.7	86.7	38.7	12.8	115.5	0.0	0.0	48.3	0.0	33.9
LnGrp LOS	E	F	B	F	D	B	F			D		C
Approach Vol, veh/h		1044			1265			162			204	
Approach Delay, s/veh		59.7			36.7			115.5			43.7	
Approach LOS		E			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.7	68.1		30.2	11.0	68.8		30.2
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	8.0	62.1		* 26	8.0	62.1		* 26
Max Q Clear Time (g_c+I1), s	8.6	64.1		25.1	6.8	56.4		28.2
Green Ext Time (p_c), s	0.0	0.0		0.2	0.0	4.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	51.0
HCM 2010 LOS	D

Notes

Intersection	
Int Delay, s/veh	7.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	19	128	346	51	27	0
Future Vol, veh/h	19	128	346	51	27	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	15	10	2	4	11	0
Mvmt Flow	21	139	376	55	29	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	837	29	29	0	-	0
Stage 1	29	-	-	-	-	-
Stage 2	808	-	-	-	-	-
Critical Hdwy	6.55	6.3	4.12	-	-	-
Critical Hdwy Stg 1	5.55	-	-	-	-	-
Critical Hdwy Stg 2	5.55	-	-	-	-	-
Follow-up Hdwy	3.635	3.39	2.218	-	-	-
Pot Cap-1 Maneuver	320	1023	1584	-	-	-
Stage 1	961	-	-	-	-	-
Stage 2	417	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	242	1023	1584	-	-	-
Mov Cap-2 Maneuver	242	-	-	-	-	-
Stage 1	961	-	-	-	-	-
Stage 2	315	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1584	-	242	1023	-	-
HCM Lane V/C Ratio	0.237	-	0.085	0.136	-	-
HCM Control Delay (s)	8	0	21.3	9.1	-	-
HCM Lane LOS	A	A	C	A	-	-
HCM 95th %tile Q(veh)	0.9	-	0.3	0.5	-	-

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	25	1	6	48	9	0	0	0	0	0	0
Future Vol, veh/h	3	25	1	6	48	9	0	0	0	0	0	0
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Heavy Vehicles, %	0	0	0	0	8	0	0	0	0	0	0	0
Mvmt Flow	5	40	2	10	77	15	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	7.3	7.7	0
HCM LOS	A	A	-

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	0%	10%	11%	0%
Vol Thru, %	100%	86%	89%	0%
Vol Right, %	0%	3%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	29	54	9
LT Vol	0	3	6	0
Through Vol	0	25	48	0
RT Vol	0	1	0	9
Lane Flow Rate	0	47	87	15
Geometry Grp	2	5	7	7
Degree of Util (X)	0	0.053	0.111	0.016
Departure Headway (Hd)	4.15	4.073	4.578	3.958
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	878	786	908
Service Time	2.239	2.103	2.284	1.664
HCM Lane V/C Ratio	0	0.054	0.111	0.017
HCM Control Delay	7.2	7.3	7.9	6.7
HCM Lane LOS	N	A	A	A
HCM 95th-tile Q	0	0.2	0.4	0

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	14	44	22	60	0	44	0	16	0	20	7
Future Vol, veh/h	0	14	44	22	60	0	44	0	16	0	20	7
Conflicting Peds, #/hr	4	0	1	0	0	3	1	0	0	3	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	5	0	5	0	7	0	13	0	10	0
Mvmt Flow	0	16	49	25	67	0	49	0	18	0	22	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	17	0	0	153	134	20	145	134	71
Stage 1	-	-	-	-	-	-	17	17	-	117	117	-
Stage 2	-	-	-	-	-	-	136	117	-	28	17	-
Critical Hdwy	-	-	-	4.1	-	-	7.17	6.5	6.33	7.1	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.17	5.5	-	6.1	5.6	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.17	5.5	-	6.1	5.6	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.563	4	3.417	3.5	4.09	3.3
Pot Cap-1 Maneuver	0	-	-	1613	-	0	803	760	1027	828	742	997
Stage 1	0	-	-	-	-	0	990	885	-	892	784	-
Stage 2	0	-	-	-	-	0	855	803	-	994	866	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1609	-	-	765	747	1024	802	730	994
Mov Cap-2 Maneuver	-	-	-	-	-	-	765	747	-	802	730	-
Stage 1	-	-	-	-	-	-	990	884	-	892	771	-
Stage 2	-	-	-	-	-	-	808	790	-	974	865	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2	9.8	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	820	-	-	1609	-	784
HCM Lane V/C Ratio	0.082	-	-	0.015	-	0.039
HCM Control Delay (s)	9.8	-	-	7.3	0	9.8
HCM Lane LOS	A	-	-	A	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	468	61	119	1291	20	80	8	74	24	24	23
Future Volume (veh/h)	21	468	61	119	1291	20	80	8	74	24	24	23
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		1.00	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1845	1863	1862	1900	1900	1833	1743	1900	1876	1900
Adj Flow Rate, veh/h	23	520	68	132	1434	22	89	9	0	27	27	26
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	4	3	2	2	2	0	0	9	0	0	0
Cap, veh/h	98	1481	665	290	1911	29	360	30	267	156	137	97
Arrive On Green	0.05	0.43	0.43	0.16	0.54	0.51	0.18	0.18	0.00	0.18	0.18	0.16
Sat Flow, veh/h	1810	3471	1559	1774	3566	55	1270	168	1482	354	762	537
Grp Volume(v), veh/h	23	520	68	132	711	745	98	0	0	80	0	0
Grp Sat Flow(s),veh/h/ln	1810	1736	1559	1774	1769	1852	1438	0	1482	1653	0	0
Q Serve(g_s), s	0.6	5.3	1.4	3.5	16.3	16.3	0.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	5.3	1.4	3.5	16.3	16.3	2.7	0.0	0.0	2.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	0.91		1.00	0.34		0.32
Lane Grp Cap(c), veh/h	98	1481	665	290	948	992	390	0	267	390	0	0
V/C Ratio(X)	0.23	0.35	0.10	0.46	0.75	0.75	0.25	0.00	0.00	0.21	0.00	0.00
Avail Cap(c_a), veh/h	364	2261	1015	442	1237	1295	949	0	880	1049	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.6	10.1	9.0	19.7	9.4	9.4	18.6	0.0	0.0	18.5	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.1	0.0	0.4	1.2	1.2	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.5	0.6	1.8	8.0	8.4	1.2	0.0	0.0	1.0	0.0	0.0
LnGrp Delay(d),s/veh	24.1	10.1	9.0	20.2	10.6	10.6	18.7	0.0	0.0	18.6	0.0	0.0
LnGrp LOS	C	B	A	C	B	B	B			B		
Approach Vol, veh/h		611			1588			98			80	
Approach Delay, s/veh		10.5			11.4			18.7			18.6	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.5	26.3		13.4	6.8	32.0		13.4
Change Period (Y+Rc), s	4.0	5.2		5.0	4.0	5.2		5.0
Max Green Setting (Gmax), s	13.0	32.8		30.0	10.5	35.3		30.0
Max Q Clear Time (g_c+I1), s	5.5	7.3		4.0	2.6	18.3		4.7
Green Ext Time (p_c), s	0.0	10.2		0.2	0.0	8.4		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	11.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	182	407	117	335	370	86	132	300	159	84	680	282
Future Volume (veh/h)	182	407	117	335	370	86	132	300	159	84	680	282
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1837	1900	1881	1827	1863	1810	1863	1845	1759	1827	1810
Adj Flow Rate, veh/h	198	442	127	364	402	93	143	326	173	91	739	307
Adj No. of Lanes	2	2	0	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	4	2	5	2	3	8	4	5
Cap, veh/h	338	771	219	424	1082	485	168	1181	517	152	1135	492
Arrive On Green	0.10	0.29	0.28	0.12	0.31	0.31	0.10	0.33	0.33	0.09	0.33	0.33
Sat Flow, veh/h	3408	2669	760	3476	3471	1557	1723	3539	1551	1675	3471	1504
Grp Volume(v), veh/h	198	287	282	364	402	93	143	326	173	91	739	307
Grp Sat Flow(s),veh/h/ln	1704	1745	1684	1738	1736	1557	1723	1770	1551	1675	1736	1504
Q Serve(g_s), s	5.4	13.6	13.9	10.0	8.8	4.3	7.9	6.6	8.1	5.1	17.7	16.8
Cycle Q Clear(g_c), s	5.4	13.6	13.9	10.0	8.8	4.3	7.9	6.6	8.1	5.1	17.7	16.8
Prop In Lane	1.00		0.45	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	338	504	487	424	1082	485	168	1181	517	152	1135	492
V/C Ratio(X)	0.59	0.57	0.58	0.86	0.37	0.19	0.85	0.28	0.33	0.60	0.65	0.62
Avail Cap(c_a), veh/h	385	635	613	465	1335	599	195	1295	568	172	1235	535
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.9	29.4	29.7	41.9	26.1	24.5	43.2	23.8	24.3	42.5	28.0	27.7
Incr Delay (d2), s/veh	1.8	1.4	1.6	13.9	0.3	0.3	25.7	0.2	0.5	4.5	1.3	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	6.8	6.6	5.6	4.2	1.9	5.0	3.2	3.6	2.5	8.6	7.3
LnGrp Delay(d),s/veh	43.7	30.9	31.2	55.7	26.4	24.8	68.9	24.0	24.8	47.0	29.3	30.1
LnGrp LOS	D	C	C	E	C	C	E	C	C	D	C	C
Approach Vol, veh/h		767			859			642			1137	
Approach Delay, s/veh		34.3			38.6			34.2			30.9	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.9	32.1	13.5	35.8	13.7	34.3	12.8	36.4
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	12.3	34.8	11.3	34.0	11.3	36.8	10.3	35.0
Max Q Clear Time (g_c+I1), s	12.2	15.9	9.9	19.7	7.4	10.8	7.1	10.1
Green Ext Time (p_c), s	0.2	8.1	0.0	9.7	0.2	9.3	0.1	14.2

Intersection Summary	
HCM 2010 Ctrl Delay	34.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	419	203	162	758	64	279	222	76	67	276	103
Future Volume (veh/h)	116	419	203	162	758	64	279	222	76	67	276	103
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1792	1845	1863	1900	1845	1836	1900	1863	1788	1900
Adj Flow Rate, veh/h	123	446	216	172	806	68	297	236	81	71	294	110
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	3	6	3	2	0	3	3	3	2	6	6
Cap, veh/h	161	993	429	208	1092	497	338	775	259	158	485	178
Arrive On Green	0.09	0.28	0.28	0.12	0.31	0.31	0.19	0.30	0.30	0.09	0.20	0.20
Sat Flow, veh/h	1723	3505	1512	1757	3539	1612	1757	2562	855	1774	2433	890
Grp Volume(v), veh/h	123	446	216	172	806	68	297	159	158	71	203	201
Grp Sat Flow(s),veh/h/ln	1723	1752	1512	1757	1770	1612	1757	1744	1674	1774	1698	1624
Q Serve(g_s), s	5.6	8.4	9.6	7.7	16.4	2.4	13.2	5.6	5.9	3.1	8.7	9.1
Cycle Q Clear(g_c), s	5.6	8.4	9.6	7.7	16.4	2.4	13.2	5.6	5.9	3.1	8.7	9.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.51	1.00		0.55
Lane Grp Cap(c), veh/h	161	993	429	208	1092	497	338	528	506	158	339	324
V/C Ratio(X)	0.77	0.45	0.50	0.83	0.74	0.14	0.88	0.30	0.31	0.45	0.60	0.62
Avail Cap(c_a), veh/h	221	1308	565	225	1321	602	378	727	698	212	545	522
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	23.6	24.1	34.6	24.9	20.1	31.6	21.5	21.6	34.7	29.3	29.4
Incr Delay (d2), s/veh	10.2	0.3	0.9	20.6	1.8	0.1	19.1	0.4	0.4	2.0	2.1	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	4.1	4.1	4.9	8.2	1.1	8.2	2.7	2.7	1.6	4.3	4.3
LnGrp Delay(d),s/veh	45.8	24.0	25.0	55.2	26.6	20.2	50.7	21.9	22.0	36.7	31.3	31.7
LnGrp LOS	D	C	C	E	C	C	D	C	C	D	C	C
Approach Vol, veh/h		785			1046			614			475	
Approach Delay, s/veh		27.7			30.9			35.8			32.3	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	28.9	13.2	27.4	19.1	20.6	11.2	29.4
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	7.3	33.5	10.3	30.0	17.3	25.8	10.3	30.0
Max Q Clear Time (g_c+I1), s	5.1	7.9	9.7	11.6	15.2	11.1	7.6	18.4
Green Ext Time (p_c), s	0.1	3.9	0.0	7.5	0.3	3.3	0.1	5.9

Intersection Summary	
HCM 2010 Ctrl Delay	31.3
HCM 2010 LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	444	145	275	92	119	532
Future Volume (veh/h)	444	145	275	92	119	532
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1827	1881	1900	1900
Adj Flow Rate, veh/h	505	165	312	105	135	605
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	1	1	4	1	0	0
Cap, veh/h	606	540	484	423	234	895
Arrive On Green	0.34	0.34	0.26	0.26	0.13	0.47
Sat Flow, veh/h	1792	1599	1827	1599	1810	1900
Grp Volume(v), veh/h	505	165	312	105	135	605
Grp Sat Flow(s),veh/h/ln	1792	1599	1827	1599	1810	1900
Q Serve(g_s), s	13.9	4.1	8.1	2.8	3.7	13.2
Cycle Q Clear(g_c), s	13.9	4.1	8.1	2.8	3.7	13.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	606	540	484	423	234	895
V/C Ratio(X)	0.83	0.31	0.65	0.25	0.58	0.68
Avail Cap(c_a), veh/h	842	751	944	826	271	1412
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.3	13.1	17.4	15.5	21.9	11.0
Incr Delay (d2), s/veh	5.2	0.3	1.4	0.3	2.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	4.1	4.3	1.2	2.0	7.1
LnGrp Delay(d),s/veh	21.5	13.4	18.9	15.8	24.1	11.9
LnGrp LOS	C	B	B	B	C	B
Approach Vol, veh/h	670		417			740
Approach Delay, s/veh	19.5		18.1			14.1
Approach LOS	B		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		30.5		23.0	11.0	19.4		
Change Period (Y+Rc), s		5.3		4.9	4.1	5.3		
Max Green Setting (Gmax), s		39.7		25.1	8.0	27.6		
Max Q Clear Time (g_c+I1), s		15.2		15.9	5.7	10.1		
Green Ext Time (p_c), s		4.3		2.2	0.1	4.0		

Intersection Summary	
HCM 2010 Ctrl Delay	17.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	41	16	317	979	40
Future Vol, veh/h	25	41	16	317	979	40
Conflicting Peds, #/hr	1	0	0	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	40	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	12	20	19	3	3	5
Mvmt Flow	29	47	18	364	1125	46

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1528	1126	1126	0	-	0
Stage 1	1126	-	-	-	-	-
Stage 2	402	-	-	-	-	-
Critical Hdwy	6.52	6.4	4.29	-	-	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.48	2.371	-	-	-
Pot Cap-1 Maneuver	122	229	562	-	-	-
Stage 1	296	-	-	-	-	-
Stage 2	654	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	118	229	562	-	-	-
Mov Cap-2 Maneuver	228	-	-	-	-	-
Stage 1	296	-	-	-	-	-
Stage 2	633	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	24.1	0.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	562	-	228	229	-	-
HCM Lane V/C Ratio	0.033	-	0.126	0.206	-	-
HCM Control Delay (s)	11.6	-	23.1	24.7	-	-
HCM Lane LOS	B	-	C	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	0.8	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	12	17	326	44	94	878
Future Volume (veh/h)	12	17	326	44	94	878
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1532	1583	1845	1792	1696	1863
Adj Flow Rate, veh/h	13	18	354	48	102	954
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	20	3	6	12	2
Cap, veh/h	87	248	802	662	202	1235
Arrive On Green	0.06	0.06	0.43	0.43	0.12	0.66
Sat Flow, veh/h	1459	1346	1845	1524	1616	1863
Grp Volume(v), veh/h	13	18	354	48	102	954
Grp Sat Flow(s),veh/h/ln	1459	1346	1845	1524	1616	1863
Q Serve(g_s), s	0.3	0.4	4.8	0.7	2.1	12.6
Cycle Q Clear(g_c), s	0.3	0.4	4.8	0.7	2.1	12.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	87	248	802	662	202	1235
V/C Ratio(X)	0.15	0.07	0.44	0.07	0.51	0.77
Avail Cap(c_a), veh/h	859	960	1530	1264	489	2303
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	12.0	7.1	5.9	14.6	4.1
Incr Delay (d2), s/veh	0.8	0.1	0.5	0.1	2.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.3	2.5	0.3	1.0	6.5
LnGrp Delay(d),s/veh	16.7	12.2	7.5	5.9	16.5	5.4
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	31		402			1056
Approach Delay, s/veh	14.1		7.3			6.5
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		29.4		6.3	8.2	21.2		
Change Period (Y+Rc), s		5.7		* 4.2	3.7	5.7		
Max Green Setting (Gmax), s		44.1		* 21	10.8	29.6		
Max Q Clear Time (g_c+I1), s		14.6		2.4	4.1	6.8		
Green Ext Time (p_c), s		9.0		0.1	0.1	8.3		

Intersection Summary	
HCM 2010 Ctrl Delay	6.9
HCM 2010 LOS	A

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	920	111	42	832	195	55
Future Volume (veh/h)	920	111	42	832	195	55
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1900	1845	1600	1881	1900
Adj Flow Rate, veh/h	1070	129	49	967	227	64
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	3	0	1	0
Cap, veh/h	1034	125	72	1286	230	207
Arrive On Green	0.74	0.74	0.04	0.80	0.13	0.13
Sat Flow, veh/h	1401	169	1757	1600	1792	1615
Grp Volume(v), veh/h	0	1199	49	967	227	64
Grp Sat Flow(s),veh/h/ln	0	1570	1757	1600	1792	1615
Q Serve(g_s), s	0.0	110.0	4.1	44.8	18.9	5.4
Cycle Q Clear(g_c), s	0.0	110.0	4.1	44.8	18.9	5.4
Prop In Lane		0.11	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	1159	72	1286	230	207
V/C Ratio(X)	0.00	1.03	0.68	0.75	0.99	0.31
Avail Cap(c_a), veh/h	0	1159	82	1295	230	207
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.5	70.6	7.3	64.9	59.0
Incr Delay (d2), s/veh	0.0	35.9	17.6	2.6	56.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	58.5	2.4	20.3	12.9	2.4
LnGrp Delay(d),s/veh	0.0	55.4	88.1	9.9	121.0	59.8
LnGrp LOS		F	F	A	F	E
Approach Vol, veh/h	1199			1016	291	
Approach Delay, s/veh	55.4			13.6	107.6	
Approach LOS	E			B	F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	9.8	116.0				125.8		23.3
Change Period (Y+Rc), s	3.7	6.0				6.0		4.2
Max Green Setting (Gmax), s	7.3	110.0				120.7		19.1
Max Q Clear Time (g_c+I1), s	6.1	112.0				46.8		20.9
Green Ext Time (p_c), s	0.0	0.0				31.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	44.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	826	3	0	752	283	8	2	5	596	8	312
Future Volume (veh/h)	82	826	3	0	752	283	8	2	5	596	8	312
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.95	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1652	1597	1900	1900	1600	1776	1900	1900	1900	1845	1827	1863
Adj Flow Rate, veh/h	94	949	3	0	864	325	9	2	6	685	9	359
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	15	0	0	0	0	7	0	0	0	3	4	2
Cap, veh/h	171	1531	5	2	1011	923	64	14	43	952	510	436
Arrive On Green	0.11	0.49	0.49	0.00	0.33	0.33	0.04	0.04	0.04	0.28	0.28	0.28
Sat Flow, veh/h	1573	3104	10	1810	3040	1507	1810	402	1205	3408	1827	1562
Grp Volume(v), veh/h	94	464	488	0	864	325	9	0	8	685	9	359
Grp Sat Flow(s),veh/h/ln	1573	1518	1596	1810	1520	1507	1810	0	1607	1704	1827	1562
Q Serve(g_s), s	4.6	18.0	18.0	0.0	21.4	8.6	0.4	0.0	0.4	14.6	0.3	17.4
Cycle Q Clear(g_c), s	4.6	18.0	18.0	0.0	21.4	8.6	0.4	0.0	0.4	14.6	0.3	17.4
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.75	1.00		1.00
Lane Grp Cap(c), veh/h	171	749	787	2	1011	923	64	0	57	952	510	436
V/C Ratio(X)	0.55	0.62	0.62	0.00	0.85	0.35	0.14	0.00	0.14	0.72	0.02	0.82
Avail Cap(c_a), veh/h	195	749	787	224	1253	1043	202	0	179	1181	633	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	14.9	14.9	0.0	25.1	7.8	37.8	0.0	37.8	26.3	21.1	27.2
Incr Delay (d2), s/veh	2.7	1.6	1.5	0.0	5.0	0.2	1.0	0.0	1.1	1.6	0.0	8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	7.8	8.2	0.0	9.7	6.2	0.2	0.0	0.2	7.1	0.1	8.5
LnGrp Delay(d),s/veh	36.9	16.5	16.4	0.0	30.1	8.0	38.8	0.0	38.9	27.9	21.1	35.4
LnGrp LOS	D	B	B		C	A	D		D	C	C	D
Approach Vol, veh/h		1046			1189			17			1053	
Approach Delay, s/veh		18.3			24.1			38.8			30.4	
Approach LOS		B			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	45.9		27.9	13.0	32.9		7.1
Change Period (Y+Rc), s	* 4.2	6.0		5.3	* 4.2	6.0		4.2
Max Green Setting (Gmax), s	* 10	33.3		28.0	* 10	33.3		9.0
Max Q Clear Time (g_c+I1), s	10.6	20.0		19.4	6.6	23.4		2.4
Green Ext Time (p_c), s	0.0	7.6		3.2	0.1	3.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	24.3
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	444	934	0	0	997	31	0	0	0	0	0	89
Future Volume (veh/h)	444	934	0	0	997	31	0	0	0	0	0	89
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1600	0	0	1599	1900				0	1863	1759
Adj Flow Rate, veh/h	477	1004	0	0	1072	33				0	0	96
Adj No. of Lanes	1	2	0	0	2	0				0	1	2
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93				0.93	0.92	0.93
Percent Heavy Veh, %	1	0	0	0	0	0				0	2	8
Cap, veh/h	526	2884	0	0	1815	56				0	0	0
Arrive On Green	0.29	0.95	0.00	0.00	0.60	0.60				0.00	0.00	0.00
Sat Flow, veh/h	1792	3120	0	0	3088	93					0	
Grp Volume(v), veh/h	477	1004	0	0	541	564					0.0	
Grp Sat Flow(s),veh/h/ln	1792	1520	0	0	1519	1582						
Q Serve(g_s), s	19.9	2.0	0.0	0.0	17.1	17.1						
Cycle Q Clear(g_c), s	19.9	2.0	0.0	0.0	17.1	17.1						
Prop In Lane	1.00		0.00	0.00		0.06						
Lane Grp Cap(c), veh/h	526	2884	0	0	916	955						
V/C Ratio(X)	0.91	0.35	0.00	0.00	0.59	0.59						
Avail Cap(c_a), veh/h	622	2971	0	0	916	955						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	26.4	0.2	0.0	0.0	9.5	9.5						
Incr Delay (d2), s/veh	15.4	0.1	0.0	0.0	1.0	1.0						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	12.1	0.7	0.0	0.0	7.3	7.6						
LnGrp Delay(d),s/veh	41.8	0.2	0.0	0.0	10.5	10.5						
LnGrp LOS	D	A			B	B						
Approach Vol, veh/h		1481			1105							
Approach Delay, s/veh		13.6			10.5							
Approach LOS		B			B							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		77.8			26.8	50.9		
Change Period (Y+Rc), s		4.0			4.0	4.0		
Max Green Setting (Gmax), s		76.0			27.0	45.0		
Max Q Clear Time (g_c+I1), s		4.0			21.9	19.1		
Green Ext Time (p_c), s		11.1			0.9	10.8		

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	201	757	861	394	84	92
Future Volume (veh/h)	201	757	861	394	84	92
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1600	1600	1881	1776	1759
Adj Flow Rate, veh/h	223	841	957	438	93	102
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	0	0	1	7	8
Cap, veh/h	250	1318	1034	1034	149	132
Arrive On Green	0.14	0.82	0.65	0.65	0.09	0.09
Sat Flow, veh/h	1774	1600	1600	1599	1691	1495
Grp Volume(v), veh/h	223	841	957	438	93	102
Grp Sat Flow(s),veh/h/ln	1774	1600	1600	1599	1691	1495
Q Serve(g_s), s	14.3	22.6	60.9	15.4	6.1	7.7
Cycle Q Clear(g_c), s	14.3	22.6	60.9	15.4	6.1	7.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	250	1318	1034	1034	149	132
V/C Ratio(X)	0.89	0.64	0.93	0.42	0.62	0.77
Avail Cap(c_a), veh/h	257	1365	1075	1074	307	271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.9	3.8	18.0	10.0	50.9	51.7
Incr Delay (d2), s/veh	29.2	1.1	13.1	0.4	4.2	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	10.2	30.4	6.9	3.0	6.6
LnGrp Delay(d),s/veh	78.1	4.9	31.1	10.4	55.2	60.9
LnGrp LOS	E	A	C	B	E	E
Approach Vol, veh/h		1064	1395		195	
Approach Delay, s/veh		20.2	24.6		58.2	
Approach LOS		C	C		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		101.4		14.4	20.5	80.8		
Change Period (Y+Rc), s		6.0		* 4.2	* 4.2	6.0		
Max Green Setting (Gmax), s		98.8		* 21	* 17	77.8		
Max Q Clear Time (g_c+I1), s		24.6		9.7	16.3	62.9		
Green Ext Time (p_c), s		33.8		0.5	0.0	11.9		

Intersection Summary

HCM 2010 Ctrl Delay	25.3
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	789	24	18	1109	20	66	2	24	31	1	59
Future Volume (veh/h)	33	789	24	18	1109	20	66	2	24	31	1	59
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1600	1759	1900	1600	1681	1900	1723	1900	1900	1900	1863
Adj Flow Rate, veh/h	38	917	28	21	1290	23	77	2	28	36	1	69
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	3	0	8	0	0	13	0	0	0	0	0	2
Cap, veh/h	59	1203	1124	44	1188	1060	158	12	165	192	5	189
Arrive On Green	0.03	0.75	0.75	0.02	0.74	0.74	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1757	1600	1495	1810	1600	1428	1347	98	1375	1169	39	1577
Grp Volume(v), veh/h	38	917	28	21	1290	23	77	0	30	37	0	69
Grp Sat Flow(s),veh/h/ln	1757	1600	1495	1810	1600	1428	1347	0	1474	1207	0	1577
Q Serve(g_s), s	2.9	45.7	0.6	1.6	101.7	0.6	7.7	0.0	2.5	3.2	0.0	5.5
Cycle Q Clear(g_c), s	2.9	45.7	0.6	1.6	101.7	0.6	13.4	0.0	2.5	5.7	0.0	5.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.93	0.97		1.00
Lane Grp Cap(c), veh/h	59	1203	1124	44	1188	1060	158	0	177	202	0	189
V/C Ratio(X)	0.65	0.76	0.02	0.48	1.09	0.02	0.49	0.00	0.17	0.18	0.00	0.37
Avail Cap(c_a), veh/h	77	1203	1124	79	1188	1060	272	0	301	321	0	322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	65.4	9.9	4.3	66.0	17.6	4.6	61.7	0.0	54.2	56.4	0.0	55.5
Incr Delay (d2), s/veh	11.3	3.1	0.0	8.0	52.8	0.0	2.3	0.0	0.5	0.4	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	20.9	0.3	0.9	61.6	0.2	2.9	0.0	1.0	1.3	0.0	2.5
LnGrp Delay(d),s/veh	76.7	13.0	4.3	74.0	70.4	4.6	64.1	0.0	54.6	56.8	0.0	56.7
LnGrp LOS	E	B	A	E	F	A	E		D	E		E
Approach Vol, veh/h		983			1334			107			106	
Approach Delay, s/veh		15.2			69.3			61.4			56.7	
Approach LOS		B			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.0	109.0		21.0	8.3	107.7		21.0
Change Period (Y+Rc), s	3.7	6.0		4.6	3.7	6.0		4.6
Max Green Setting (Gmax), s	6.3	101.7		28.0	6.0	101.7		28.0
Max Q Clear Time (g_c+I1), s	3.6	47.7		7.7	4.9	103.7		15.4
Green Ext Time (p_c), s	0.0	36.0		0.7	0.0	0.0		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	47.5
HCM 2010 LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	686	155	230	1053	184	251
Future Volume (veh/h)	686	155	230	1053	184	251
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1845	1827	1600	1881	1881
Adj Flow Rate, veh/h	715	161	240	1097	192	261
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	3	4	0	1	1
Cap, veh/h	934	915	313	1151	314	428
Arrive On Green	0.58	0.58	0.09	0.72	0.18	0.18
Sat Flow, veh/h	1600	1568	3375	1600	1792	1599
Grp Volume(v), veh/h	715	161	240	1097	192	261
Grp Sat Flow(s),veh/h/ln	1600	1568	1688	1600	1792	1599
Q Serve(g_s), s	32.6	4.6	6.7	59.3	9.6	13.9
Cycle Q Clear(g_c), s	32.6	4.6	6.7	59.3	9.6	13.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	934	915	313	1151	314	428
V/C Ratio(X)	0.77	0.18	0.77	0.95	0.61	0.61
Avail Cap(c_a), veh/h	1006	986	369	1250	443	544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.2	9.4	43.0	12.1	37.0	31.1
Incr Delay (d2), s/veh	3.3	0.1	8.0	14.9	1.9	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.2	2.0	3.5	30.4	4.9	6.3
LnGrp Delay(d),s/veh	18.5	9.5	51.0	27.1	38.9	32.5
LnGrp LOS	B	A	D	C	D	C
Approach Vol, veh/h	876			1337	453	
Approach Delay, s/veh	16.9			31.4	35.2	
Approach LOS	B			C	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	13.2	62.6				75.8		21.2
Change Period (Y+Rc), s	4.2	6.0				6.0		4.2
Max Green Setting (Gmax), s	11.1	61.0				75.8		24.0
Max Q Clear Time (g_c+I1), s	8.7	34.6				61.3		15.9
Green Ext Time (p_c), s	0.2	11.8				8.5		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	27.2
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	864	43	154	1045	5	149	0	262	0	1	0
Future Volume (veh/h)	0	864	43	154	1045	5	149	0	262	0	1	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1845	1759	1597	1900	1900	1810	1863	1900	1900	1900
Adj Flow Rate, veh/h	0	1005	50	179	1215	6	173	0	305	0	1	0
Adj No. of Lanes	1	1	1	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	3	8	0	0	0	0	2	0	0	0
Cap, veh/h	1	1002	982	182	1210	6	301	0	460	0	351	299
Arrive On Green	0.00	0.63	0.63	0.14	1.00	1.00	0.18	0.00	0.18	0.00	0.18	0.00
Sat Flow, veh/h	1810	1600	1568	1675	1588	8	1367	0	1583	0	1900	1615
Grp Volume(v), veh/h	0	1005	50	179	0	1221	173	0	305	0	1	0
Grp Sat Flow(s),veh/h/ln	1810	1600	1568	1675	0	1596	1367	0	1583	0	1900	1615
Q Serve(g_s), s	0.0	94.0	1.8	16.0	0.0	114.1	17.7	0.0	25.4	0.0	0.1	0.0
Cycle Q Clear(g_c), s	0.0	94.0	1.8	16.0	0.0	114.1	17.7	0.0	25.4	0.0	0.1	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1	1002	982	182	0	1216	301	0	460	0	351	299
V/C Ratio(X)	0.00	1.00	0.05	0.98	0.00	1.00	0.57	0.00	0.66	0.00	0.00	0.00
Avail Cap(c_a), veh/h	97	1002	982	182	0	1216	305	0	464	0	357	304
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.65	0.65	0.09	0.00	0.09	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	28.0	10.8	64.0	0.0	0.0	57.1	0.0	46.8	0.0	49.8	0.0
Incr Delay (d2), s/veh	0.0	23.7	0.1	16.2	0.0	8.8	2.6	0.0	3.5	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	47.8	0.8	8.2	0.0	3.0	6.9	0.0	11.6	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	51.7	10.9	80.2	0.0	8.8	59.6	0.0	50.3	0.0	49.8	0.0
LnGrp LOS		F	B	F		F	E		D		D	
Approach Vol, veh/h		1055			1400			478			1	
Approach Delay, s/veh		49.8			17.9			53.7			49.8	
Approach LOS		D			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.3	98.0		31.7	0.0	118.3		31.7
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	16.6	91.5		* 28	8.3	99.8		* 28
Max Q Clear Time (g_c+I1), s	18.1	96.0		2.1	0.0	116.1		27.4
Green Ext Time (p_c), s	0.0	0.0		2.1	0.0	0.0		0.2

Intersection Summary

HCM 2010 Ctrl Delay	35.2
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	993	105	150	1018	1	153	0	239	0	0	1
Future Volume (veh/h)	0	993	105	150	1018	1	153	0	239	0	0	1
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1827	1810	1600	1900	1900	1827	1810	1900	1900	1900
Adj Flow Rate, veh/h	0	1128	119	170	1157	1	174	0	272	0	0	1
Adj No. of Lanes	1	1	1	2	1	0	0	1	1	0	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	4	5	0	0	0	0	5	0	0	0
Cap, veh/h	1	1017	974	172	1159	1	244	0	210	0	104	88
Arrive On Green	0.00	1.00	1.00	0.05	0.73	0.71	0.14	0.00	0.14	0.00	0.00	0.05
Sat Flow, veh/h	1810	1600	1533	3343	1598	1	1740	0	1503	0	1900	1615
Grp Volume(v), veh/h	0	1128	119	170	0	1158	174	0	272	0	0	1
Grp Sat Flow(s),veh/h/ln	1810	1600	1533	1672	0	1600	1740	0	1503	0	1900	1615
Q Serve(g_s), s	0.0	95.3	0.0	7.6	0.0	108.0	14.3	0.0	21.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	95.3	0.0	7.6	0.0	108.0	14.3	0.0	21.0	0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1	1017	974	172	0	1160	244	0	210	0	104	88
V/C Ratio(X)	0.00	1.11	0.12	0.99	0.00	1.00	0.71	0.00	1.29	0.00	0.00	0.01
Avail Cap(c_a), veh/h	93	1017	974	172	0	1160	244	0	210	0	307	261
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.31	0.31	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	71.1	0.0	20.5	61.6	0.0	64.5	0.0	0.0	67.1
Incr Delay (d2), s/veh	0.0	54.3	0.1	65.8	0.0	25.9	9.5	0.0	162.2	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	15.3	0.0	5.1	0.0	55.3	7.6	0.0	18.2	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	54.3	0.1	136.9	0.0	46.4	71.1	0.0	226.7	0.0	0.0	67.1
LnGrp LOS		F	A	F		D	E		F			E
Approach Vol, veh/h		1247			1328			446			1	
Approach Delay, s/veh		49.1			58.0			166.0			67.1	
Approach LOS		D			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.7	101.1		12.2	0.0	112.8		25.0
Change Period (Y+Rc), s	3.7	* 6		* 4.2	3.7	6.0		4.2
Max Green Setting (Gmax), s	8.0	* 81		* 24	8.0	79.1		20.8
Max Q Clear Time (g_c+I1), s	9.6	97.3		2.1	0.0	110.0		23.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary

HCM 2010 Ctrl Delay	70.3
HCM 2010 LOS	E

Notes

Intersection	
Int Delay, s/veh	68.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	111	1123	791	1	12	364
Future Vol, veh/h	111	1123	791	1	12	364
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	230	-	-	250	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	4	3	6	67	0	1
Mvmt Flow	131	1321	931	1	14	428

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	931	0	-	0	2513	931
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	1582	-
Critical Hdwy	4.14	-	-	-	6.4	6.21
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.236	-	-	-	3.5	3.309
Pot Cap-1 Maneuver	727	-	-	-	32	~ 325
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	188	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	727	-	-	-	26	~ 325
Mov Cap-2 Maneuver	-	-	-	-	26	-
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	154	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	$ 436.9
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	727	-	-	-	238
HCM Lane V/C Ratio	0.18	-	-	-	1.859
HCM Control Delay (s)	11	-	-	-	$ 436.9
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.7	-	-	-	30.9

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	654	14	50	989	124	27	18	166	228	16	139
Future Volume (veh/h)	56	654	14	50	989	124	27	18	166	228	16	139
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1900	1900	1584	1827	1900	1890	1900	1900	1882	1881
Adj Flow Rate, veh/h	60	696	15	53	1052	132	29	19	177	243	17	148
Adj No. of Lanes	1	1	1	1	1	1	0	1	0	0	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	1	4	0	0	0	0	0	1
Cap, veh/h	89	938	927	86	926	889	27	30	109	130	6	437
Arrive On Green	0.05	0.59	0.59	0.05	0.58	0.58	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1810	1600	1582	1810	1584	1521	0	108	399	303	21	1599
Grp Volume(v), veh/h	60	696	15	53	1052	132	225	0	0	260	0	148
Grp Sat Flow(s),veh/h/ln	1810	1600	1582	1810	1584	1521	507	0	0	325	0	1599
Q Serve(g_s), s	4.9	47.6	0.6	4.3	87.3	5.9	0.0	0.0	0.0	0.0	0.0	11.1
Cycle Q Clear(g_c), s	4.9	47.6	0.6	4.3	87.3	5.9	40.8	0.0	0.0	40.8	0.0	11.1
Prop In Lane	1.00		1.00	1.00		1.00	0.13		0.79	0.93		1.00
Lane Grp Cap(c), veh/h	89	938	927	86	926	889	166	0	0	135	0	437
V/C Ratio(X)	0.67	0.74	0.02	0.61	1.14	0.15	1.36	0.00	0.00	1.92	0.00	0.34
Avail Cap(c_a), veh/h	97	938	927	98	926	889	166	0	0	135	0	437
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	69.8	22.6	12.9	69.8	31.0	14.1	49.4	0.0	0.0	61.3	0.0	43.5
Incr Delay (d2), s/veh	16.5	3.3	0.0	10.1	74.5	0.1	195.1	0.0	0.0	440.7	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	21.7	0.3	2.4	57.2	2.5	14.7	0.0	0.0	22.1	0.0	5.0
LnGrp Delay(d),s/veh	86.3	26.0	12.9	79.9	105.5	14.2	244.6	0.0	0.0	502.0	0.0	44.1
LnGrp LOS	F	C	B	E	F	B	F			F		D
Approach Vol, veh/h		771			1237			225			408	
Approach Delay, s/veh		30.4			94.7			244.6			335.9	
Approach LOS		C			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.8	93.5		45.0	11.0	93.3		45.0
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	8.1	87.2		* 41	8.0	87.3		* 41
Max Q Clear Time (g_c+I1), s	6.3	49.6		42.8	6.9	89.3		42.8
Green Ext Time (p_c), s	0.0	15.9		0.0	0.0	0.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		126.0
HCM 2010 LOS		F

Notes

Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	26	287	116	80	100	13
Future Vol, veh/h	26	287	116	80	100	13
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	5	1	2	1	2	8
Mvmt Flow	28	309	125	86	108	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	451	117	123	0	-	0
Stage 1	116	-	-	-	-	-
Stage 2	335	-	-	-	-	-
Critical Hdwy	6.45	6.21	4.12	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.309	2.218	-	-	-
Pot Cap-1 Maneuver	561	938	1464	-	-	-
Stage 1	902	-	-	-	-	-
Stage 2	718	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	510	936	1463	-	-	-
Mov Cap-2 Maneuver	510	-	-	-	-	-
Stage 1	901	-	-	-	-	-
Stage 2	653	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.8	4.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1463	-	510	936	-	-
HCM Lane V/C Ratio	0.085	-	0.055	0.33	-	-
HCM Control Delay (s)	7.7	0	12.5	10.7	-	-
HCM Lane LOS	A	A	B	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.2	1.4	-	-

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	87	0	0	90	6	0	0	0	0	0	0
Future Vol, veh/h	1	87	0	0	90	6	0	0	0	0	0	0
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Heavy Vehicles, %	0	0	0	0	8	0	0	0	0	0	0	0
Mvmt Flow	2	140	0	0	145	10	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	8	8.4	0
HCM LOS	A	A	-

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	0%	1%	0%	0%
Vol Thru, %	100%	99%	100%	0%
Vol Right, %	0%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	88	90	6
LT Vol	0	1	0	0
Through Vol	0	87	90	0
RT Vol	0	0	0	6
Lane Flow Rate	0	142	145	10
Geometry Grp	2	5	7	7
Degree of Util (X)	0	0.162	0.19	0.01
Departure Headway (Hd)	4.574	4.114	4.704	3.867
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	866	765	927
Service Time	2.574	2.165	2.423	1.586
HCM Lane V/C Ratio	0	0.164	0.19	0.011
HCM Control Delay	7.6	8	8.5	6.6
HCM Lane LOS	N	A	A	A
HCM 95th-tile Q	0	0.6	0.7	0

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	166	22	7	26	0	29	0	42	1	4	2
Future Vol, veh/h	0	166	22	7	26	0	29	0	42	1	4	2
Conflicting Peds, #/hr	1	0	1	1	0	4	2	0	1	4	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	1	0	0	0	0	0	0	5	0	25	0
Mvmt Flow	0	182	24	8	29	0	32	0	46	1	4	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	183	0	0	235	227	187	253	227	34
Stage 1	-	-	-	-	-	-	183	183	-	44	44	-
Stage 2	-	-	-	-	-	-	52	44	-	209	183	-
Critical Hdwy	-	-	-	4.1	-	-	7.1	6.5	6.25	7.1	6.75	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.75	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.75	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.5	4	3.345	3.5	4.225	3.3
Pot Cap-1 Maneuver	0	-	-	1404	-	0	724	676	847	704	634	1045
Stage 1	0	-	-	-	-	0	823	752	-	975	815	-
Stage 2	0	-	-	-	-	0	966	862	-	798	707	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1399	-	-	712	671	843	660	630	1041
Mov Cap-2 Maneuver	-	-	-	-	-	-	712	671	-	660	630	-
Stage 1	-	-	-	-	-	-	823	751	-	975	810	-
Stage 2	-	-	-	-	-	-	949	857	-	752	706	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.6	10.1	10.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	784	-	-	1399	-	715
HCM Lane V/C Ratio	0.1	-	-	0.005	-	0.011
HCM Control Delay (s)	10.1	-	-	7.6	0	10.1
HCM Lane LOS	B	-	-	A	A	B
HCM 95th %tile Q(veh)	0.3	-	-	0	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	927	78	99	609	35	110	36	206	12	11	21
Future Volume (veh/h)	53	927	78	99	609	35	110	36	206	12	11	21
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		1.00	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1865	1900	1900	1850	1900	1900	1859	1900
Adj Flow Rate, veh/h	60	1042	88	111	684	39	124	40	0	13	12	24
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	2	0	0	2	2	8	8	0	9	9	9
Cap, veh/h	200	1401	635	274	1488	85	314	82	300	130	112	150
Arrive On Green	0.11	0.40	0.40	0.15	0.44	0.44	0.19	0.19	0.00	0.19	0.19	0.19
Sat Flow, veh/h	1810	3539	1605	1810	3406	194	1051	439	1615	239	601	806
Grp Volume(v), veh/h	60	1042	88	111	356	367	164	0	0	49	0	0
Grp Sat Flow(s),veh/h/ln	1810	1770	1605	1810	1771	1829	1490	0	1615	1646	0	0
Q Serve(g_s), s	1.6	13.4	1.9	3.0	7.5	7.5	3.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.6	13.4	1.9	3.0	7.5	7.5	5.2	0.0	0.0	1.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.11	0.76		1.00	0.27		0.49
Lane Grp Cap(c), veh/h	200	1401	635	274	774	799	396	0	300	391	0	0
V/C Ratio(X)	0.30	0.74	0.14	0.40	0.46	0.46	0.41	0.00	0.00	0.13	0.00	0.00
Avail Cap(c_a), veh/h	357	1716	778	340	842	869	941	0	910	981	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.8	13.8	10.3	20.4	10.6	10.6	19.7	0.0	0.0	18.2	0.0	0.0
Incr Delay (d2), s/veh	0.3	1.0	0.0	0.4	0.2	0.2	0.3	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	6.7	0.8	1.5	3.7	3.8	2.2	0.0	0.0	0.6	0.0	0.0
LnGrp Delay(d),s/veh	22.1	14.8	10.3	20.8	10.7	10.7	19.9	0.0	0.0	18.2	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	B			B		
Approach Vol, veh/h		1190			834			164			49	
Approach Delay, s/veh		14.8			12.1			19.9			18.2	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.1	26.3		14.9	9.9	28.5		14.9
Change Period (Y+Rc), s	4.0	5.2		5.0	4.0	5.2		5.0
Max Green Setting (Gmax), s	10.0	25.8		30.0	10.5	25.3		30.0
Max Q Clear Time (g_c+I1), s	5.0	15.4		3.3	3.6	9.5		7.2
Green Ext Time (p_c), s	0.0	5.7		0.2	0.0	7.2		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	14.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	193	362	96	223	553	170	279	955	410	140	469	292
Future Volume (veh/h)	193	362	96	223	553	170	279	955	410	140	469	292
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1863	1845	1881	1881	1881	1845	1881	1863
Adj Flow Rate, veh/h	197	369	98	228	564	173	285	974	418	143	479	298
Adj No. of Lanes	2	2	0	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	2	3	1	1	1	3	1	2
Cap, veh/h	344	747	196	344	948	415	272	1322	581	173	1132	495
Arrive On Green	0.10	0.27	0.27	0.10	0.27	0.27	0.15	0.37	0.37	0.10	0.32	0.32
Sat Flow, veh/h	3476	2788	730	3476	3539	1549	1792	3574	1570	1757	3574	1562
Grp Volume(v), veh/h	197	235	232	228	564	173	285	974	418	143	479	298
Grp Sat Flow(s),veh/h/ln	1738	1787	1732	1738	1770	1549	1792	1787	1570	1757	1787	1562
Q Serve(g_s), s	5.5	11.2	11.4	6.4	14.0	9.3	15.3	23.8	23.0	8.0	10.7	16.2
Cycle Q Clear(g_c), s	5.5	11.2	11.4	6.4	14.0	9.3	15.3	23.8	23.0	8.0	10.7	16.2
Prop In Lane	1.00		0.42	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	344	479	464	344	948	415	272	1322	581	173	1132	495
V/C Ratio(X)	0.57	0.49	0.50	0.66	0.59	0.42	1.05	0.74	0.72	0.83	0.42	0.60
Avail Cap(c_a), veh/h	355	599	581	355	1187	519	272	1322	581	214	1206	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.4	31.1	31.2	43.8	32.1	30.4	42.7	27.5	27.3	44.6	27.2	29.1
Incr Delay (d2), s/veh	2.1	1.1	1.2	4.4	0.9	1.0	67.6	2.4	4.7	18.9	0.4	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	5.6	5.6	3.3	6.9	4.1	12.6	12.2	10.7	4.8	5.3	7.2
LnGrp Delay(d),s/veh	45.5	32.2	32.4	48.1	33.0	31.3	110.4	29.9	32.0	63.5	27.5	31.2
LnGrp LOS	D	C	C	D	C	C	F	C	C	E	C	C
Approach Vol, veh/h		664			965			1677			920	
Approach Delay, s/veh		36.2			36.3			44.1			34.3	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	31.6	19.0	36.5	13.7	31.6	13.6	41.9
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	10.3	33.8	15.3	34.0	10.3	33.8	12.3	37.0
Max Q Clear Time (g_c+I1), s	9.4	13.4	17.3	18.2	7.5	16.0	10.0	25.8
Green Ext Time (p_c), s	0.1	9.4	0.0	12.6	0.2	8.7	0.1	9.7

Intersection Summary	
HCM 2010 Ctrl Delay	38.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	822	220	170	542	51	257	325	195	139	246	154
Future Volume (veh/h)	184	822	220	170	542	51	257	325	195	139	246	154
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1881	1881	1881	1881	1881	1881	1881	1900	1881	1859	1900
Adj Flow Rate, veh/h	188	839	224	173	553	52	262	332	199	142	251	157
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	1	1	1	1	1	1	1	1	1	3	3
Cap, veh/h	184	1165	513	180	1152	513	209	552	323	193	525	316
Arrive On Green	0.10	0.33	0.33	0.10	0.32	0.32	0.12	0.26	0.26	0.11	0.25	0.25
Sat Flow, veh/h	1774	3574	1574	1792	3574	1592	1792	2140	1250	1792	2105	1266
Grp Volume(v), veh/h	188	839	224	173	553	52	262	276	255	142	209	199
Grp Sat Flow(s),veh/h/ln	1774	1787	1574	1792	1787	1592	1792	1787	1604	1792	1766	1606
Q Serve(g_s), s	8.3	16.5	8.9	7.7	9.9	1.8	9.3	10.8	11.2	6.1	8.0	8.5
Cycle Q Clear(g_c), s	8.3	16.5	8.9	7.7	9.9	1.8	9.3	10.8	11.2	6.1	8.0	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		0.79
Lane Grp Cap(c), veh/h	184	1165	513	180	1152	513	209	461	414	193	440	400
V/C Ratio(X)	1.02	0.72	0.44	0.96	0.48	0.10	1.26	0.60	0.62	0.73	0.47	0.50
Avail Cap(c_a), veh/h	184	1357	597	180	1343	598	209	584	524	202	571	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.8	23.7	21.1	35.8	21.7	19.0	35.3	26.0	26.1	34.5	25.5	25.7
Incr Delay (d2), s/veh	71.4	1.6	0.6	56.3	0.3	0.1	147.8	1.5	1.8	12.5	1.0	1.2
Initial Q Delay(d3),s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	8.4	3.9	6.6	4.9	0.8	13.1	5.5	5.2	3.7	4.0	3.9
LnGrp Delay(d),s/veh	107.3	25.3	21.7	92.1	22.0	19.0	183.1	27.5	27.9	47.0	26.5	26.8
LnGrp LOS	F	C	C	F	C	B	F	C	C	D	C	C
Approach Vol, veh/h		1251			778			793			550	
Approach Delay, s/veh		37.0			37.4			79.0			31.9	
Approach LOS		D			D			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	25.2	11.7	30.6	13.0	24.5	12.0	30.3
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	9.0	26.1	8.0	30.3	9.3	25.8	8.3	30.0
Max Q Clear Time (g_c+I1), s	8.1	13.2	9.7	18.5	11.3	10.5	10.3	11.9
Green Ext Time (p_c), s	0.0	4.2	0.0	6.4	0.0	4.6	0.0	8.2

Intersection Summary	
HCM 2010 Ctrl Delay	46.1
HCM 2010 LOS	D

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	99	83	818	476	148	271
Future Volume (veh/h)	99	83	818	476	148	271
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1827	1881	1900	1900
Adj Flow Rate, veh/h	104	87	861	501	156	285
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	4	1	0	0
Cap, veh/h	189	169	1013	887	212	1397
Arrive On Green	0.11	0.11	0.55	0.55	0.12	0.74
Sat Flow, veh/h	1792	1599	1827	1599	1810	1900
Grp Volume(v), veh/h	104	87	861	501	156	285
Grp Sat Flow(s),veh/h/ln	1792	1599	1827	1599	1810	1900
Q Serve(g_s), s	3.5	3.3	25.5	13.0	5.3	3.0
Cycle Q Clear(g_c), s	3.5	3.3	25.5	13.0	5.3	3.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	189	169	1013	887	212	1397
V/C Ratio(X)	0.55	0.52	0.85	0.56	0.74	0.20
Avail Cap(c_a), veh/h	475	424	1390	1216	279	1860
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	27.1	12.0	9.3	27.4	2.6
Incr Delay (d2), s/veh	2.5	2.4	3.8	0.6	6.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	3.0	13.8	5.8	3.1	1.5
LnGrp Delay(d),s/veh	29.7	29.6	15.9	9.8	34.3	2.7
LnGrp LOS	C	C	B	A	C	A
Approach Vol, veh/h	191		1362			441
Approach Delay, s/veh	29.7		13.6			13.9
Approach LOS	C		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		52.5		11.7	11.6	40.9		
Change Period (Y+Rc), s		5.3		4.9	4.1	5.3		
Max Green Setting (Gmax), s		62.8		17.0	9.9	48.8		
Max Q Clear Time (g_c+I1), s		5.0		5.5	7.3	27.5		
Green Ext Time (p_c), s		9.9		0.5	0.1	8.1		

Intersection Summary	
HCM 2010 Ctrl Delay	15.2
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	26	28	27	1288	325	20
Future Vol, veh/h	26	28	27	1288	325	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	40	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	15	2	5	0
Mvmt Flow	27	29	28	1356	342	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1755	342	342	0	-	0
Stage 1	342	-	-	-	-	-
Stage 2	1413	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.25	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.335	-	-	-
Pot Cap-1 Maneuver	95	705	1148	-	-	-
Stage 1	724	-	-	-	-	-
Stage 2	227	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	93	705	1148	-	-	-
Mov Cap-2 Maneuver	182	-	-	-	-	-
Stage 1	724	-	-	-	-	-
Stage 2	221	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1148	-	182	705	-	-
HCM Lane V/C Ratio	0.025	-	0.15	0.042	-	-
HCM Control Delay (s)	8.2	-	28.3	10.3	-	-
HCM Lane LOS	A	-	D	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	0.1	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	40	95	1200	7	11	350
Future Volume (veh/h)	40	95	1200	7	11	350
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1881	1387	1508	1881
Adj Flow Rate, veh/h	43	103	1304	8	12	380
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	3	1	37	26	1
Cap, veh/h	149	167	1412	885	29	1523
Arrive On Green	0.09	0.09	0.75	0.75	0.02	0.81
Sat Flow, veh/h	1723	1568	1881	1179	1436	1881
Grp Volume(v), veh/h	43	103	1304	8	12	380
Grp Sat Flow(s),veh/h/ln	1723	1568	1881	1179	1436	1881
Q Serve(g_s), s	2.2	6.0	53.6	0.2	0.8	4.6
Cycle Q Clear(g_c), s	2.2	6.0	53.6	0.2	0.8	4.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	149	167	1412	885	29	1523
V/C Ratio(X)	0.29	0.62	0.92	0.01	0.42	0.25
Avail Cap(c_a), veh/h	380	378	1748	1096	106	1960
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	40.7	9.6	3.0	46.1	2.2
Incr Delay (d2), s/veh	1.1	3.7	7.8	0.0	9.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	5.3	30.2	0.1	0.4	2.4
LnGrp Delay(d),s/veh	41.8	44.3	17.5	3.0	55.4	2.3
LnGrp LOS	D	D	B	A	E	A
Approach Vol, veh/h	146		1312			392
Approach Delay, s/veh	43.6		17.4			3.9
Approach LOS	D		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		82.7		12.4	5.6	77.1		
Change Period (Y+Rc), s		5.7		* 4.2	3.7	5.7		
Max Green Setting (Gmax), s		99.1		* 21	7.0	88.4		
Max Q Clear Time (g_c+I1), s		6.6		8.0	2.8	55.6		
Green Ext Time (p_c), s		20.9		0.4	0.0	15.8		

Intersection Summary

HCM 2010 Ctrl Delay	16.6
HCM 2010 LOS	B

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	707	81	57	1251	70	29
Future Volume (veh/h)	707	81	57	1251	70	29
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1569	1900	1900	1584	1900	1845
Adj Flow Rate, veh/h	744	85	60	1317	74	31
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	0	1	0	3
Cap, veh/h	1233	1270	86	1366	108	94
Arrive On Green	0.79	0.79	0.05	0.86	0.06	0.06
Sat Flow, veh/h	1569	1615	1810	1584	1810	1568
Grp Volume(v), veh/h	744	85	60	1317	74	31
Grp Sat Flow(s),veh/h/ln	1569	1615	1810	1584	1810	1568
Q Serve(g_s), s	25.2	1.6	4.3	88.8	5.2	2.5
Cycle Q Clear(g_c), s	25.2	1.6	4.3	88.8	5.2	2.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1233	1270	86	1366	108	94
V/C Ratio(X)	0.60	0.07	0.70	0.96	0.68	0.33
Avail Cap(c_a), veh/h	1305	1343	158	1501	222	192
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.7	3.2	61.3	7.4	60.2	58.9
Incr Delay (d2), s/veh	0.8	0.0	9.8	15.1	7.4	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.0	0.7	2.4	43.0	2.9	1.1
LnGrp Delay(d),s/veh	6.5	3.2	71.1	22.4	67.6	60.9
LnGrp LOS	A	A	E	C	E	E
Approach Vol, veh/h	829			1377	105	
Approach Delay, s/veh	6.1			24.6	65.6	
Approach LOS	A			C	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	9.9	108.7				118.7		12.0
Change Period (Y+Rc), s	3.7	6.0				6.0		4.2
Max Green Setting (Gmax), s	11.4	108.7				123.8		16.0
Max Q Clear Time (g_c+I1), s	6.3	27.2				90.8		7.2
Green Ext Time (p_c), s	0.1	34.8				21.8		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	19.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	675	2	2	969	716	4	23	13	270	4	108
Future Volume (veh/h)	252	675	2	2	969	716	4	23	13	270	4	108
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1569	1900	1900	1584	1845	1900	1841	1900	1863	1900	1845
Adj Flow Rate, veh/h	274	734	2	2	1053	778	4	25	14	293	4	117
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	2	2	0	1	3	0	5	5	2	0	3
Cap, veh/h	309	1780	5	10	1254	847	120	73	41	425	235	191
Arrive On Green	0.17	0.58	0.58	0.01	0.42	0.42	0.07	0.07	0.07	0.12	0.12	0.12
Sat Flow, veh/h	1792	3049	8	1810	3010	1568	1810	1110	621	3442	1900	1544
Grp Volume(v), veh/h	274	359	377	2	1053	778	4	0	39	293	4	117
Grp Sat Flow(s),veh/h/ln	1792	1490	1567	1810	1505	1568	1810	0	1731	1721	1900	1544
Q Serve(g_s), s	13.3	11.8	11.8	0.1	28.0	37.1	0.2	0.0	1.9	7.3	0.2	6.4
Cycle Q Clear(g_c), s	13.3	11.8	11.8	0.1	28.0	37.1	0.2	0.0	1.9	7.3	0.2	6.4
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	309	870	915	10	1254	847	120	0	115	425	235	191
V/C Ratio(X)	0.89	0.41	0.41	0.20	0.84	0.92	0.03	0.00	0.34	0.69	0.02	0.61
Avail Cap(c_a), veh/h	326	870	915	203	1254	847	183	0	175	1082	597	485
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	10.2	10.2	44.1	23.3	18.0	38.9	0.0	39.7	37.4	34.3	37.0
Incr Delay (d2), s/veh	23.3	0.3	0.3	9.9	5.3	14.9	0.1	0.0	1.7	2.0	0.0	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	4.9	5.1	0.1	12.5	22.5	0.1	0.0	1.0	3.6	0.1	2.9
LnGrp Delay(d),s/veh	59.3	10.5	10.5	54.0	28.6	32.9	39.0	0.0	41.5	39.4	34.3	40.2
LnGrp LOS	E	B	B	D	C	C	D		D	D	C	D
Approach Vol, veh/h		1010			1833			43			414	
Approach Delay, s/veh		23.7			30.4			41.2			39.6	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.7	58.0		16.3	19.6	43.1		10.1
Change Period (Y+Rc), s	* 4.2	6.0		5.3	* 4.2	6.0		4.2
Max Green Setting (Gmax), s	* 16	43.3		28.0	* 16	37.1		9.0
Max Q Clear Time (g_c+I1), s	2.1	13.8		9.3	15.3	39.1		3.9
Green Ext Time (p_c), s	0.0	15.5		1.6	0.1	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.7
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	852	0	0	1018	12	0	0	0	0	0	659
Future Volume (veh/h)	109	852	0	0	1018	12	0	0	0	0	0	659
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1681	1569	0	0	1569	1900				0	1863	1863
Adj Flow Rate, veh/h	121	947	0	0	1131	13				0	0	732
Adj No. of Lanes	1	2	0	0	2	0				0	1	2
Peak Hour Factor	0.90	0.90	0.92	0.92	0.90	0.90				0.90	0.92	0.90
Percent Heavy Veh, %	13	2	0	0	2	2				0	2	2
Cap, veh/h	156	2735	0	0	2310	27				0	0	0
Arrive On Green	0.10	0.92	0.00	0.00	0.77	0.77				0.00	0.00	0.00
Sat Flow, veh/h	1601	3059	0	0	3097	35					0	
Grp Volume(v), veh/h	121	947	0	0	558	586					0.0	
Grp Sat Flow(s),veh/h/ln	1601	1490	0	0	1491	1563						
Q Serve(g_s), s	5.4	2.8	0.0	0.0	10.3	10.3						
Cycle Q Clear(g_c), s	5.4	2.8	0.0	0.0	10.3	10.3						
Prop In Lane	1.00		0.00	0.00		0.02						
Lane Grp Cap(c), veh/h	156	2735	0	0	1141	1196						
V/C Ratio(X)	0.77	0.35	0.00	0.00	0.49	0.49						
Avail Cap(c_a), veh/h	945	3557	0	0	1141	1196						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	32.1	0.4	0.0	0.0	3.2	3.2						
Incr Delay (d2), s/veh	7.9	0.1	0.0	0.0	0.4	0.4						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	2.7	1.1	0.0	0.0	4.2	4.4						
LnGrp Delay(d),s/veh	40.0	0.4	0.0	0.0	3.6	3.6						
LnGrp LOS	D	A			A	A						
Approach Vol, veh/h		1068			1144							
Approach Delay, s/veh		4.9			3.6							
Approach LOS		A			A							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		72.9			11.1	61.8		
Change Period (Y+Rc), s		* 6			4.0	6.0		
Max Green Setting (Gmax), s		* 87			43.0	37.0		
Max Q Clear Time (g_c+I1), s		4.8			7.4	12.3		
Green Ext Time (p_c), s		7.1			0.4	12.0		

Intersection Summary	
HCM 2010 Ctrl Delay	4.2
HCM 2010 LOS	A

Notes

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	78	773	932	127	345	117
Future Volume (veh/h)	78	773	932	127	345	117
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1584	1584	1845	1900	1881
Adj Flow Rate, veh/h	82	814	981	134	363	123
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	0	1
Cap, veh/h	93	1122	985	975	374	330
Arrive On Green	0.05	0.71	0.62	0.62	0.21	0.21
Sat Flow, veh/h	1792	1584	1584	1568	1810	1599
Grp Volume(v), veh/h	82	814	981	134	363	123
Grp Sat Flow(s),veh/h/ln	1792	1584	1584	1568	1810	1599
Q Serve(g_s), s	5.5	37.0	73.8	4.2	23.9	7.9
Cycle Q Clear(g_c), s	5.5	37.0	73.8	4.2	23.9	7.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	93	1122	985	975	374	330
V/C Ratio(X)	0.89	0.73	1.00	0.14	0.97	0.37
Avail Cap(c_a), veh/h	93	1122	985	975	374	330
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.5	10.5	22.6	9.4	47.2	40.9
Incr Delay (d2), s/veh	58.1	2.6	27.7	0.1	38.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	16.6	39.5	1.8	15.9	7.4
LnGrp Delay(d),s/veh	114.7	13.1	50.2	9.5	85.9	41.6
LnGrp LOS	F	B	D	A	F	D
Approach Vol, veh/h		896	1115		486	
Approach Delay, s/veh		22.4	45.3		74.7	
Approach LOS		C	D		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		91.0		29.0	10.4	80.6		
Change Period (Y+Rc), s		6.0		* 4.2	* 4.2	6.0		
Max Green Setting (Gmax), s		85.0		* 25	* 6.2	74.6		
Max Q Clear Time (g_c+I1), s		39.0		25.9	7.5	75.8		
Green Ext Time (p_c), s		22.5		0.0	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	42.8
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	1005	71	8	942	23	41	3	8	19	2	41
Future Volume (veh/h)	52	1005	71	8	942	23	41	3	8	19	2	41
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1584	1900	1900	1584	1900	1900	1900	1900	1900	1900	1845
Adj Flow Rate, veh/h	54	1036	73	8	971	24	42	3	8	20	2	42
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	0	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	1	0	0	1	0	0	0	0	0	0	3
Cap, veh/h	86	1220	1244	22	1164	1186	146	32	85	155	12	109
Arrive On Green	0.05	0.77	0.77	0.01	0.73	0.73	0.07	0.07	0.07	0.07	0.07	0.07
Sat Flow, veh/h	1810	1584	1615	1810	1584	1615	1384	459	1225	1211	177	1568
Grp Volume(v), veh/h	54	1036	73	8	971	24	42	0	11	22	0	42
Grp Sat Flow(s),veh/h/ln	1810	1584	1615	1810	1584	1615	1384	0	1684	1388	0	1568
Q Serve(g_s), s	2.8	41.9	1.0	0.4	40.5	0.4	2.9	0.0	0.6	1.1	0.0	2.5
Cycle Q Clear(g_c), s	2.8	41.9	1.0	0.4	40.5	0.4	4.6	0.0	0.6	1.7	0.0	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.73	0.91		1.00
Lane Grp Cap(c), veh/h	86	1220	1244	22	1164	1186	146	0	117	169	0	109
V/C Ratio(X)	0.63	0.85	0.06	0.37	0.83	0.02	0.29	0.00	0.09	0.13	0.00	0.39
Avail Cap(c_a), veh/h	113	1508	1537	113	1508	1537	452	0	489	492	0	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.0	7.4	2.7	47.2	8.8	3.4	44.7	0.0	42.0	42.6	0.0	42.9
Incr Delay (d2), s/veh	7.3	4.4	0.0	10.1	3.8	0.0	1.1	0.0	0.3	0.3	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	19.3	0.5	0.3	18.5	0.2	1.1	0.0	0.3	0.6	0.0	1.1
LnGrp Delay(d),s/veh	52.3	11.8	2.7	57.3	12.5	3.5	45.7	0.0	42.3	42.9	0.0	45.1
LnGrp LOS	D	B	A	E	B	A	D		D	D		D
Approach Vol, veh/h		1163			1003			53			64	
Approach Delay, s/veh		13.1			12.7			45.0			44.3	
Approach LOS		B			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	80.2		11.3	8.3	76.8		11.3
Change Period (Y+Rc), s	3.7	6.0		4.6	3.7	6.0		4.6
Max Green Setting (Gmax), s	6.3	91.7		28.0	6.0	91.7		28.0
Max Q Clear Time (g_c+I1), s	2.4	43.9		4.5	4.8	42.5		6.6
Green Ext Time (p_c), s	0.0	27.8		0.3	0.0	28.3		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	14.5
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	787	137	194	782	193	327
Future Volume (veh/h)	787	137	194	782	193	327
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1553	1863	1881	1584	1863	1827
Adj Flow Rate, veh/h	820	143	202	815	201	341
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	2	1	1	2	4
Cap, veh/h	837	853	320	1068	393	487
Arrive On Green	0.54	0.54	0.09	0.67	0.22	0.22
Sat Flow, veh/h	1553	1583	3476	1584	1774	1553
Grp Volume(v), veh/h	820	143	202	815	201	341
Grp Sat Flow(s),veh/h/ln	1553	1583	1738	1584	1774	1553
Q Serve(g_s), s	50.2	4.5	5.5	33.6	9.7	18.8
Cycle Q Clear(g_c), s	50.2	4.5	5.5	33.6	9.7	18.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	837	853	320	1068	393	487
V/C Ratio(X)	0.98	0.17	0.63	0.76	0.51	0.70
Avail Cap(c_a), veh/h	838	854	325	1071	437	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.9	11.4	42.6	10.7	33.3	29.4
Incr Delay (d2), s/veh	26.1	0.1	3.8	3.3	1.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.5	2.0	2.8	15.5	4.9	8.5
LnGrp Delay(d),s/veh	48.0	11.5	46.4	14.0	34.3	33.2
LnGrp LOS	D	B	D	B	C	C
Approach Vol, veh/h	963			1017	542	
Approach Delay, s/veh	42.6			20.4	33.6	
Approach LOS	D			C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	13.2	58.4				71.6		25.7
Change Period (Y+Rc), s	4.2	6.0				6.0		4.2
Max Green Setting (Gmax), s	9.1	52.5				65.8		24.0
Max Q Clear Time (g_c+I1), s	7.5	52.2				35.6		20.8
Green Ext Time (p_c), s	0.1	0.2				9.9		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	31.7
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1037	72	191	909	8	76	0	138	8	1	4
Future Volume (veh/h)	5	1037	72	191	909	8	76	0	138	8	1	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1584	1845	1863	1569	1900	1900	1881	1863	1900	1900	1900
Adj Flow Rate, veh/h	5	1080	75	199	947	8	79	0	144	8	1	4
Adj No. of Lanes	1	1	1	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	3	2	2	2	0	0	2	0	0	0
Cap, veh/h	18	989	954	192	1125	10	48	0	463	48	3	301
Arrive On Green	0.01	0.62	0.61	0.22	1.00	1.00	0.18	0.00	0.18	0.19	0.19	0.19
Sat Flow, veh/h	1810	1584	1568	1774	1553	13	0	0	1583	13	19	1615
Grp Volume(v), veh/h	5	1080	75	199	0	955	79	0	144	9	0	4
Grp Sat Flow(s),veh/h/ln	1810	1584	1568	1774	0	1567	0	0	1583	31	0	1615
Q Serve(g_s), s	0.4	93.6	2.9	16.2	0.0	0.0	0.0	0.0	10.6	0.3	0.0	0.3
Cycle Q Clear(g_c), s	0.4	93.6	2.9	16.2	0.0	0.0	27.7	0.0	10.6	28.0	0.0	0.3
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.89		1.00
Lane Grp Cap(c), veh/h	18	989	954	192	0	1134	48	0	463	51	0	301
V/C Ratio(X)	0.28	1.09	0.08	1.04	0.00	0.84	1.65	0.00	0.31	0.18	0.00	0.01
Avail Cap(c_a), veh/h	100	989	954	192	0	1134	48	0	463	51	0	301
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.40	0.40	0.40	0.19	0.00	0.19	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	73.7	28.2	12.1	58.8	0.0	0.0	74.9	0.0	41.3	65.1	0.0	49.7
Incr Delay (d2), s/veh	3.5	49.0	0.1	39.1	0.0	1.6	366.4	0.0	0.4	2.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	54.1	1.3	10.0	0.0	0.5	6.9	0.0	4.7	0.4	0.0	0.1
LnGrp Delay(d),s/veh	77.2	77.2	12.1	98.0	0.0	1.6	441.3	0.0	41.7	67.5	0.0	49.8
LnGrp LOS	E	F	B	F		A	F		D	E		D
Approach Vol, veh/h		1160			1154			223			13	
Approach Delay, s/veh		73.0			18.2			183.2			62.0	
Approach LOS		E			B			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	30.2	97.6		32.2	5.2	112.6		32.2
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	16.5	91.6		* 28	8.3	99.8		* 28
Max Q Clear Time (g_c+I1), s	18.2	95.6		30.0	2.4	2.0		29.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	18.2		0.0

Intersection Summary

HCM 2010 Ctrl Delay	57.8
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	1076	73	148	1066	1	54	0	77	0	0	0
Future Volume (veh/h)	3	1076	73	148	1066	1	54	0	77	0	0	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1569	1881	1863	1569	1900	1900	1900	1845	1900	1900	1900
Adj Flow Rate, veh/h	3	1121	76	154	1110	1	56	0	80	0	0	0
Adj No. of Lanes	1	1	1	2	1	0	0	1	1	0	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	1	2	2	2	0	0	3	0	0	0
Cap, veh/h	8	1277	1285	177	1349	1	93	0	78	0	1	1
Arrive On Green	0.01	1.00	1.00	0.05	0.86	0.85	0.05	0.00	0.05	0.00	0.00	0.00
Sat Flow, veh/h	1810	1569	1579	3442	1567	1	1810	0	1526	0	1900	1615
Grp Volume(v), veh/h	3	1121	76	154	0	1111	56	0	80	0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1569	1579	1721	0	1568	1810	0	1526	0	1900	1615
Q Serve(g_s), s	0.2	0.0	0.0	6.7	0.0	50.6	4.5	0.0	7.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	0.0	6.7	0.0	50.6	4.5	0.0	7.7	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	8	1277	1285	177	0	1351	93	0	78	0	1	1
V/C Ratio(X)	0.39	0.88	0.06	0.87	0.00	0.82	0.60	0.00	1.02	0.00	0.00	0.00
Avail Cap(c_a), veh/h	93	1277	1285	177	0	1351	93	0	78	0	300	255
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.19	0.19	0.19	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	74.2	0.0	0.0	70.7	0.0	5.0	69.7	0.0	71.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	5.9	1.8	0.0	34.6	0.0	5.8	10.5	0.0	107.7	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.7	0.0	4.0	0.0	23.5	2.5	0.0	5.6	0.0	0.0	0.0
LnGrp Delay(d),s/veh	80.1	1.8	0.0	105.2	0.0	10.7	80.1	0.0	179.1	0.0	0.0	0.0
LnGrp LOS	F	A	A	F		B	F		F			
Approach Vol, veh/h		1200			1265			136			0	
Approach Delay, s/veh		1.9			22.2			138.4			0.0	
Approach LOS		A			C			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.7	126.1		0.0	4.6	133.2		12.2
Change Period (Y+Rc), s	3.7	* 6		* 4.2	3.7	6.0		4.2
Max Green Setting (Gmax), s	8.0	* 94		* 24	8.0	91.9		8.0
Max Q Clear Time (g_c+I1), s	8.7	2.0		0.0	2.2	52.6		9.7
Green Ext Time (p_c), s	0.0	26.5		0.0	0.0	20.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.9
HCM 2010 LOS	B

Notes

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	78	1108	1183	55	12	51
Future Vol, veh/h	78	1108	1183	55	12	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	230	-	-	250	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	1	2	0	0	0
Mvmt Flow	81	1154	1232	57	13	53

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1232	0	-	0	2549	1232
Stage 1	-	-	-	-	1232	-
Stage 2	-	-	-	-	1317	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	573	-	-	-	30	218
Stage 1	-	-	-	-	278	-
Stage 2	-	-	-	-	253	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	573	-	-	-	26	218
Mov Cap-2 Maneuver	-	-	-	-	26	-
Stage 1	-	-	-	-	278	-
Stage 2	-	-	-	-	217	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	111.3
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	573	-	-	-	91
HCM Lane V/C Ratio	0.142	-	-	-	0.721
HCM Control Delay (s)	12.3	-	-	-	111.3
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.5	-	-	-	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	799	30	93	737	254	40	25	74	98	21	56
Future Volume (veh/h)	67	799	30	93	737	254	40	25	74	98	21	56
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1900	1863	1600	1881	1900	1869	1900	1900	1735	1652
Adj Flow Rate, veh/h	78	929	35	108	857	295	47	29	86	114	24	65
Adj No. of Lanes	1	1	1	1	1	1	0	1	0	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	2	0	1	3	3	3	12	12	15
Cap, veh/h	119	903	893	129	914	895	56	44	65	181	32	334
Arrive On Green	0.07	0.56	0.56	0.07	0.57	0.57	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1810	1600	1582	1774	1600	1566	58	184	273	508	135	1404
Grp Volume(v), veh/h	78	929	35	108	857	295	162	0	0	138	0	65
Grp Sat Flow(s),veh/h/ln	1810	1600	1582	1774	1600	1566	515	0	0	643	0	1404
Q Serve(g_s), s	4.6	62.1	1.1	6.6	54.4	10.9	3.4	0.0	0.0	0.0	0.0	4.1
Cycle Q Clear(g_c), s	4.6	62.1	1.1	6.6	54.4	10.9	26.2	0.0	0.0	22.8	0.0	4.1
Prop In Lane	1.00		1.00	1.00		1.00	0.29		0.53	0.83		1.00
Lane Grp Cap(c), veh/h	119	903	893	129	914	895	165	0	0	213	0	334
V/C Ratio(X)	0.65	1.03	0.04	0.84	0.94	0.33	0.98	0.00	0.00	0.65	0.00	0.19
Avail Cap(c_a), veh/h	132	903	893	129	914	895	165	0	0	213	0	334
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.1	24.0	10.7	50.4	21.8	12.5	43.5	0.0	0.0	40.3	0.0	33.5
Incr Delay (d2), s/veh	10.6	37.4	0.0	36.4	16.8	0.3	64.8	0.0	0.0	7.6	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	36.5	0.5	4.5	28.1	4.7	7.9	0.0	0.0	4.5	0.0	1.6
LnGrp Delay(d),s/veh	60.7	61.4	10.7	86.7	38.6	12.7	108.3	0.0	0.0	47.9	0.0	33.9
LnGrp LOS	E	F	B	F	D	B	F			D		C
Approach Vol, veh/h		1042			1260			162			203	
Approach Delay, s/veh		59.6			36.7			108.3			43.4	
Approach LOS		E			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.7	68.1		30.2	11.0	68.8		30.2
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	8.0	62.1		* 26	8.0	62.1		* 26
Max Q Clear Time (g_c+I1), s	8.6	64.1		24.8	6.6	56.4		28.2
Green Ext Time (p_c), s	0.0	0.0		0.3	0.0	4.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	50.5
HCM 2010 LOS	D

Notes

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↔			↔			↔	
Traffic Vol, veh/h	9	10	128	14	1	5	346	19	26	4	12	2
Future Vol, veh/h	9	10	128	14	1	5	346	19	26	4	12	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	15	2	10	2	2	2	2	4	2	2	11	0
Mvmt Flow	10	11	139	15	1	5	376	21	28	4	13	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	813	824	14	815	811	35	15	0	0	49	0	0
Stage 1	23	23	-	787	787	-	-	-	-	-	-	-
Stage 2	790	801	-	28	24	-	-	-	-	-	-	-
Critical Hdwy	7.25	6.52	6.3	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.25	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.25	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.635	4.018	3.39	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	282	308	1043	296	313	1038	1603	-	-	1558	-	-
Stage 1	963	876	-	385	403	-	-	-	-	-	-	-
Stage 2	365	397	-	989	875	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	227	233	1043	201	237	1038	1603	-	-	1558	-	-
Mov Cap-2 Maneuver	227	233	-	201	237	-	-	-	-	-	-	-
Stage 1	730	873	-	292	305	-	-	-	-	-	-	-
Stage 2	274	301	-	844	872	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.7	20.5	7	1.6
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1603	-	-	230	1043	254	1558	-	-
HCM Lane V/C Ratio	0.235	-	-	0.09	0.133	0.086	0.003	-	-
HCM Control Delay (s)	7.9	0	-	22.2	9	20.5	7.3	0	-
HCM Lane LOS	A	A	-	C	A	C	A	A	-
HCM 95th %tile Q(veh)	0.9	-	-	0.3	0.5	0.3	0	-	-

Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	10	2	6	26	3	16	0	6	0	0	0
Future Vol, veh/h	3	10	2	6	26	3	16	0	6	0	0	0
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Heavy Vehicles, %	0	0	0	0	8	0	0	0	0	0	0	0
Mvmt Flow	5	16	3	10	42	5	26	0	10	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	7.2	7.6	7.2
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	73%	20%	19%	0%
Vol Thru, %	0%	67%	81%	0%
Vol Right, %	27%	13%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	22	15	32	3
LT Vol	16	3	6	0
Through Vol	0	10	26	0
RT Vol	6	2	0	3
Lane Flow Rate	35	24	52	5
Geometry Grp	2	5	7	7
Degree of Util (X)	0.04	0.027	0.067	0.005
Departure Headway (Hd)	4.02	4.065	4.67	4.011
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	885	879	769	893
Service Time	2.071	2.099	2.388	1.73
HCM Lane V/C Ratio	0.04	0.027	0.068	0.006
HCM Control Delay	7.2	7.2	7.7	6.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.2	0

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	14	51	22	60	0	46	0	16	0	20	7
Future Vol, veh/h	0	14	51	22	60	0	46	0	16	0	20	7
Conflicting Peds, #/hr	4	0	1	0	0	3	1	0	0	3	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	5	0	5	0	7	0	13	0	10	0
Mvmt Flow	0	16	57	25	67	0	52	0	18	0	22	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	17	0	0	153	134	20	145	134	71
Stage 1	-	-	-	-	-	-	17	17	-	117	117	-
Stage 2	-	-	-	-	-	-	136	117	-	28	17	-
Critical Hdwy	-	-	-	4.1	-	-	7.17	6.5	6.33	7.1	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.17	5.5	-	6.1	5.6	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.17	5.5	-	6.1	5.6	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.563	4	3.417	3.5	4.09	3.3
Pot Cap-1 Maneuver	0	-	-	1613	-	0	803	760	1027	828	742	997
Stage 1	0	-	-	-	-	0	990	885	-	892	784	-
Stage 2	0	-	-	-	-	0	855	803	-	994	866	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1609	-	-	765	747	1024	802	730	994
Mov Cap-2 Maneuver	-	-	-	-	-	-	765	747	-	802	730	-
Stage 1	-	-	-	-	-	-	990	884	-	892	771	-
Stage 2	-	-	-	-	-	-	808	790	-	974	865	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2	9.8	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	818	-	-	1609	-	784
HCM Lane V/C Ratio	0.085	-	-	0.015	-	0.039
HCM Control Delay (s)	9.8	-	-	7.3	0	9.8
HCM Lane LOS	A	-	-	A	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	468	63	124	1291	20	81	8	75	24	24	23
Future Volume (veh/h)	21	468	63	124	1291	20	81	8	75	24	24	23
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		1.00	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1845	1863	1862	1900	1900	1833	1743	1900	1876	1900
Adj Flow Rate, veh/h	23	520	70	138	1434	22	90	9	0	27	27	26
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	4	3	2	2	2	0	0	9	0	0	0
Cap, veh/h	98	1473	661	294	1910	29	361	30	268	156	138	97
Arrive On Green	0.05	0.42	0.42	0.17	0.54	0.51	0.18	0.18	0.00	0.18	0.18	0.16
Sat Flow, veh/h	1810	3471	1559	1774	3566	55	1271	166	1482	353	763	537
Grp Volume(v), veh/h	23	520	70	138	711	745	99	0	0	80	0	0
Grp Sat Flow(s),veh/h/ln	1810	1736	1559	1774	1769	1852	1437	0	1482	1654	0	0
Q Serve(g_s), s	0.6	5.3	1.4	3.7	16.3	16.4	0.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	5.3	1.4	3.7	16.3	16.4	2.7	0.0	0.0	2.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	0.91		1.00	0.34		0.32
Lane Grp Cap(c), veh/h	98	1473	661	294	947	992	391	0	268	391	0	0
V/C Ratio(X)	0.23	0.35	0.11	0.47	0.75	0.75	0.25	0.00	0.00	0.20	0.00	0.00
Avail Cap(c_a), veh/h	364	2258	1014	441	1235	1293	948	0	879	1048	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.7	10.2	9.1	19.7	9.4	9.4	18.6	0.0	0.0	18.5	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.1	0.0	0.4	1.2	1.2	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.5	0.6	1.8	8.0	8.4	1.3	0.0	0.0	1.0	0.0	0.0
LnGrp Delay(d),s/veh	24.1	10.2	9.1	20.2	10.7	10.6	18.7	0.0	0.0	18.6	0.0	0.0
LnGrp LOS	C	B	A	C	B	B	B			B		
Approach Vol, veh/h		613			1594			99			80	
Approach Delay, s/veh		10.6			11.5			18.7			18.6	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.7	26.2		13.4	6.8	32.0		13.4
Change Period (Y+Rc), s	4.0	5.2		5.0	4.0	5.2		5.0
Max Green Setting (Gmax), s	13.0	32.8		30.0	10.5	35.3		30.0
Max Q Clear Time (g_c+I1), s	5.7	7.3		4.0	2.6	18.4		4.7
Green Ext Time (p_c), s	0.0	10.2		0.2	0.0	8.4		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	11.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	182	407	117	335	370	86	132	300	159	84	681	282
Future Volume (veh/h)	182	407	117	335	370	86	132	300	159	84	681	282
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1837	1900	1881	1827	1863	1810	1863	1845	1759	1827	1810
Adj Flow Rate, veh/h	198	442	127	364	402	93	143	326	173	91	740	307
Adj No. of Lanes	2	2	0	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	4	2	5	2	3	8	4	5
Cap, veh/h	338	771	219	424	1082	485	168	1181	518	152	1135	492
Arrive On Green	0.10	0.29	0.28	0.12	0.31	0.31	0.10	0.33	0.33	0.09	0.33	0.33
Sat Flow, veh/h	3408	2669	760	3476	3471	1557	1723	3539	1551	1675	3471	1504
Grp Volume(v), veh/h	198	287	282	364	402	93	143	326	173	91	740	307
Grp Sat Flow(s),veh/h/ln	1704	1745	1684	1738	1736	1557	1723	1770	1551	1675	1736	1504
Q Serve(g_s), s	5.4	13.6	13.9	10.0	8.8	4.3	7.9	6.6	8.1	5.1	17.7	16.8
Cycle Q Clear(g_c), s	5.4	13.6	13.9	10.0	8.8	4.3	7.9	6.6	8.1	5.1	17.7	16.8
Prop In Lane	1.00		0.45	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	338	504	486	424	1082	485	168	1181	518	152	1135	492
V/C Ratio(X)	0.59	0.57	0.58	0.86	0.37	0.19	0.85	0.28	0.33	0.60	0.65	0.62
Avail Cap(c_a), veh/h	385	635	613	464	1335	599	195	1295	568	172	1235	535
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.9	29.5	29.7	41.9	26.1	24.5	43.2	23.8	24.3	42.5	28.0	27.7
Incr Delay (d2), s/veh	1.8	1.4	1.6	13.9	0.3	0.3	25.7	0.2	0.5	4.5	1.3	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	6.8	6.6	5.6	4.2	1.9	5.0	3.2	3.6	2.5	8.6	7.3
LnGrp Delay(d),s/veh	43.7	30.9	31.2	55.8	26.4	24.8	68.9	24.0	24.8	47.0	29.3	30.1
LnGrp LOS	D	C	C	E	C	C	E	C	C	D	C	C
Approach Vol, veh/h		767			859			642			1138	
Approach Delay, s/veh		34.3			38.6			34.2			30.9	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.9	32.1	13.5	35.8	13.7	34.3	12.8	36.5
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	12.3	34.8	11.3	34.0	11.3	36.8	10.3	35.0
Max Q Clear Time (g_c+I1), s	12.0	15.9	9.9	19.7	7.4	10.8	7.1	10.1
Green Ext Time (p_c), s	0.2	8.1	0.0	9.7	0.2	9.3	0.1	14.2

Intersection Summary	
HCM 2010 Ctrl Delay	34.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	419	204	161	759	64	282	222	76	67	276	104
Future Volume (veh/h)	116	419	204	161	759	64	282	222	76	67	276	104
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1792	1845	1863	1900	1845	1836	1900	1863	1788	1900
Adj Flow Rate, veh/h	123	446	217	171	807	68	300	236	81	71	294	111
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	3	6	3	2	0	3	3	3	2	6	6
Cap, veh/h	160	993	429	207	1091	497	340	779	260	158	484	179
Arrive On Green	0.09	0.28	0.28	0.12	0.31	0.31	0.19	0.30	0.30	0.09	0.20	0.20
Sat Flow, veh/h	1723	3505	1512	1757	3539	1612	1757	2562	855	1774	2426	896
Grp Volume(v), veh/h	123	446	217	171	807	68	300	159	158	71	204	201
Grp Sat Flow(s),veh/h/ln	1723	1752	1512	1757	1770	1612	1757	1744	1674	1774	1698	1623
Q Serve(g_s), s	5.6	8.4	9.7	7.7	16.5	2.5	13.4	5.6	5.9	3.1	8.8	9.1
Cycle Q Clear(g_c), s	5.6	8.4	9.7	7.7	16.5	2.5	13.4	5.6	5.9	3.1	8.8	9.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.51	1.00		0.55
Lane Grp Cap(c), veh/h	160	993	429	207	1091	497	340	530	509	158	339	324
V/C Ratio(X)	0.77	0.45	0.51	0.83	0.74	0.14	0.88	0.30	0.31	0.45	0.60	0.62
Avail Cap(c_a), veh/h	220	1304	562	224	1316	599	377	724	695	211	543	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	23.7	24.2	34.8	25.0	20.1	31.6	21.5	21.6	34.9	29.4	29.5
Incr Delay (d2), s/veh	10.5	0.3	0.9	20.6	1.8	0.1	19.7	0.4	0.4	2.0	2.1	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	4.1	4.1	4.9	8.2	1.1	8.4	2.7	2.7	1.6	4.3	4.3
LnGrp Delay(d),s/veh	46.2	24.1	25.1	55.3	26.8	20.3	51.3	21.9	22.0	36.9	31.4	31.9
LnGrp LOS	D	C	C	E	C	C	D	C	C	D	C	C
Approach Vol, veh/h		786			1046			617			476	
Approach Delay, s/veh		27.8			31.1			36.2			32.4	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	29.1	13.2	27.5	19.3	20.7	11.2	29.5
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	9.6	33.5	10.3	30.0	17.3	25.8	10.3	30.0
Max Q Clear Time (g_c+I1), s	15.1	7.9	9.7	11.7	15.4	11.1	7.6	18.5
Green Ext Time (p_c), s	0.1	3.9	0.0	7.5	0.2	3.3	0.1	5.8

Intersection Summary	
HCM 2010 Ctrl Delay	31.5
HCM 2010 LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	443	146	277	92	119	532
Future Volume (veh/h)	443	146	277	92	119	532
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1827	1881	1900	1900
Adj Flow Rate, veh/h	503	166	315	105	135	605
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	1	1	4	1	0	0
Cap, veh/h	604	539	486	426	234	897
Arrive On Green	0.34	0.34	0.27	0.27	0.13	0.47
Sat Flow, veh/h	1792	1599	1827	1599	1810	1900
Grp Volume(v), veh/h	503	166	315	105	135	605
Grp Sat Flow(s),veh/h/ln	1792	1599	1827	1599	1810	1900
Q Serve(g_s), s	13.8	4.1	8.2	2.8	3.8	13.2
Cycle Q Clear(g_c), s	13.8	4.1	8.2	2.8	3.8	13.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	604	539	486	426	234	897
V/C Ratio(X)	0.83	0.31	0.65	0.25	0.58	0.67
Avail Cap(c_a), veh/h	841	751	943	825	271	1411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.3	13.1	17.4	15.4	21.9	10.9
Incr Delay (d2), s/veh	5.2	0.3	1.5	0.3	2.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	4.1	4.3	1.2	2.0	7.1
LnGrp Delay(d),s/veh	21.5	13.4	18.9	15.7	24.1	11.8
LnGrp LOS	C	B	B	B	C	B
Approach Vol, veh/h	669		420			740
Approach Delay, s/veh	19.5		18.1			14.1
Approach LOS	B		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		30.6		22.9	11.0	19.5		
Change Period (Y+Rc), s		5.3		4.9	4.1	5.3		
Max Green Setting (Gmax), s		39.7		25.1	8.0	27.6		
Max Q Clear Time (g_c+I1), s		15.2		15.8	5.8	10.2		
Green Ext Time (p_c), s		4.3		2.2	0.1	4.0		

Intersection Summary	
HCM 2010 Ctrl Delay	17.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	41	16	319	978	40
Future Vol, veh/h	25	41	16	319	978	40
Conflicting Peds, #/hr	1	0	0	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	40	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	12	20	19	3	3	5
Mvmt Flow	29	47	18	367	1124	46

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1529	1125	1125	0	-	0
Stage 1	1125	-	-	-	-	-
Stage 2	404	-	-	-	-	-
Critical Hdwy	6.52	6.4	4.29	-	-	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.48	2.371	-	-	-
Pot Cap-1 Maneuver	122	230	563	-	-	-
Stage 1	296	-	-	-	-	-
Stage 2	653	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	118	230	563	-	-	-
Mov Cap-2 Maneuver	228	-	-	-	-	-
Stage 1	296	-	-	-	-	-
Stage 2	632	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	24	0.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	563	-	228	230	-	-
HCM Lane V/C Ratio	0.033	-	0.126	0.205	-	-
HCM Control Delay (s)	11.6	-	23.1	24.6	-	-
HCM Lane LOS	B	-	C	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	0.7	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	12	17	328	44	94	877
Future Volume (veh/h)	12	17	328	44	94	877
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1532	1583	1845	1792	1696	1863
Adj Flow Rate, veh/h	13	18	357	48	102	953
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	20	3	6	12	2
Cap, veh/h	87	248	801	662	202	1235
Arrive On Green	0.06	0.06	0.43	0.43	0.12	0.66
Sat Flow, veh/h	1459	1346	1845	1524	1616	1863
Grp Volume(v), veh/h	13	18	357	48	102	953
Grp Sat Flow(s),veh/h/ln	1459	1346	1845	1524	1616	1863
Q Serve(g_s), s	0.3	0.4	4.8	0.7	2.1	12.6
Cycle Q Clear(g_c), s	0.3	0.4	4.8	0.7	2.1	12.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	87	248	801	662	202	1235
V/C Ratio(X)	0.15	0.07	0.45	0.07	0.51	0.77
Avail Cap(c_a), veh/h	859	961	1531	1265	489	2304
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	12.0	7.1	5.9	14.6	4.1
Incr Delay (d2), s/veh	0.8	0.1	0.5	0.1	2.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.3	2.5	0.3	1.0	6.5
LnGrp Delay(d),s/veh	16.7	12.2	7.5	5.9	16.5	5.4
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	31		405			1055
Approach Delay, s/veh	14.1		7.4			6.5
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		29.3		6.3	8.2	21.2		
Change Period (Y+Rc), s		5.7		* 4.2	3.7	5.7		
Max Green Setting (Gmax), s		44.1		* 21	10.8	29.6		
Max Q Clear Time (g_c+I1), s		14.6		2.4	4.1	6.8		
Green Ext Time (p_c), s		9.1		0.1	0.1	8.3		

Intersection Summary	
HCM 2010 Ctrl Delay	6.9
HCM 2010 LOS	A

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	918	111	42	832	195	55
Future Volume (veh/h)	918	111	42	832	195	55
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1900	1845	1600	1881	1900
Adj Flow Rate, veh/h	1067	129	49	967	227	64
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	3	0	1	0
Cap, veh/h	1034	125	72	1286	230	207
Arrive On Green	0.74	0.74	0.04	0.80	0.13	0.13
Sat Flow, veh/h	1401	169	1757	1600	1792	1615
Grp Volume(v), veh/h	0	1196	49	967	227	64
Grp Sat Flow(s),veh/h/ln	0	1570	1757	1600	1792	1615
Q Serve(g_s), s	0.0	110.0	4.1	44.8	18.9	5.4
Cycle Q Clear(g_c), s	0.0	110.0	4.1	44.8	18.9	5.4
Prop In Lane		0.11	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	1159	72	1286	230	207
V/C Ratio(X)	0.00	1.03	0.68	0.75	0.99	0.31
Avail Cap(c_a), veh/h	0	1159	82	1295	230	207
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.5	70.6	7.3	64.9	59.0
Incr Delay (d2), s/veh	0.0	35.1	17.6	2.6	56.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	58.3	2.4	20.3	12.9	2.4
LnGrp Delay(d),s/veh	0.0	54.7	88.1	9.9	121.0	59.8
LnGrp LOS		F	F	A	F	E
Approach Vol, veh/h	1196			1016	291	
Approach Delay, s/veh	54.7			13.6	107.6	
Approach LOS	D			B	F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	9.8	116.0				125.8		23.3
Change Period (Y+Rc), s	3.7	6.0				6.0		4.2
Max Green Setting (Gmax), s	7.3	110.0				120.7		19.1
Max Q Clear Time (g_c+I1), s	6.1	112.0				46.8		20.9
Green Ext Time (p_c), s	0.0	0.0				31.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	44.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	825	3	0	750	285	8	2	5	597	8	310
Future Volume (veh/h)	82	825	3	0	750	285	8	2	5	597	8	310
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.95	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1652	1597	1900	1900	1600	1776	1900	1900	1900	1845	1827	1863
Adj Flow Rate, veh/h	94	948	3	0	862	328	9	2	6	686	9	356
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	15	0	0	0	0	7	0	0	0	3	4	2
Cap, veh/h	172	1533	5	2	1011	921	64	14	43	948	508	434
Arrive On Green	0.11	0.49	0.49	0.00	0.33	0.33	0.04	0.04	0.04	0.28	0.28	0.28
Sat Flow, veh/h	1573	3104	10	1810	3040	1507	1810	402	1205	3408	1827	1562
Grp Volume(v), veh/h	94	464	487	0	862	328	9	0	8	686	9	356
Grp Sat Flow(s),veh/h/ln	1573	1518	1596	1810	1520	1507	1810	0	1607	1704	1827	1562
Q Serve(g_s), s	4.6	17.9	17.9	0.0	21.3	8.7	0.4	0.0	0.4	14.6	0.3	17.2
Cycle Q Clear(g_c), s	4.6	17.9	17.9	0.0	21.3	8.7	0.4	0.0	0.4	14.6	0.3	17.2
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.75	1.00		1.00
Lane Grp Cap(c), veh/h	172	750	788	2	1011	921	64	0	57	948	508	434
V/C Ratio(X)	0.55	0.62	0.62	0.00	0.85	0.36	0.14	0.00	0.14	0.72	0.02	0.82
Avail Cap(c_a), veh/h	195	750	788	225	1258	1043	202	0	180	1186	636	543
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	14.8	14.8	0.0	25.0	7.8	37.6	0.0	37.6	26.3	21.1	27.2
Incr Delay (d2), s/veh	2.7	1.6	1.5	0.0	4.9	0.2	1.0	0.0	1.1	1.7	0.0	7.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	7.8	8.2	0.0	9.5	6.3	0.2	0.0	0.2	7.1	0.1	8.3
LnGrp Delay(d),s/veh	36.7	16.4	16.3	0.0	29.9	8.0	38.6	0.0	38.8	27.9	21.1	35.0
LnGrp LOS	D	B	B		C	A	D		D	C	C	D
Approach Vol, veh/h		1045			1190			17			1051	
Approach Delay, s/veh		18.2			23.8			38.7			30.3	
Approach LOS		B			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	45.8		27.7	13.0	32.8		7.0
Change Period (Y+Rc), s	* 4.2	6.0		5.3	* 4.2	6.0		4.2
Max Green Setting (Gmax), s	* 10	33.3		28.0	* 10	33.3		9.0
Max Q Clear Time (g_c+I1), s	10.3	19.9		19.2	6.6	23.3		2.4
Green Ext Time (p_c), s	0.0	7.6		3.2	0.1	3.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	24.2
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	444	934	0	0	997	31	0	0	0	0	0	89
Future Volume (veh/h)	444	934	0	0	997	31	0	0	0	0	0	89
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1600	0	0	1599	1900				0	1863	1759
Adj Flow Rate, veh/h	477	1004	0	0	1072	33				0	0	96
Adj No. of Lanes	1	2	0	0	2	0				0	1	2
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93				0.93	0.92	0.93
Percent Heavy Veh, %	1	0	0	0	0	0				0	2	8
Cap, veh/h	526	2884	0	0	1815	56				0	0	0
Arrive On Green	0.29	0.95	0.00	0.00	0.60	0.60				0.00	0.00	0.00
Sat Flow, veh/h	1792	3120	0	0	3088	93					0	
Grp Volume(v), veh/h	477	1004	0	0	541	564					0.0	
Grp Sat Flow(s),veh/h/ln	1792	1520	0	0	1519	1582						
Q Serve(g_s), s	19.9	2.0	0.0	0.0	17.1	17.1						
Cycle Q Clear(g_c), s	19.9	2.0	0.0	0.0	17.1	17.1						
Prop In Lane	1.00		0.00	0.00		0.06						
Lane Grp Cap(c), veh/h	526	2884	0	0	916	955						
V/C Ratio(X)	0.91	0.35	0.00	0.00	0.59	0.59						
Avail Cap(c_a), veh/h	622	2971	0	0	916	955						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	26.4	0.2	0.0	0.0	9.5	9.5						
Incr Delay (d2), s/veh	15.4	0.1	0.0	0.0	1.0	1.0						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	12.1	0.7	0.0	0.0	7.3	7.6						
LnGrp Delay(d),s/veh	41.8	0.2	0.0	0.0	10.5	10.5						
LnGrp LOS	D	A			B	B						
Approach Vol, veh/h		1481			1105							
Approach Delay, s/veh		13.6			10.5							
Approach LOS		B			B							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		77.8			26.8	50.9		
Change Period (Y+Rc), s		4.0			4.0	4.0		
Max Green Setting (Gmax), s		76.0			27.0	45.0		
Max Q Clear Time (g_c+I1), s		4.0			21.9	19.1		
Green Ext Time (p_c), s		11.1			0.9	10.8		

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	201	757	861	394	84	92
Future Volume (veh/h)	201	757	861	394	84	92
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1600	1600	1881	1776	1759
Adj Flow Rate, veh/h	223	841	957	438	93	102
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	0	0	1	7	8
Cap, veh/h	250	1318	1034	1034	149	132
Arrive On Green	0.14	0.82	0.65	0.65	0.09	0.09
Sat Flow, veh/h	1774	1600	1600	1599	1691	1495
Grp Volume(v), veh/h	223	841	957	438	93	102
Grp Sat Flow(s),veh/h/ln	1774	1600	1600	1599	1691	1495
Q Serve(g_s), s	14.3	22.6	60.9	15.4	6.1	7.7
Cycle Q Clear(g_c), s	14.3	22.6	60.9	15.4	6.1	7.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	250	1318	1034	1034	149	132
V/C Ratio(X)	0.89	0.64	0.93	0.42	0.62	0.77
Avail Cap(c_a), veh/h	257	1365	1075	1074	307	271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.9	3.8	18.0	10.0	50.9	51.7
Incr Delay (d2), s/veh	29.2	1.1	13.1	0.4	4.2	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	10.2	30.4	6.9	3.0	6.6
LnGrp Delay(d),s/veh	78.1	4.9	31.1	10.4	55.2	60.9
LnGrp LOS	E	A	C	B	E	E
Approach Vol, veh/h		1064	1395		195	
Approach Delay, s/veh		20.2	24.6		58.2	
Approach LOS		C	C		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		101.4		14.4	20.5	80.8		
Change Period (Y+Rc), s		6.0		* 4.2	* 4.2	6.0		
Max Green Setting (Gmax), s		98.8		* 21	* 17	77.8		
Max Q Clear Time (g_c+I1), s		24.6		9.7	16.3	62.9		
Green Ext Time (p_c), s		33.8		0.5	0.0	11.9		

Intersection Summary

HCM 2010 Ctrl Delay	25.3
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	789	24	18	1109	20	66	2	24	31	1	59
Future Volume (veh/h)	33	789	24	18	1109	20	66	2	24	31	1	59
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1600	1759	1900	1600	1681	1900	1723	1900	1900	1900	1863
Adj Flow Rate, veh/h	38	917	28	21	1290	23	77	2	28	36	1	69
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	3	0	8	0	0	13	0	0	0	0	0	2
Cap, veh/h	59	1203	1124	44	1188	1060	158	12	165	192	5	189
Arrive On Green	0.03	0.75	0.75	0.02	0.74	0.74	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1757	1600	1495	1810	1600	1428	1347	98	1375	1169	39	1577
Grp Volume(v), veh/h	38	917	28	21	1290	23	77	0	30	37	0	69
Grp Sat Flow(s),veh/h/ln	1757	1600	1495	1810	1600	1428	1347	0	1474	1207	0	1577
Q Serve(g_s), s	2.9	45.7	0.6	1.6	101.7	0.6	7.7	0.0	2.5	3.2	0.0	5.5
Cycle Q Clear(g_c), s	2.9	45.7	0.6	1.6	101.7	0.6	13.4	0.0	2.5	5.7	0.0	5.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.93	0.97		1.00
Lane Grp Cap(c), veh/h	59	1203	1124	44	1188	1060	158	0	177	202	0	189
V/C Ratio(X)	0.65	0.76	0.02	0.48	1.09	0.02	0.49	0.00	0.17	0.18	0.00	0.37
Avail Cap(c_a), veh/h	77	1203	1124	79	1188	1060	272	0	301	321	0	322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	65.4	9.9	4.3	66.0	17.6	4.6	61.7	0.0	54.2	56.4	0.0	55.5
Incr Delay (d2), s/veh	11.3	3.1	0.0	8.0	52.8	0.0	2.3	0.0	0.5	0.4	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	20.9	0.3	0.9	61.6	0.2	2.9	0.0	1.0	1.3	0.0	2.5
LnGrp Delay(d),s/veh	76.7	13.0	4.3	74.0	70.4	4.6	64.1	0.0	54.6	56.8	0.0	56.7
LnGrp LOS	E	B	A	E	F	A	E		D	E		E
Approach Vol, veh/h		983			1334			107			106	
Approach Delay, s/veh		15.2			69.3			61.4			56.7	
Approach LOS		B			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.0	109.0		21.0	8.3	107.7		21.0
Change Period (Y+Rc), s	3.7	6.0		4.6	3.7	6.0		4.6
Max Green Setting (Gmax), s	6.3	101.7		28.0	6.0	101.7		28.0
Max Q Clear Time (g_c+I1), s	3.6	47.7		7.7	4.9	103.7		15.4
Green Ext Time (p_c), s	0.0	36.0		0.7	0.0	0.0		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	47.5
HCM 2010 LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	686	155	230	1053	184	251
Future Volume (veh/h)	686	155	230	1053	184	251
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1845	1827	1600	1881	1881
Adj Flow Rate, veh/h	715	161	240	1097	192	261
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	3	4	0	1	1
Cap, veh/h	934	915	313	1151	314	428
Arrive On Green	0.58	0.58	0.09	0.72	0.18	0.18
Sat Flow, veh/h	1600	1568	3375	1600	1792	1599
Grp Volume(v), veh/h	715	161	240	1097	192	261
Grp Sat Flow(s),veh/h/ln	1600	1568	1688	1600	1792	1599
Q Serve(g_s), s	32.6	4.6	6.7	59.3	9.6	13.9
Cycle Q Clear(g_c), s	32.6	4.6	6.7	59.3	9.6	13.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	934	915	313	1151	314	428
V/C Ratio(X)	0.77	0.18	0.77	0.95	0.61	0.61
Avail Cap(c_a), veh/h	1006	986	369	1250	443	544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.2	9.4	43.0	12.1	37.0	31.1
Incr Delay (d2), s/veh	3.3	0.1	8.0	14.9	1.9	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.2	2.0	3.5	30.4	4.9	6.3
LnGrp Delay(d),s/veh	18.5	9.5	51.0	27.1	38.9	32.5
LnGrp LOS	B	A	D	C	D	C
Approach Vol, veh/h	876			1337	453	
Approach Delay, s/veh	16.9			31.4	35.2	
Approach LOS	B			C	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	13.2	62.6				75.8		21.2
Change Period (Y+Rc), s	4.2	6.0				6.0		4.2
Max Green Setting (Gmax), s	11.1	61.0				75.8		24.0
Max Q Clear Time (g_c+I1), s	8.7	34.6				61.3		15.9
Green Ext Time (p_c), s	0.2	11.8				8.5		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	27.2
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	864	43	154	1045	5	149	0	262	0	1	0
Future Volume (veh/h)	0	864	43	154	1045	5	149	0	262	0	1	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1845	1759	1597	1900	1900	1810	1863	1900	1900	1900
Adj Flow Rate, veh/h	0	1005	50	179	1215	6	173	0	305	0	1	0
Adj No. of Lanes	1	1	1	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	3	8	0	0	0	0	2	0	0	0
Cap, veh/h	1	1002	982	182	1210	6	301	0	460	0	351	299
Arrive On Green	0.00	0.63	0.63	0.14	1.00	1.00	0.18	0.00	0.18	0.00	0.18	0.00
Sat Flow, veh/h	1810	1600	1568	1675	1588	8	1367	0	1583	0	1900	1615
Grp Volume(v), veh/h	0	1005	50	179	0	1221	173	0	305	0	1	0
Grp Sat Flow(s),veh/h/ln	1810	1600	1568	1675	0	1596	1367	0	1583	0	1900	1615
Q Serve(g_s), s	0.0	94.0	1.8	16.0	0.0	114.1	17.7	0.0	25.4	0.0	0.1	0.0
Cycle Q Clear(g_c), s	0.0	94.0	1.8	16.0	0.0	114.1	17.7	0.0	25.4	0.0	0.1	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1	1002	982	182	0	1216	301	0	460	0	351	299
V/C Ratio(X)	0.00	1.00	0.05	0.98	0.00	1.00	0.57	0.00	0.66	0.00	0.00	0.00
Avail Cap(c_a), veh/h	97	1002	982	182	0	1216	305	0	464	0	357	304
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.65	0.65	0.09	0.00	0.09	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	28.0	10.8	64.0	0.0	0.0	57.1	0.0	46.8	0.0	49.8	0.0
Incr Delay (d2), s/veh	0.0	23.7	0.1	16.2	0.0	8.8	2.6	0.0	3.5	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	47.8	0.8	8.2	0.0	3.0	6.9	0.0	11.6	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	51.7	10.9	80.2	0.0	8.8	59.6	0.0	50.3	0.0	49.8	0.0
LnGrp LOS		F	B	F		F	E		D		D	
Approach Vol, veh/h		1055			1400			478			1	
Approach Delay, s/veh		49.8			17.9			53.7			49.8	
Approach LOS		D			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.3	98.0		31.7	0.0	118.3		31.7
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	16.6	91.5		* 28	8.3	99.8		* 28
Max Q Clear Time (g_c+I1), s	18.0	96.0		2.1	0.0	116.1		27.4
Green Ext Time (p_c), s	0.0	0.0		2.1	0.0	0.0		0.2

Intersection Summary

HCM 2010 Ctrl Delay	35.2
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	993	105	150	1018	1	153	0	239	0	0	1
Future Volume (veh/h)	0	993	105	150	1018	1	153	0	239	0	0	1
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1827	1810	1600	1900	1900	1827	1810	1900	1900	1900
Adj Flow Rate, veh/h	0	1128	119	170	1157	1	174	0	272	0	0	1
Adj No. of Lanes	1	1	1	2	1	0	0	1	1	0	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	4	5	0	0	0	0	5	0	0	0
Cap, veh/h	1	1017	974	172	1159	1	244	0	210	0	104	88
Arrive On Green	0.00	1.00	1.00	0.05	0.73	0.71	0.14	0.00	0.14	0.00	0.00	0.05
Sat Flow, veh/h	1810	1600	1533	3343	1598	1	1740	0	1503	0	1900	1615
Grp Volume(v), veh/h	0	1128	119	170	0	1158	174	0	272	0	0	1
Grp Sat Flow(s),veh/h/ln	1810	1600	1533	1672	0	1600	1740	0	1503	0	1900	1615
Q Serve(g_s), s	0.0	95.3	0.0	7.6	0.0	108.0	14.3	0.0	21.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	95.3	0.0	7.6	0.0	108.0	14.3	0.0	21.0	0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1	1017	974	172	0	1160	244	0	210	0	104	88
V/C Ratio(X)	0.00	1.11	0.12	0.99	0.00	1.00	0.71	0.00	1.29	0.00	0.00	0.01
Avail Cap(c_a), veh/h	93	1017	974	172	0	1160	244	0	210	0	307	261
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.31	0.31	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	71.1	0.0	20.5	61.6	0.0	64.5	0.0	0.0	67.1
Incr Delay (d2), s/veh	0.0	54.3	0.1	65.8	0.0	25.9	9.5	0.0	162.2	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	15.3	0.0	5.1	0.0	55.3	7.6	0.0	18.2	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	54.3	0.1	136.9	0.0	46.4	71.1	0.0	226.7	0.0	0.0	67.1
LnGrp LOS		F	A	F		D	E		F			E
Approach Vol, veh/h		1247			1328			446			1	
Approach Delay, s/veh		49.1			58.0			166.0			67.1	
Approach LOS		D			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.7	101.1		12.2	0.0	112.8		25.0
Change Period (Y+Rc), s	3.7	* 6		* 4.2	3.7	6.0		4.2
Max Green Setting (Gmax), s	8.0	* 81		* 24	8.0	79.1		20.8
Max Q Clear Time (g_c+I1), s	9.6	97.3		2.1	0.0	110.0		23.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary

HCM 2010 Ctrl Delay	70.3
HCM 2010 LOS	E

Notes

Intersection						
Int Delay, s/veh	68.9					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	111	1123	791	1	12	364
Future Vol, veh/h	111	1123	791	1	12	364
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	230	-	-	250	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	4	3	6	67	0	1
Mvmt Flow	131	1321	931	1	14	428

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	931	0	-	0	2513	931
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	1582	-
Critical Hdwy	4.14	-	-	-	6.4	6.21
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.236	-	-	-	3.5	3.309
Pot Cap-1 Maneuver	727	-	-	-	32	~ 325
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	188	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	727	-	-	-	26	~ 325
Mov Cap-2 Maneuver	-	-	-	-	26	-
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	154	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	$ 436.9
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	727	-	-	-	238
HCM Lane V/C Ratio	0.18	-	-	-	1.859
HCM Control Delay (s)	11	-	-	-	$ 436.9
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.7	-	-	-	30.9

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	654	14	50	989	120	27	18	166	224	16	136
Future Volume (veh/h)	54	654	14	50	989	120	27	18	166	224	16	136
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1900	1900	1584	1827	1900	1890	1900	1900	1882	1881
Adj Flow Rate, veh/h	57	696	15	53	1052	128	29	19	177	238	17	145
Adj No. of Lanes	1	1	1	1	1	1	0	1	0	0	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	1	4	0	0	0	0	0	1
Cap, veh/h	88	937	927	86	927	890	27	30	109	130	6	437
Arrive On Green	0.05	0.59	0.59	0.05	0.58	0.58	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1810	1600	1582	1810	1584	1521	0	108	399	303	22	1599
Grp Volume(v), veh/h	57	696	15	53	1052	128	225	0	0	255	0	145
Grp Sat Flow(s),veh/h/ln	1810	1600	1582	1810	1584	1521	507	0	0	325	0	1599
Q Serve(g_s), s	4.6	47.6	0.6	4.3	87.3	5.7	0.0	0.0	0.0	0.0	0.0	10.8
Cycle Q Clear(g_c), s	4.6	47.6	0.6	4.3	87.3	5.7	40.8	0.0	0.0	40.8	0.0	10.8
Prop In Lane	1.00		1.00	1.00		1.00	0.13		0.79	0.93		1.00
Lane Grp Cap(c), veh/h	88	937	927	86	927	890	166	0	0	135	0	437
V/C Ratio(X)	0.65	0.74	0.02	0.61	1.14	0.14	1.36	0.00	0.00	1.88	0.00	0.33
Avail Cap(c_a), veh/h	97	937	927	98	927	890	166	0	0	135	0	437
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	69.7	22.7	12.9	69.7	31.0	14.0	49.4	0.0	0.0	61.2	0.0	43.3
Incr Delay (d2), s/veh	13.6	3.3	0.0	10.1	74.2	0.1	194.8	0.0	0.0	423.6	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	21.7	0.3	2.4	56.9	2.4	14.7	0.0	0.0	21.5	0.0	4.8
LnGrp Delay(d),s/veh	83.3	26.0	12.9	79.8	105.2	14.1	244.2	0.0	0.0	484.8	0.0	44.0
LnGrp LOS	F	C	B	E	F	B	F			F		D
Approach Vol, veh/h		768			1233			225			400	
Approach Delay, s/veh		30.0			94.7			244.2			325.0	
Approach LOS		C			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.8	93.4		45.0	10.9	93.3		45.0
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	8.1	87.2		* 41	8.0	87.3		* 41
Max Q Clear Time (g_c+I1), s	6.3	49.6		42.8	6.6	89.3		42.8
Green Ext Time (p_c), s	0.0	15.9		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	123.7
HCM 2010 LOS	F

Notes

Intersection	
Int Delay, s/veh	8.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	13	288	50	13	10	116	34	40	10	43	13
Future Vol, veh/h	13	13	288	50	13	10	116	34	40	10	43	13
Conflicting Peds, #/hr	0	0	1	0	0	0	1	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	92	93	92	92	92	93	93	92	92	93	93
Heavy Vehicles, %	5	2	1	2	2	2	2	1	2	2	2	8
Mvmt Flow	14	14	310	54	14	11	125	37	43	11	46	14

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	396	405	55	391	391	58	61	0	0	80	0	0
Stage 1	76	76	-	308	308	-	-	-	-	-	-	-
Stage 2	320	329	-	83	83	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.52	6.21	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.15	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.018	3.309	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	559	535	1015	568	545	1008	1542	-	-	1518	-	-
Stage 1	926	832	-	702	660	-	-	-	-	-	-	-
Stage 2	685	646	-	925	826	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	502	485	1013	358	494	1008	1541	-	-	1518	-	-
Mov Cap-2 Maneuver	502	485	-	358	494	-	-	-	-	-	-	-
Stage 1	847	825	-	642	604	-	-	-	-	-	-	-
Stage 2	606	591	-	626	819	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.3	15.7	4.6	1.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1541	-	-	493	1013	415	1518	-	-
HCM Lane V/C Ratio	0.081	-	-	0.057	0.306	0.191	0.007	-	-
HCM Control Delay (s)	7.5	0	-	12.7	10.1	15.7	7.4	0	-
HCM Lane LOS	A	A	-	B	B	C	A	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.2	1.3	0.7	0	-	-

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	39	1	10	33	12	8	0	25	0	0	0
Future Vol, veh/h	1	39	1	10	33	12	8	0	25	0	0	0
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Heavy Vehicles, %	0	0	0	0	8	0	0	0	0	0	0	0
Mvmt Flow	2	63	2	16	53	19	13	0	40	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	7.5	7.7	7.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	24%	2%	23%	0%
Vol Thru, %	0%	95%	77%	0%
Vol Right, %	76%	2%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	33	41	43	12
LT Vol	8	1	10	0
Through Vol	0	39	33	0
RT Vol	25	1	0	12
Lane Flow Rate	53	66	69	19
Geometry Grp	2	5	7	7
Degree of Util (X)	0.056	0.076	0.091	0.022
Departure Headway (Hd)	3.754	4.149	4.743	4.062
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	936	859	755	880
Service Time	1.848	2.195	2.472	1.79
HCM Lane V/C Ratio	0.057	0.077	0.091	0.022
HCM Control Delay	7.1	7.5	7.9	6.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.2	0.3	0.1

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	166	29	7	26	0	38	0	42	1	4	2
Future Vol, veh/h	0	166	29	7	26	0	38	0	42	1	4	2
Conflicting Peds, #/hr	1	0	1	1	0	4	2	0	1	4	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	1	0	0	0	0	0	0	5	0	25	0
Mvmt Flow	0	182	32	8	29	0	42	0	46	1	4	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	183	0	0	235	227	187	253	227	34
Stage 1	-	-	-	-	-	-	183	183	-	44	44	-
Stage 2	-	-	-	-	-	-	52	44	-	209	183	-
Critical Hdwy	-	-	-	4.1	-	-	7.1	6.5	6.25	7.1	6.75	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.75	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.75	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.5	4	3.345	3.5	4.225	3.3
Pot Cap-1 Maneuver	0	-	-	1404	-	0	724	676	847	704	634	1045
Stage 1	0	-	-	-	-	0	823	752	-	975	815	-
Stage 2	0	-	-	-	-	0	966	862	-	798	707	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1399	-	-	712	671	843	660	630	1041
Mov Cap-2 Maneuver	-	-	-	-	-	-	712	671	-	660	630	-
Stage 1	-	-	-	-	-	-	823	751	-	975	810	-
Stage 2	-	-	-	-	-	-	949	857	-	752	706	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.6	10.2	10.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	775	-	-	1399	-	715
HCM Lane V/C Ratio	0.113	-	-	0.005	-	0.011
HCM Control Delay (s)	10.2	-	-	7.6	0	10.1
HCM Lane LOS	B	-	-	A	A	B
HCM 95th %tile Q(veh)	0.4	-	-	0	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	927	80	104	609	35	112	36	212	12	11	21
Future Volume (veh/h)	53	927	80	104	609	35	112	36	212	12	11	21
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		1.00	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1865	1900	1900	1850	1900	1900	1859	1900
Adj Flow Rate, veh/h	60	1042	90	117	684	39	126	40	0	13	12	24
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	2	0	0	2	2	8	8	0	9	9	9
Cap, veh/h	200	1398	634	279	1494	85	315	79	300	130	112	150
Arrive On Green	0.11	0.39	0.39	0.15	0.44	0.44	0.19	0.19	0.00	0.19	0.19	0.19
Sat Flow, veh/h	1810	3539	1605	1810	3406	194	1061	428	1615	240	601	808
Grp Volume(v), veh/h	60	1042	90	117	356	367	166	0	0	49	0	0
Grp Sat Flow(s),veh/h/ln	1810	1770	1605	1810	1771	1829	1489	0	1615	1649	0	0
Q Serve(g_s), s	1.6	13.5	1.9	3.1	7.5	7.6	4.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.6	13.5	1.9	3.1	7.5	7.6	5.3	0.0	0.0	1.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.11	0.76		1.00	0.27		0.49
Lane Grp Cap(c), veh/h	200	1398	634	279	777	802	395	0	300	391	0	0
V/C Ratio(X)	0.30	0.75	0.14	0.42	0.46	0.46	0.42	0.00	0.00	0.13	0.00	0.00
Avail Cap(c_a), veh/h	355	1707	774	338	838	865	936	0	906	976	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.9	13.9	10.4	20.5	10.5	10.5	19.8	0.0	0.0	18.3	0.0	0.0
Incr Delay (d2), s/veh	0.3	1.1	0.0	0.4	0.2	0.2	0.3	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	6.7	0.9	1.6	3.7	3.8	2.2	0.0	0.0	0.6	0.0	0.0
LnGrp Delay(d),s/veh	22.2	14.9	10.4	20.8	10.7	10.7	20.1	0.0	0.0	18.3	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	C			B		
Approach Vol, veh/h		1192			840			166			49	
Approach Delay, s/veh		15.0			12.1			20.1			18.3	
Approach LOS		B			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.2	26.3		14.9	9.9	28.7		14.9
Change Period (Y+Rc), s	4.0	5.2		5.0	4.0	5.2		5.0
Max Green Setting (Gmax), s	10.0	25.8		30.0	10.5	25.3		30.0
Max Q Clear Time (g_c+I1), s	5.1	15.5		3.3	3.6	9.6		7.3
Green Ext Time (p_c), s	0.0	5.6		0.2	0.0	7.2		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	14.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	193	362	96	223	553	170	279	956	410	140	470	292
Future Volume (veh/h)	193	362	96	223	553	170	279	956	410	140	470	292
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1863	1845	1881	1881	1881	1845	1881	1863
Adj Flow Rate, veh/h	197	369	98	228	564	173	285	976	418	143	480	298
Adj No. of Lanes	2	2	0	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	2	3	1	1	1	3	1	2
Cap, veh/h	344	747	196	344	948	415	272	1322	581	173	1132	495
Arrive On Green	0.10	0.27	0.27	0.10	0.27	0.27	0.15	0.37	0.37	0.10	0.32	0.32
Sat Flow, veh/h	3476	2788	730	3476	3539	1549	1792	3574	1570	1757	3574	1562
Grp Volume(v), veh/h	197	235	232	228	564	173	285	976	418	143	480	298
Grp Sat Flow(s),veh/h/ln	1738	1787	1732	1738	1770	1549	1792	1787	1570	1757	1787	1562
Q Serve(g_s), s	5.5	11.2	11.4	6.4	14.0	9.3	15.3	23.9	23.0	8.0	10.7	16.2
Cycle Q Clear(g_c), s	5.5	11.2	11.4	6.4	14.0	9.3	15.3	23.9	23.0	8.0	10.7	16.2
Prop In Lane	1.00		0.42	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	344	479	464	344	948	415	272	1322	581	173	1132	495
V/C Ratio(X)	0.57	0.49	0.50	0.66	0.59	0.42	1.05	0.74	0.72	0.83	0.42	0.60
Avail Cap(c_a), veh/h	355	599	581	355	1187	519	272	1322	581	214	1206	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.4	31.1	31.2	43.8	32.1	30.4	42.7	27.5	27.3	44.6	27.2	29.1
Incr Delay (d2), s/veh	2.1	1.1	1.2	4.4	0.9	1.0	67.6	2.4	4.7	18.9	0.4	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	5.6	5.6	3.3	6.9	4.1	12.6	12.2	10.7	4.8	5.3	7.2
LnGrp Delay(d),s/veh	45.5	32.2	32.4	48.1	33.0	31.3	110.4	29.9	32.0	63.5	27.5	31.2
LnGrp LOS	D	C	C	D	C	C	F	C	C	E	C	C
Approach Vol, veh/h		664			965			1679			921	
Approach Delay, s/veh		36.2			36.3			44.1			34.3	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	31.6	19.0	36.5	13.7	31.6	13.6	41.9
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	10.3	33.8	15.3	34.0	10.3	33.8	12.3	37.0
Max Q Clear Time (g_c+I1), s	9.4	13.4	17.3	18.2	7.5	16.0	10.0	25.9
Green Ext Time (p_c), s	0.1	9.4	0.0	12.6	0.2	8.7	0.1	9.6

Intersection Summary	
HCM 2010 Ctrl Delay	38.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	823	224	169	543	51	260	325	194	139	246	155
Future Volume (veh/h)	185	823	224	169	543	51	260	325	194	139	246	155
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1881	1881	1881	1881	1881	1881	1881	1900	1881	1859	1900
Adj Flow Rate, veh/h	189	840	229	172	554	52	265	332	198	142	251	158
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	1	1	1	1	1	1	1	1	1	3	3
Cap, veh/h	184	1166	513	180	1153	513	209	553	321	193	523	317
Arrive On Green	0.10	0.33	0.33	0.10	0.32	0.32	0.12	0.26	0.26	0.11	0.25	0.25
Sat Flow, veh/h	1774	3574	1574	1792	3574	1592	1792	2145	1247	1792	2100	1271
Grp Volume(v), veh/h	189	840	229	172	554	52	265	275	255	142	209	200
Grp Sat Flow(s),veh/h/ln	1774	1787	1574	1792	1787	1592	1792	1787	1604	1792	1766	1605
Q Serve(g_s), s	8.3	16.5	9.2	7.6	9.9	1.8	9.3	10.8	11.2	6.1	8.1	8.5
Cycle Q Clear(g_c), s	8.3	16.5	9.2	7.6	9.9	1.8	9.3	10.8	11.2	6.1	8.1	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		0.79
Lane Grp Cap(c), veh/h	184	1166	513	180	1153	513	209	461	414	193	440	400
V/C Ratio(X)	1.02	0.72	0.45	0.96	0.48	0.10	1.27	0.60	0.62	0.73	0.48	0.50
Avail Cap(c_a), veh/h	184	1356	597	180	1343	598	209	584	524	202	571	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.8	23.7	21.2	35.8	21.7	18.9	35.3	26.0	26.1	34.5	25.5	25.7
Incr Delay (d2), s/veh	72.9	1.6	0.6	54.8	0.3	0.1	153.6	1.5	1.8	12.5	1.0	1.2
Initial Q Delay(d3),s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	8.4	4.0	6.5	4.9	0.8	13.4	5.5	5.2	3.7	4.0	3.9
LnGrp Delay(d),s/veh	108.9	25.3	21.8	90.6	22.0	19.0	188.8	27.5	27.9	47.0	26.5	26.9
LnGrp LOS	F	C	C	F	C	B	F	C	C	D	C	C
Approach Vol, veh/h		1258			778			795			551	
Approach Delay, s/veh		37.2			37.0			81.4			31.9	
Approach LOS		D			D			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	25.2	11.7	30.6	13.0	24.5	12.0	30.3
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	8.6	26.1	8.0	30.3	9.3	25.8	8.3	30.0
Max Q Clear Time (g_c+I1), s	11.1	13.2	9.6	18.5	11.3	10.5	10.3	11.9
Green Ext Time (p_c), s	0.0	4.2	0.0	6.4	0.0	4.6	0.0	8.2

Intersection Summary	
HCM 2010 Ctrl Delay	46.7
HCM 2010 LOS	D

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	98	84	819	475	149	273
Future Volume (veh/h)	98	84	819	475	149	273
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1827	1881	1900	1900
Adj Flow Rate, veh/h	103	88	862	500	157	287
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	4	1	0	0
Cap, veh/h	189	168	1014	887	212	1398
Arrive On Green	0.11	0.11	0.56	0.56	0.12	0.74
Sat Flow, veh/h	1792	1599	1827	1599	1810	1900
Grp Volume(v), veh/h	103	88	862	500	157	287
Grp Sat Flow(s),veh/h/ln	1792	1599	1827	1599	1810	1900
Q Serve(g_s), s	3.5	3.3	25.5	13.0	5.4	3.0
Cycle Q Clear(g_c), s	3.5	3.3	25.5	13.0	5.4	3.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	189	168	1014	887	212	1398
V/C Ratio(X)	0.55	0.52	0.85	0.56	0.74	0.21
Avail Cap(c_a), veh/h	474	423	1388	1215	279	1858
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	27.2	12.0	9.3	27.4	2.6
Incr Delay (d2), s/veh	2.4	2.5	3.9	0.6	7.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	3.1	13.8	5.8	3.1	1.5
LnGrp Delay(d),s/veh	29.7	29.7	15.9	9.8	34.7	2.7
LnGrp LOS	C	C	B	A	C	A
Approach Vol, veh/h	191		1362			444
Approach Delay, s/veh	29.7		13.7			14.0
Approach LOS	C		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		52.6		11.7	11.6	40.9		
Change Period (Y+Rc), s		5.3		4.9	4.1	5.3		
Max Green Setting (Gmax), s		62.8		17.0	9.9	48.8		
Max Q Clear Time (g_c+I1), s		5.0		5.5	7.4	27.5		
Green Ext Time (p_c), s		10.0		0.5	0.1	8.1		

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	26	28	27	1288	326	20
Future Vol, veh/h	26	28	27	1288	326	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	40	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	15	2	5	0
Mvmt Flow	27	29	28	1356	343	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1756	343	343	0	-	0
Stage 1	343	-	-	-	-	-
Stage 2	1413	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.25	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.335	-	-	-
Pot Cap-1 Maneuver	95	704	1147	-	-	-
Stage 1	723	-	-	-	-	-
Stage 2	227	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	93	704	1147	-	-	-
Mov Cap-2 Maneuver	182	-	-	-	-	-
Stage 1	723	-	-	-	-	-
Stage 2	221	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1147	-	182	704	-	-
HCM Lane V/C Ratio	0.025	-	0.15	0.042	-	-
HCM Control Delay (s)	8.2	-	28.3	10.3	-	-
HCM Lane LOS	A	-	D	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	0.1	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	40	95	1200	7	11	351
Future Volume (veh/h)	40	95	1200	7	11	351
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1881	1387	1508	1881
Adj Flow Rate, veh/h	43	103	1304	8	12	382
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	3	1	37	26	1
Cap, veh/h	149	167	1412	885	29	1523
Arrive On Green	0.09	0.09	0.75	0.75	0.02	0.81
Sat Flow, veh/h	1723	1568	1881	1179	1436	1881
Grp Volume(v), veh/h	43	103	1304	8	12	382
Grp Sat Flow(s),veh/h/ln	1723	1568	1881	1179	1436	1881
Q Serve(g_s), s	2.2	6.0	53.6	0.2	0.8	4.6
Cycle Q Clear(g_c), s	2.2	6.0	53.6	0.2	0.8	4.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	149	167	1412	885	29	1523
V/C Ratio(X)	0.29	0.62	0.92	0.01	0.42	0.25
Avail Cap(c_a), veh/h	380	377	1748	1095	106	1959
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	40.7	9.6	3.0	46.1	2.2
Incr Delay (d2), s/veh	1.1	3.7	7.8	0.0	9.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	5.3	30.2	0.1	0.4	2.4
LnGrp Delay(d),s/veh	41.8	44.4	17.4	3.0	55.5	2.3
LnGrp LOS	D	D	B	A	E	A
Approach Vol, veh/h	146		1312			394
Approach Delay, s/veh	43.6		17.4			3.9
Approach LOS	D		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		82.7		12.4	5.6	77.1		
Change Period (Y+Rc), s		5.7		* 4.2	3.7	5.7		
Max Green Setting (Gmax), s		99.1		* 21	7.0	88.4		
Max Q Clear Time (g_c+I1), s		6.6		8.0	2.8	55.6		
Green Ext Time (p_c), s		21.0		0.4	0.0	15.8		

Intersection Summary

HCM 2010 Ctrl Delay	16.6
HCM 2010 LOS	B

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	705	81	57	1248	70	29
Future Volume (veh/h)	705	81	57	1248	70	29
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1569	1900	1900	1584	1900	1845
Adj Flow Rate, veh/h	742	85	60	1314	74	31
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	0	1	0	3
Cap, veh/h	1232	1268	86	1364	109	94
Arrive On Green	0.79	0.79	0.05	0.86	0.06	0.06
Sat Flow, veh/h	1569	1615	1810	1584	1810	1568
Grp Volume(v), veh/h	742	85	60	1314	74	31
Grp Sat Flow(s),veh/h/ln	1569	1615	1810	1584	1810	1568
Q Serve(g_s), s	25.1	1.6	4.2	87.6	5.2	2.5
Cycle Q Clear(g_c), s	25.1	1.6	4.2	87.6	5.2	2.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1232	1268	86	1364	109	94
V/C Ratio(X)	0.60	0.07	0.70	0.96	0.68	0.33
Avail Cap(c_a), veh/h	1313	1351	159	1510	223	193
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.7	3.2	60.9	7.3	59.8	58.5
Incr Delay (d2), s/veh	0.8	0.0	9.6	14.7	7.2	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.0	0.7	2.4	42.4	2.8	1.1
LnGrp Delay(d),s/veh	6.5	3.2	70.5	22.1	67.0	60.5
LnGrp LOS	A	A	E	C	E	E
Approach Vol, veh/h	827			1374	105	
Approach Delay, s/veh	6.1			24.2	65.1	
Approach LOS	A			C	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	9.9	108.0				117.9		12.0
Change Period (Y+Rc), s	3.7	6.0				6.0		4.2
Max Green Setting (Gmax), s	11.4	108.7				123.8		16.0
Max Q Clear Time (g_c+I1), s	6.2	27.1				89.6		7.2
Green Ext Time (p_c), s	0.1	34.5				22.2		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	19.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	673	2	2	967	718	4	23	13	273	4	106
Future Volume (veh/h)	250	673	2	2	967	718	4	23	13	273	4	106
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1569	1900	1900	1584	1845	1900	1841	1900	1863	1900	1845
Adj Flow Rate, veh/h	272	732	2	2	1051	780	4	25	14	297	4	115
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	2	2	0	1	3	0	5	5	2	0	3
Cap, veh/h	308	1779	5	10	1255	848	120	73	41	426	235	191
Arrive On Green	0.17	0.58	0.58	0.01	0.42	0.42	0.07	0.07	0.07	0.12	0.12	0.12
Sat Flow, veh/h	1792	3049	8	1810	3010	1568	1810	1110	621	3442	1900	1544
Grp Volume(v), veh/h	272	358	376	2	1051	780	4	0	39	297	4	115
Grp Sat Flow(s),veh/h/ln	1792	1490	1567	1810	1505	1568	1810	0	1731	1721	1900	1544
Q Serve(g_s), s	13.2	11.7	11.7	0.1	27.8	37.1	0.2	0.0	1.9	7.4	0.2	6.3
Cycle Q Clear(g_c), s	13.2	11.7	11.7	0.1	27.8	37.1	0.2	0.0	1.9	7.4	0.2	6.3
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	308	869	914	10	1255	848	120	0	115	426	235	191
V/C Ratio(X)	0.88	0.41	0.41	0.20	0.84	0.92	0.03	0.00	0.34	0.70	0.02	0.60
Avail Cap(c_a), veh/h	326	869	914	203	1255	848	183	0	175	1083	598	486
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	10.2	10.2	44.0	23.2	17.9	38.9	0.0	39.7	37.4	34.2	36.9
Incr Delay (d2), s/veh	22.9	0.3	0.3	9.9	5.1	15.1	0.1	0.0	1.7	2.1	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	4.8	5.1	0.1	12.4	22.6	0.1	0.0	1.0	3.6	0.1	2.8
LnGrp Delay(d),s/veh	58.9	10.5	10.5	53.9	28.4	33.0	39.0	0.0	41.4	39.5	34.3	40.0
LnGrp LOS	E	B	B	D	C	C	D		D	D	C	D
Approach Vol, veh/h		1006			1833			43			416	
Approach Delay, s/veh		23.6			30.4			41.2			39.6	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.7	57.9		16.3	19.5	43.1		10.1
Change Period (Y+Rc), s	* 4.2	6.0		5.3	* 4.2	6.0		4.2
Max Green Setting (Gmax), s	* 16	43.3		28.0	* 16	37.1		9.0
Max Q Clear Time (g_c+I1), s	2.1	13.7		9.4	15.2	39.1		3.9
Green Ext Time (p_c), s	0.0	15.5		1.6	0.1	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.6
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	853	0	0	1018	12	0	0	0	0	0	659
Future Volume (veh/h)	109	853	0	0	1018	12	0	0	0	0	0	659
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1681	1569	0	0	1569	1900				0	1863	1863
Adj Flow Rate, veh/h	121	948	0	0	1131	13				0	0	732
Adj No. of Lanes	1	2	0	0	2	0				0	1	2
Peak Hour Factor	0.90	0.90	0.92	0.92	0.90	0.90				0.90	0.92	0.90
Percent Heavy Veh, %	13	2	0	0	2	2				0	2	2
Cap, veh/h	156	2735	0	0	2310	27				0	0	0
Arrive On Green	0.10	0.92	0.00	0.00	0.77	0.77				0.00	0.00	0.00
Sat Flow, veh/h	1601	3059	0	0	3097	35					0	
Grp Volume(v), veh/h	121	948	0	0	558	586					0.0	
Grp Sat Flow(s),veh/h/ln	1601	1490	0	0	1491	1563						
Q Serve(g_s), s	5.4	2.8	0.0	0.0	10.3	10.3						
Cycle Q Clear(g_c), s	5.4	2.8	0.0	0.0	10.3	10.3						
Prop In Lane	1.00		0.00	0.00		0.02						
Lane Grp Cap(c), veh/h	156	2735	0	0	1141	1196						
V/C Ratio(X)	0.77	0.35	0.00	0.00	0.49	0.49						
Avail Cap(c_a), veh/h	945	3557	0	0	1141	1196						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	32.1	0.4	0.0	0.0	3.2	3.2						
Incr Delay (d2), s/veh	7.9	0.1	0.0	0.0	0.4	0.4						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	2.7	1.1	0.0	0.0	4.2	4.4						
LnGrp Delay(d),s/veh	40.0	0.4	0.0	0.0	3.6	3.6						
LnGrp LOS	D	A			A	A						
Approach Vol, veh/h		1069			1144							
Approach Delay, s/veh		4.9			3.6							
Approach LOS		A			A							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		72.9			11.1	61.8		
Change Period (Y+Rc), s		* 6			4.0	6.0		
Max Green Setting (Gmax), s		* 87			43.0	37.0		
Max Q Clear Time (g_c+I1), s		4.8			7.4	12.3		
Green Ext Time (p_c), s		7.1			0.4	12.0		

Intersection Summary	
HCM 2010 Ctrl Delay	4.2
HCM 2010 LOS	A

Notes

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	78	774	932	127	345	117
Future Volume (veh/h)	78	774	932	127	345	117
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1584	1584	1845	1900	1881
Adj Flow Rate, veh/h	82	815	981	134	363	123
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	0	1
Cap, veh/h	93	1122	985	975	374	330
Arrive On Green	0.05	0.71	0.62	0.62	0.21	0.21
Sat Flow, veh/h	1792	1584	1584	1568	1810	1599
Grp Volume(v), veh/h	82	815	981	134	363	123
Grp Sat Flow(s),veh/h/ln	1792	1584	1584	1568	1810	1599
Q Serve(g_s), s	5.5	37.1	73.8	4.2	23.9	7.9
Cycle Q Clear(g_c), s	5.5	37.1	73.8	4.2	23.9	7.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	93	1122	985	975	374	330
V/C Ratio(X)	0.89	0.73	1.00	0.14	0.97	0.37
Avail Cap(c_a), veh/h	93	1122	985	975	374	330
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.5	10.5	22.6	9.4	47.2	40.9
Incr Delay (d2), s/veh	58.1	2.6	27.7	0.1	38.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	16.9	39.5	1.8	15.9	7.4
LnGrp Delay(d),s/veh	114.7	13.1	50.2	9.5	85.9	41.6
LnGrp LOS	F	B	D	A	F	D
Approach Vol, veh/h		897	1115		486	
Approach Delay, s/veh		22.4	45.3		74.7	
Approach LOS		C	D		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		91.0		29.0	10.4	80.6		
Change Period (Y+Rc), s		6.0		* 4.2	* 4.2	6.0		
Max Green Setting (Gmax), s		85.0		* 25	* 6.2	74.6		
Max Q Clear Time (g_c+I1), s		39.1		25.9	7.5	75.8		
Green Ext Time (p_c), s		22.5		0.0	0.0	0.0		

Intersection Summary

HCM 2010 Ctrl Delay	42.8
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	1006	71	8	942	23	41	3	8	19	2	41
Future Volume (veh/h)	52	1006	71	8	942	23	41	3	8	19	2	41
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1584	1900	1900	1584	1900	1900	1900	1900	1900	1900	1845
Adj Flow Rate, veh/h	54	1037	73	8	971	24	42	3	8	20	2	42
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	0	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	1	0	0	1	0	0	0	0	0	0	3
Cap, veh/h	86	1220	1244	22	1164	1186	146	32	85	155	12	109
Arrive On Green	0.05	0.77	0.77	0.01	0.73	0.73	0.07	0.07	0.07	0.07	0.07	0.07
Sat Flow, veh/h	1810	1584	1615	1810	1584	1615	1384	459	1225	1211	177	1568
Grp Volume(v), veh/h	54	1037	73	8	971	24	42	0	11	22	0	42
Grp Sat Flow(s),veh/h/ln	1810	1584	1615	1810	1584	1615	1384	0	1684	1388	0	1568
Q Serve(g_s), s	2.8	42.0	1.0	0.4	40.5	0.4	2.9	0.0	0.6	1.1	0.0	2.5
Cycle Q Clear(g_c), s	2.8	42.0	1.0	0.4	40.5	0.4	4.6	0.0	0.6	1.7	0.0	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.73	0.91		1.00
Lane Grp Cap(c), veh/h	86	1220	1244	22	1164	1186	146	0	117	169	0	109
V/C Ratio(X)	0.63	0.85	0.06	0.37	0.83	0.02	0.29	0.00	0.09	0.13	0.00	0.39
Avail Cap(c_a), veh/h	113	1507	1537	113	1507	1537	452	0	489	492	0	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.1	7.4	2.7	47.2	8.8	3.4	44.7	0.0	42.0	42.6	0.0	42.9
Incr Delay (d2), s/veh	7.3	4.5	0.0	10.1	3.8	0.0	1.1	0.0	0.3	0.3	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	19.4	0.5	0.3	18.5	0.2	1.1	0.0	0.3	0.6	0.0	1.1
LnGrp Delay(d),s/veh	52.3	11.8	2.7	57.3	12.5	3.5	45.8	0.0	42.3	42.9	0.0	45.1
LnGrp LOS	D	B	A	E	B	A	D		D	D		D
Approach Vol, veh/h		1164			1003			53			64	
Approach Delay, s/veh		13.1			12.7			45.0			44.3	
Approach LOS		B			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	80.2		11.3	8.3	76.8		11.3
Change Period (Y+Rc), s	3.7	6.0		4.6	3.7	6.0		4.6
Max Green Setting (Gmax), s	6.3	91.7		28.0	6.0	91.7		28.0
Max Q Clear Time (g_c+I1), s	2.4	44.0		4.5	4.8	42.5		6.6
Green Ext Time (p_c), s	0.0	27.8		0.3	0.0	28.3		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	14.5
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	788	137	194	782	193	327
Future Volume (veh/h)	788	137	194	782	193	327
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1553	1863	1881	1584	1863	1827
Adj Flow Rate, veh/h	821	143	202	815	201	341
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	2	1	1	2	4
Cap, veh/h	837	853	320	1068	393	487
Arrive On Green	0.54	0.54	0.09	0.67	0.22	0.22
Sat Flow, veh/h	1553	1583	3476	1584	1774	1553
Grp Volume(v), veh/h	821	143	202	815	201	341
Grp Sat Flow(s),veh/h/ln	1553	1583	1738	1584	1774	1553
Q Serve(g_s), s	50.3	4.5	5.5	33.6	9.7	18.8
Cycle Q Clear(g_c), s	50.3	4.5	5.5	33.6	9.7	18.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	837	853	320	1068	393	487
V/C Ratio(X)	0.98	0.17	0.63	0.76	0.51	0.70
Avail Cap(c_a), veh/h	837	854	325	1070	437	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	11.4	42.6	10.7	33.3	29.4
Incr Delay (d2), s/veh	26.3	0.1	3.8	3.3	1.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.6	2.0	2.8	15.5	4.9	8.6
LnGrp Delay(d),s/veh	48.3	11.5	46.5	14.0	34.3	33.2
LnGrp LOS	D	B	D	B	C	C
Approach Vol, veh/h	964			1017	542	
Approach Delay, s/veh	42.8			20.4	33.6	
Approach LOS	D			C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	13.2	58.5				71.6		25.8
Change Period (Y+Rc), s	4.2	6.0				6.0		4.2
Max Green Setting (Gmax), s	9.1	52.5				65.8		24.0
Max Q Clear Time (g_c+I1), s	7.5	52.3				35.6		20.8
Green Ext Time (p_c), s	0.1	0.1				9.9		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	31.8
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1038	72	191	909	8	76	0	138	8	1	4
Future Volume (veh/h)	5	1038	72	191	909	8	76	0	138	8	1	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1584	1845	1863	1569	1900	1900	1881	1863	1900	1900	1900
Adj Flow Rate, veh/h	5	1081	75	199	947	8	79	0	144	8	1	4
Adj No. of Lanes	1	1	1	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	3	2	2	2	0	0	2	0	0	0
Cap, veh/h	18	989	954	192	1125	10	48	0	463	48	3	301
Arrive On Green	0.01	0.62	0.61	0.22	1.00	1.00	0.18	0.00	0.18	0.19	0.19	0.19
Sat Flow, veh/h	1810	1584	1568	1774	1553	13	0	0	1583	13	19	1615
Grp Volume(v), veh/h	5	1081	75	199	0	955	79	0	144	9	0	4
Grp Sat Flow(s),veh/h/ln	1810	1584	1568	1774	0	1567	0	0	1583	31	0	1615
Q Serve(g_s), s	0.4	93.6	2.9	16.2	0.0	0.0	0.0	0.0	10.6	0.3	0.0	0.3
Cycle Q Clear(g_c), s	0.4	93.6	2.9	16.2	0.0	0.0	27.7	0.0	10.6	28.0	0.0	0.3
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.89		1.00
Lane Grp Cap(c), veh/h	18	989	954	192	0	1134	48	0	463	51	0	301
V/C Ratio(X)	0.28	1.09	0.08	1.04	0.00	0.84	1.65	0.00	0.31	0.18	0.00	0.01
Avail Cap(c_a), veh/h	100	989	954	192	0	1134	48	0	463	51	0	301
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.40	0.40	0.40	0.19	0.00	0.19	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	73.7	28.2	12.1	58.8	0.0	0.0	74.9	0.0	41.3	65.1	0.0	49.7
Incr Delay (d2), s/veh	3.5	49.4	0.1	39.1	0.0	1.6	366.4	0.0	0.4	2.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	54.2	1.3	10.0	0.0	0.5	6.9	0.0	4.7	0.4	0.0	0.1
LnGrp Delay(d),s/veh	77.2	77.6	12.1	98.0	0.0	1.6	441.3	0.0	41.7	67.5	0.0	49.8
LnGrp LOS	E	F	B	F		A	F		D	E		D
Approach Vol, veh/h		1161			1154			223			13	
Approach Delay, s/veh		73.3			18.2			183.2			62.0	
Approach LOS		E			B			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	30.2	97.6		32.2	5.2	112.6		32.2
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	16.5	91.6		* 28	8.3	99.8		* 28
Max Q Clear Time (g_c+I1), s	18.2	95.6		30.0	2.4	2.0		29.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	18.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	57.9
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	1077	73	148	1066	1	54	0	77	0	0	0
Future Volume (veh/h)	3	1077	73	148	1066	1	54	0	77	0	0	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1569	1881	1863	1569	1900	1900	1900	1845	1900	1900	1900
Adj Flow Rate, veh/h	3	1122	76	154	1110	1	56	0	80	0	0	0
Adj No. of Lanes	1	1	1	2	1	0	0	1	1	0	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	1	2	2	2	0	0	3	0	0	0
Cap, veh/h	8	1277	1285	177	1349	1	93	0	78	0	1	1
Arrive On Green	0.01	1.00	1.00	0.05	0.86	0.85	0.05	0.00	0.05	0.00	0.00	0.00
Sat Flow, veh/h	1810	1569	1579	3442	1567	1	1810	0	1526	0	1900	1615
Grp Volume(v), veh/h	3	1122	76	154	0	1111	56	0	80	0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1569	1579	1721	0	1568	1810	0	1526	0	1900	1615
Q Serve(g_s), s	0.2	0.0	0.0	6.7	0.0	50.6	4.5	0.0	7.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	0.0	6.7	0.0	50.6	4.5	0.0	7.7	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	8	1277	1285	177	0	1351	93	0	78	0	1	1
V/C Ratio(X)	0.39	0.88	0.06	0.87	0.00	0.82	0.60	0.00	1.02	0.00	0.00	0.00
Avail Cap(c_a), veh/h	93	1277	1285	177	0	1351	93	0	78	0	300	255
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.19	0.19	0.19	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	74.2	0.0	0.0	70.7	0.0	5.0	69.7	0.0	71.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	5.8	1.8	0.0	34.6	0.0	5.8	10.5	0.0	107.7	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.7	0.0	4.0	0.0	23.5	2.5	0.0	5.6	0.0	0.0	0.0
LnGrp Delay(d),s/veh	80.0	1.8	0.0	105.2	0.0	10.7	80.1	0.0	179.1	0.0	0.0	0.0
LnGrp LOS	F	A	A	F		B	F		F			
Approach Vol, veh/h		1201			1265			136			0	
Approach Delay, s/veh		1.9			22.2			138.4			0.0	
Approach LOS		A			C			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.7	126.1		0.0	4.6	133.2		12.2
Change Period (Y+Rc), s	3.7	* 6		* 4.2	3.7	6.0		4.2
Max Green Setting (Gmax), s	8.0	* 94		* 24	8.0	91.9		8.0
Max Q Clear Time (g_c+I1), s	8.7	2.0		0.0	2.2	52.6		9.7
Green Ext Time (p_c), s	0.0	26.6		0.0	0.0	20.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.9
HCM 2010 LOS	B

Notes

Intersection						
Int Delay, s/veh	3.2					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	78	1109	1183	55	12	51
Future Vol, veh/h	78	1109	1183	55	12	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	230	-	-	250	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	1	2	0	0	0
Mvmt Flow	81	1155	1232	57	13	53

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1232	0	-	0	2550	1232
Stage 1	-	-	-	-	1232	-
Stage 2	-	-	-	-	1318	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	573	-	-	-	30	218
Stage 1	-	-	-	-	278	-
Stage 2	-	-	-	-	253	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	573	-	-	-	26	218
Mov Cap-2 Maneuver	-	-	-	-	26	-
Stage 1	-	-	-	-	278	-
Stage 2	-	-	-	-	217	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	111.3
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	573	-	-	-	91
HCM Lane V/C Ratio	0.142	-	-	-	0.721
HCM Control Delay (s)	12.3	-	-	-	111.3
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.5	-	-	-	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	802	30	93	738	253	40	24	75	96	21	54
Future Volume (veh/h)	65	802	30	93	738	253	40	24	75	96	21	54
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1900	1863	1600	1881	1900	1869	1900	1900	1735	1652
Adj Flow Rate, veh/h	76	933	35	108	858	294	47	28	87	112	24	63
Adj No. of Lanes	1	1	1	1	1	1	0	1	0	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	2	0	1	3	3	3	12	12	15
Cap, veh/h	119	903	893	129	915	895	58	44	70	180	33	334
Arrive On Green	0.07	0.56	0.56	0.07	0.57	0.57	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1810	1600	1582	1774	1600	1566	66	186	292	507	137	1404
Grp Volume(v), veh/h	76	933	35	108	858	294	162	0	0	136	0	63
Grp Sat Flow(s),veh/h/ln	1810	1600	1582	1774	1600	1566	544	0	0	644	0	1404
Q Serve(g_s), s	4.5	62.1	1.1	6.6	54.5	10.9	3.9	0.0	0.0	0.0	0.0	3.9
Cycle Q Clear(g_c), s	4.5	62.1	1.1	6.6	54.5	10.9	26.2	0.0	0.0	22.3	0.0	3.9
Prop In Lane	1.00		1.00	1.00		1.00	0.29		0.54	0.82		1.00
Lane Grp Cap(c), veh/h	119	903	893	129	915	895	172	0	0	213	0	334
V/C Ratio(X)	0.64	1.03	0.04	0.84	0.94	0.33	0.94	0.00	0.00	0.64	0.00	0.19
Avail Cap(c_a), veh/h	132	903	893	129	915	895	172	0	0	213	0	334
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.1	24.0	10.7	50.4	21.8	12.4	43.4	0.0	0.0	40.1	0.0	33.4
Incr Delay (d2), s/veh	9.6	38.7	0.0	36.4	16.9	0.3	52.3	0.0	0.0	7.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	36.8	0.5	4.5	28.1	4.7	7.4	0.0	0.0	4.4	0.0	1.6
LnGrp Delay(d),s/veh	59.7	62.7	10.7	86.7	38.6	12.7	95.6	0.0	0.0	47.2	0.0	33.8
LnGrp LOS	E	F	B	F	D	B	F			D		C
Approach Vol, veh/h		1044			1260			162			199	
Approach Delay, s/veh		60.7			36.7			95.6			42.9	
Approach LOS		E			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.7	68.1		30.2	10.9	68.9		30.2
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	8.0	62.1		* 26	8.0	62.1		* 26
Max Q Clear Time (g_c+I1), s	8.6	64.1		24.3	6.5	56.5		28.2
Green Ext Time (p_c), s	0.0	0.0		0.4	0.0	4.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	50.2
HCM 2010 LOS	D

Notes

Intersection	
Int Delay, s/veh	8.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	10	128	14	1	5	346	15	26	4	8	1
Future Vol, veh/h	8	10	128	14	1	5	346	15	26	4	8	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	15	2	10	2	2	2	2	4	2	2	11	0
Mvmt Flow	9	11	139	15	1	5	376	16	28	4	9	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	804	815	9	806	801	30	10	0	0	45	0	0
Stage 1	18	18	-	783	783	-	-	-	-	-	-	-
Stage 2	786	797	-	23	18	-	-	-	-	-	-	-
Critical Hdwy	7.25	6.52	6.3	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.25	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.25	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.635	4.018	3.39	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	286	312	1050	300	318	1044	1610	-	-	1563	-	-
Stage 1	969	880	-	387	404	-	-	-	-	-	-	-
Stage 2	367	399	-	995	880	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	231	236	1050	205	241	1044	1610	-	-	1563	-	-
Mov Cap-2 Maneuver	231	236	-	205	241	-	-	-	-	-	-	-
Stage 1	736	877	-	294	307	-	-	-	-	-	-	-
Stage 2	276	303	-	850	877	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	20.2	7.1	2.2
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1610	-	-	234	1050	259	1563	-	-
HCM Lane V/C Ratio	0.234	-	-	0.084	0.133	0.084	0.003	-	-
HCM Control Delay (s)	7.9	0	-	21.8	9	20.2	7.3	0	-
HCM Lane LOS	A	A	-	C	A	C	A	A	-
HCM 95th %tile Q(veh)	0.9	-	-	0.3	0.5	0.3	0	-	-

Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	8	2	6	21	3	16	0	6	0	0	0
Future Vol, veh/h	3	8	2	6	21	3	16	0	6	0	0	0
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Heavy Vehicles, %	0	0	0	0	8	0	0	0	0	0	0	0
Mvmt Flow	5	13	3	10	34	5	26	0	10	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	7.2	7.6	7.2
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	73%	23%	22%	0%
Vol Thru, %	0%	62%	78%	0%
Vol Right, %	27%	15%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	22	13	27	3
LT Vol	16	3	6	0
Through Vol	0	8	21	0
RT Vol	6	2	0	3
Lane Flow Rate	35	21	44	5
Geometry Grp	2	5	7	7
Degree of Util (X)	0.039	0.024	0.057	0.005
Departure Headway (Hd)	4.001	4.053	4.685	4.01
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	890	882	766	894
Service Time	2.046	2.083	2.402	1.726
HCM Lane V/C Ratio	0.039	0.024	0.057	0.006
HCM Control Delay	7.2	7.2	7.7	6.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.2	0

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	14	43	22	60	0	44	0	16	0	20	7
Future Vol, veh/h	0	14	43	22	60	0	44	0	16	0	20	7
Conflicting Peds, #/hr	4	0	1	0	0	3	1	0	0	3	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	5	0	5	0	7	0	13	0	10	0
Mvmt Flow	0	16	48	25	67	0	49	0	18	0	22	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	17	0	0	153	134	20	145	134	71
Stage 1	-	-	-	-	-	-	17	17	-	117	117	-
Stage 2	-	-	-	-	-	-	136	117	-	28	17	-
Critical Hdwy	-	-	-	4.1	-	-	7.17	6.5	6.33	7.1	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.17	5.5	-	6.1	5.6	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.17	5.5	-	6.1	5.6	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.563	4	3.417	3.5	4.09	3.3
Pot Cap-1 Maneuver	0	-	-	1613	-	0	803	760	1027	828	742	997
Stage 1	0	-	-	-	-	0	990	885	-	892	784	-
Stage 2	0	-	-	-	-	0	855	803	-	994	866	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1609	-	-	765	747	1024	802	730	994
Mov Cap-2 Maneuver	-	-	-	-	-	-	765	747	-	802	730	-
Stage 1	-	-	-	-	-	-	990	884	-	892	771	-
Stage 2	-	-	-	-	-	-	808	790	-	974	865	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2	9.8	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	820	-	-	1609	-	784
HCM Lane V/C Ratio	0.082	-	-	0.015	-	0.039
HCM Control Delay (s)	9.8	-	-	7.3	0	9.8
HCM Lane LOS	A	-	-	A	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	467	60	119	1290	20	80	8	74	24	24	23
Future Volume (veh/h)	21	467	60	119	1290	20	80	8	74	24	24	23
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		1.00	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1845	1863	1862	1900	1900	1833	1743	1900	1876	1900
Adj Flow Rate, veh/h	23	519	67	132	1433	22	89	9	0	27	27	26
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	4	3	2	2	2	0	0	9	0	0	0
Cap, veh/h	98	1480	665	290	1910	29	360	30	267	156	137	97
Arrive On Green	0.05	0.43	0.43	0.16	0.54	0.51	0.18	0.18	0.00	0.18	0.18	0.16
Sat Flow, veh/h	1810	3471	1559	1774	3566	55	1270	168	1482	354	762	537
Grp Volume(v), veh/h	23	519	67	132	710	745	98	0	0	80	0	0
Grp Sat Flow(s),veh/h/ln	1810	1736	1559	1774	1769	1852	1437	0	1482	1653	0	0
Q Serve(g_s), s	0.6	5.3	1.3	3.5	16.3	16.3	0.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	5.3	1.3	3.5	16.3	16.3	2.7	0.0	0.0	2.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	0.91		1.00	0.34		0.32
Lane Grp Cap(c), veh/h	98	1480	665	290	947	992	391	0	267	390	0	0
V/C Ratio(X)	0.23	0.35	0.10	0.46	0.75	0.75	0.25	0.00	0.00	0.21	0.00	0.00
Avail Cap(c_a), veh/h	364	2262	1016	442	1238	1296	950	0	880	1050	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.6	10.1	9.0	19.7	9.4	9.4	18.6	0.0	0.0	18.5	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.1	0.0	0.4	1.2	1.2	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.5	0.6	1.8	8.0	8.4	1.2	0.0	0.0	1.0	0.0	0.0
LnGrp Delay(d),s/veh	24.1	10.1	9.0	20.1	10.6	10.6	18.7	0.0	0.0	18.6	0.0	0.0
LnGrp LOS	C	B	A	C	B	B	B			B		
Approach Vol, veh/h		609			1587			98			80	
Approach Delay, s/veh		10.5			11.4			18.7			18.6	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.5	26.2		13.4	6.8	31.9		13.4
Change Period (Y+Rc), s	4.0	5.2		5.0	4.0	5.2		5.0
Max Green Setting (Gmax), s	13.0	32.8		30.0	10.5	35.3		30.0
Max Q Clear Time (g_c+I1), s	5.5	7.3		4.0	2.6	18.3		4.7
Green Ext Time (p_c), s	0.0	10.1		0.2	0.0	8.4		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	11.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	182	407	117	336	370	86	132	301	159	84	682	282
Future Volume (veh/h)	182	407	117	336	370	86	132	301	159	84	682	282
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1837	1900	1881	1827	1863	1810	1863	1845	1759	1827	1810
Adj Flow Rate, veh/h	198	442	127	365	402	93	143	327	173	91	741	307
Adj No. of Lanes	2	2	0	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	4	2	5	2	3	8	4	5
Cap, veh/h	338	771	219	425	1083	486	168	1181	518	152	1135	492
Arrive On Green	0.10	0.29	0.28	0.12	0.31	0.31	0.10	0.33	0.33	0.09	0.33	0.33
Sat Flow, veh/h	3408	2669	760	3476	3471	1557	1723	3539	1551	1675	3471	1504
Grp Volume(v), veh/h	198	287	282	365	402	93	143	327	173	91	741	307
Grp Sat Flow(s),veh/h/ln	1704	1745	1684	1738	1736	1557	1723	1770	1551	1675	1736	1504
Q Serve(g_s), s	5.4	13.7	13.9	10.0	8.8	4.3	7.9	6.6	8.1	5.1	17.8	16.8
Cycle Q Clear(g_c), s	5.4	13.7	13.9	10.0	8.8	4.3	7.9	6.6	8.1	5.1	17.8	16.8
Prop In Lane	1.00		0.45	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	338	504	486	425	1083	486	168	1181	518	152	1135	492
V/C Ratio(X)	0.59	0.57	0.58	0.86	0.37	0.19	0.85	0.28	0.33	0.60	0.65	0.62
Avail Cap(c_a), veh/h	385	635	613	464	1334	598	195	1294	567	172	1234	535
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.9	29.5	29.7	41.9	26.1	24.5	43.2	23.8	24.3	42.5	28.0	27.7
Incr Delay (d2), s/veh	1.8	1.5	1.6	14.0	0.3	0.3	25.8	0.2	0.5	4.5	1.3	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	6.8	6.7	5.6	4.2	1.9	5.0	3.3	3.6	2.5	8.8	7.3
LnGrp Delay(d),s/veh	43.7	30.9	31.2	55.9	26.4	24.8	69.0	24.0	24.9	47.0	29.3	30.1
LnGrp LOS	D	C	C	E	C	C	E	C	C	D	C	C
Approach Vol, veh/h		767			860			643			1139	
Approach Delay, s/veh		34.3			38.7			34.2			31.0	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.9	32.1	13.5	35.8	13.7	34.4	12.8	36.5
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	12.3	34.8	11.3	34.0	11.3	36.8	10.3	35.0
Max Q Clear Time (g_c+I1), s	12.0	15.9	9.9	19.8	7.4	10.8	7.1	10.1
Green Ext Time (p_c), s	0.2	8.0	0.0	9.7	0.2	9.3	0.1	14.2

Intersection Summary	
HCM 2010 Ctrl Delay	34.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	418	203	163	757	64	279	223	77	67	279	103
Future Volume (veh/h)	116	418	203	163	757	64	279	223	77	67	279	103
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1792	1845	1863	1900	1845	1835	1900	1863	1788	1900
Adj Flow Rate, veh/h	123	445	216	173	805	68	297	237	82	71	297	110
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	3	6	3	2	0	3	3	3	2	6	6
Cap, veh/h	160	989	427	209	1091	497	338	775	261	158	488	177
Arrive On Green	0.09	0.28	0.28	0.12	0.31	0.31	0.19	0.30	0.30	0.09	0.20	0.20
Sat Flow, veh/h	1723	3505	1512	1757	3539	1612	1757	2556	860	1774	2440	884
Grp Volume(v), veh/h	123	445	216	173	805	68	297	160	159	71	205	202
Grp Sat Flow(s),veh/h/ln	1723	1752	1512	1757	1770	1612	1757	1744	1673	1774	1698	1626
Q Serve(g_s), s	5.6	8.4	9.6	7.7	16.4	2.5	13.2	5.6	5.9	3.1	8.8	9.1
Cycle Q Clear(g_c), s	5.6	8.4	9.6	7.7	16.4	2.5	13.2	5.6	5.9	3.1	8.8	9.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.51	1.00		0.54
Lane Grp Cap(c), veh/h	160	989	427	209	1091	497	338	529	507	158	340	325
V/C Ratio(X)	0.77	0.45	0.51	0.83	0.74	0.14	0.88	0.30	0.31	0.45	0.60	0.62
Avail Cap(c_a), veh/h	221	1307	564	225	1320	601	378	726	697	212	545	521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	23.7	24.2	34.6	24.9	20.1	31.6	21.5	21.6	34.8	29.3	29.4
Incr Delay (d2), s/veh	10.3	0.3	0.9	20.8	1.8	0.1	19.2	0.4	0.4	2.0	2.1	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	4.1	4.1	5.0	8.2	1.1	8.2	2.8	2.8	1.6	4.3	4.3
LnGrp Delay(d),s/veh	45.9	24.1	25.1	55.4	26.7	20.2	50.7	21.9	22.0	36.8	31.3	31.7
LnGrp LOS	D	C	C	E	C	C	D	C	C	D	C	C
Approach Vol, veh/h		784			1046			616			478	
Approach Delay, s/veh		27.8			31.0			35.8			32.3	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	29.0	13.3	27.3	19.2	20.7	11.2	29.4
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	9.6	33.5	10.3	30.0	17.3	25.8	10.3	30.0
Max Q Clear Time (g_c+I1), s	5.1	7.9	9.7	11.6	15.2	11.1	7.6	18.4
Green Ext Time (p_c), s	0.1	3.9	0.0	7.5	0.3	3.3	0.1	5.8

Intersection Summary	
HCM 2010 Ctrl Delay	31.4
HCM 2010 LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	444	145	277	92	119	536
Future Volume (veh/h)	444	145	277	92	119	536
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1827	1881	1900	1900
Adj Flow Rate, veh/h	505	165	315	105	135	609
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	1	1	4	1	0	0
Cap, veh/h	605	540	487	426	234	897
Arrive On Green	0.34	0.34	0.27	0.27	0.13	0.47
Sat Flow, veh/h	1792	1599	1827	1599	1810	1900
Grp Volume(v), veh/h	505	165	315	105	135	609
Grp Sat Flow(s),veh/h/ln	1792	1599	1827	1599	1810	1900
Q Serve(g_s), s	13.9	4.1	8.2	2.8	3.8	13.4
Cycle Q Clear(g_c), s	13.9	4.1	8.2	2.8	3.8	13.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	605	540	487	426	234	897
V/C Ratio(X)	0.83	0.31	0.65	0.25	0.58	0.68
Avail Cap(c_a), veh/h	839	749	941	823	270	1407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.4	13.1	17.4	15.4	22.0	11.0
Incr Delay (d2), s/veh	5.3	0.3	1.5	0.3	2.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	4.1	4.3	1.3	2.0	7.2
LnGrp Delay(d),s/veh	21.6	13.4	18.9	15.7	24.2	11.9
LnGrp LOS	C	B	B	B	C	B
Approach Vol, veh/h	670		420			744
Approach Delay, s/veh	19.6		18.1			14.1
Approach LOS	B		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		30.6		23.0	11.0	19.6		
Change Period (Y+Rc), s		5.3		4.9	4.1	5.3		
Max Green Setting (Gmax), s		39.7		25.1	8.0	27.6		
Max Q Clear Time (g_c+I1), s		15.4		15.9	5.8	10.2		
Green Ext Time (p_c), s		4.3		2.2	0.1	4.0		

Intersection Summary	
HCM 2010 Ctrl Delay	17.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	28	45	24	316	978	45
Future Vol, veh/h	28	45	24	316	978	45
Conflicting Peds, #/hr	1	0	0	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	40	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	12	20	19	3	3	5
Mvmt Flow	32	52	28	363	1124	52

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1544	1125	1125	0	-	0
Stage 1	1125	-	-	-	-	-
Stage 2	419	-	-	-	-	-
Critical Hdwy	6.52	6.4	4.29	-	-	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.48	2.371	-	-	-
Pot Cap-1 Maneuver	120	230	563	-	-	-
Stage 1	296	-	-	-	-	-
Stage 2	643	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	114	230	563	-	-	-
Mov Cap-2 Maneuver	226	-	-	-	-	-
Stage 1	296	-	-	-	-	-
Stage 2	611	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	24.5	0.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	563	-	226	230	-	-
HCM Lane V/C Ratio	0.049	-	0.142	0.225	-	-
HCM Control Delay (s)	11.7	-	23.6	25.1	-	-
HCM Lane LOS	B	-	C	D	-	-
HCM 95th %tile Q(veh)	0.2	-	0.5	0.8	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	12	17	333	44	94	881
Future Volume (veh/h)	12	17	333	44	94	881
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1532	1583	1845	1792	1696	1863
Adj Flow Rate, veh/h	13	18	362	48	102	958
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	20	3	6	12	2
Cap, veh/h	86	247	807	667	201	1239
Arrive On Green	0.06	0.06	0.44	0.44	0.12	0.67
Sat Flow, veh/h	1459	1346	1845	1524	1616	1863
Grp Volume(v), veh/h	13	18	362	48	102	958
Grp Sat Flow(s),veh/h/ln	1459	1346	1845	1524	1616	1863
Q Serve(g_s), s	0.3	0.4	4.9	0.7	2.1	12.7
Cycle Q Clear(g_c), s	0.3	0.4	4.9	0.7	2.1	12.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	86	247	807	667	201	1239
V/C Ratio(X)	0.15	0.07	0.45	0.07	0.51	0.77
Avail Cap(c_a), veh/h	853	954	1520	1256	486	2287
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.0	12.1	7.1	5.9	14.7	4.1
Incr Delay (d2), s/veh	0.8	0.1	0.5	0.1	2.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.3	2.5	0.3	1.0	6.6
LnGrp Delay(d),s/veh	16.8	12.3	7.5	5.9	16.7	5.4
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	31		410			1060
Approach Delay, s/veh	14.2		7.3			6.5
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		29.6		6.3	8.2	21.4		
Change Period (Y+Rc), s		5.7		* 4.2	3.7	5.7		
Max Green Setting (Gmax), s		44.1		* 21	10.8	29.6		
Max Q Clear Time (g_c+I1), s		14.7		2.4	4.1	6.9		
Green Ext Time (p_c), s		9.1		0.1	0.1	8.4		

Intersection Summary	
HCM 2010 Ctrl Delay	6.9
HCM 2010 LOS	A

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	919	111	42	831	195	55
Future Volume (veh/h)	919	111	42	831	195	55
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1900	1845	1600	1881	1900
Adj Flow Rate, veh/h	1069	129	49	966	227	64
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	3	0	1	0
Cap, veh/h	1034	125	72	1286	230	207
Arrive On Green	0.74	0.74	0.04	0.80	0.13	0.13
Sat Flow, veh/h	1401	169	1757	1600	1792	1615
Grp Volume(v), veh/h	0	1198	49	966	227	64
Grp Sat Flow(s),veh/h/ln	0	1570	1757	1600	1792	1615
Q Serve(g_s), s	0.0	110.0	4.1	44.6	18.9	5.4
Cycle Q Clear(g_c), s	0.0	110.0	4.1	44.6	18.9	5.4
Prop In Lane		0.11	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	1159	72	1286	230	207
V/C Ratio(X)	0.00	1.03	0.68	0.75	0.99	0.31
Avail Cap(c_a), veh/h	0	1159	82	1295	230	207
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.5	70.6	7.3	64.9	59.0
Incr Delay (d2), s/veh	0.0	35.6	17.6	2.6	56.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	58.4	2.4	20.2	12.9	2.4
LnGrp Delay(d),s/veh	0.0	55.2	88.1	9.8	121.0	59.8
LnGrp LOS		F	F	A	F	E
Approach Vol, veh/h	1198			1015	291	
Approach Delay, s/veh	55.2			13.6	107.6	
Approach LOS	E			B	F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	9.8	116.0				125.8		23.3
Change Period (Y+Rc), s	3.7	6.0				6.0		4.2
Max Green Setting (Gmax), s	7.0	110.0				120.7		19.1
Max Q Clear Time (g_c+I1), s	6.1	112.0				46.6		20.9
Green Ext Time (p_c), s	0.0	0.0				31.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	44.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	824	3	0	747	287	8	2	5	598	8	313
Future Volume (veh/h)	85	824	3	0	747	287	8	2	5	598	8	313
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.95	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1652	1597	1900	1900	1600	1776	1900	1900	1900	1845	1827	1863
Adj Flow Rate, veh/h	98	947	3	0	859	330	9	2	6	687	9	360
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	15	0	0	0	0	7	0	0	0	3	4	2
Cap, veh/h	173	1531	5	2	1007	922	64	14	43	954	511	437
Arrive On Green	0.11	0.49	0.49	0.00	0.33	0.33	0.04	0.04	0.04	0.28	0.28	0.28
Sat Flow, veh/h	1573	3104	10	1810	3040	1507	1810	402	1205	3408	1827	1562
Grp Volume(v), veh/h	98	463	487	0	859	330	9	0	8	687	9	360
Grp Sat Flow(s),veh/h/ln	1573	1518	1596	1810	1520	1507	1810	0	1607	1704	1827	1562
Q Serve(g_s), s	4.8	18.0	18.0	0.0	21.3	8.8	0.4	0.0	0.4	14.7	0.3	17.5
Cycle Q Clear(g_c), s	4.8	18.0	18.0	0.0	21.3	8.8	0.4	0.0	0.4	14.7	0.3	17.5
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.75	1.00		1.00
Lane Grp Cap(c), veh/h	173	749	787	2	1007	922	64	0	57	954	511	437
V/C Ratio(X)	0.57	0.62	0.62	0.00	0.85	0.36	0.14	0.00	0.14	0.72	0.02	0.82
Avail Cap(c_a), veh/h	195	749	787	224	1251	1043	201	0	179	1180	632	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.2	14.9	14.9	0.0	25.2	7.8	37.8	0.0	37.8	26.3	21.1	27.3
Incr Delay (d2), s/veh	3.0	1.6	1.5	0.0	4.9	0.2	1.0	0.0	1.1	1.7	0.0	8.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	7.8	8.2	0.0	9.6	6.3	0.2	0.0	0.2	7.1	0.1	8.5
LnGrp Delay(d),s/veh	37.1	16.5	16.4	0.0	30.1	8.1	38.8	0.0	39.0	27.9	21.1	35.6
LnGrp LOS	D	B	B		C	A	D		D	C	C	D
Approach Vol, veh/h		1048			1189			17			1056	
Approach Delay, s/veh		18.4			24.0			38.9			30.5	
Approach LOS		B			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	45.9		27.9	13.1	32.8		7.1
Change Period (Y+Rc), s	* 4.2	6.0		5.3	* 4.2	6.0		4.2
Max Green Setting (Gmax), s	* 10	33.3		28.0	* 10	33.3		9.0
Max Q Clear Time (g_c+I1), s	10.0	20.0		19.5	6.8	23.3		2.4
Green Ext Time (p_c), s	0.0	7.6		3.2	0.1	3.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	24.4
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	444	934	0	0	996	31	0	0	0	0	0	89
Future Volume (veh/h)	444	934	0	0	996	31	0	0	0	0	0	89
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1600	0	0	1599	1900				0	1863	1759
Adj Flow Rate, veh/h	477	1004	0	0	1071	33				0	0	96
Adj No. of Lanes	1	2	0	0	2	0				0	1	2
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93				0.93	0.92	0.93
Percent Heavy Veh, %	1	0	0	0	0	0				0	2	8
Cap, veh/h	526	2884	0	0	1815	56				0	0	0
Arrive On Green	0.29	0.95	0.00	0.00	0.60	0.60				0.00	0.00	0.00
Sat Flow, veh/h	1792	3120	0	0	3088	93					0	
Grp Volume(v), veh/h	477	1004	0	0	541	563					0.0	
Grp Sat Flow(s),veh/h/ln	1792	1520	0	0	1519	1582						
Q Serve(g_s), s	19.9	2.0	0.0	0.0	17.0	17.1						
Cycle Q Clear(g_c), s	19.9	2.0	0.0	0.0	17.0	17.1						
Prop In Lane	1.00		0.00	0.00		0.06						
Lane Grp Cap(c), veh/h	526	2884	0	0	916	955						
V/C Ratio(X)	0.91	0.35	0.00	0.00	0.59	0.59						
Avail Cap(c_a), veh/h	622	2970	0	0	916	955						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	26.4	0.2	0.0	0.0	9.5	9.5						
Incr Delay (d2), s/veh	15.4	0.1	0.0	0.0	1.0	1.0						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	12.1	0.7	0.0	0.0	7.3	7.6						
LnGrp Delay(d),s/veh	41.8	0.2	0.0	0.0	10.5	10.5						
LnGrp LOS	D	A			B	B						
Approach Vol, veh/h		1481			1104							
Approach Delay, s/veh		13.6			10.5							
Approach LOS		B			B							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		77.8			26.8	50.9		
Change Period (Y+Rc), s		4.0			4.0	4.0		
Max Green Setting (Gmax), s		76.0			27.0	45.0		
Max Q Clear Time (g_c+I1), s		4.0			21.9	19.1		
Green Ext Time (p_c), s		11.1			0.9	10.8		

Intersection Summary

HCM 2010 Ctrl Delay		12.3
HCM 2010 LOS		B

Notes

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	201	757	860	394	84	92
Future Volume (veh/h)	201	757	860	394	84	92
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1600	1600	1881	1776	1759
Adj Flow Rate, veh/h	223	841	956	438	93	102
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	0	0	1	7	8
Cap, veh/h	250	1318	1034	1034	149	132
Arrive On Green	0.14	0.82	0.65	0.65	0.09	0.09
Sat Flow, veh/h	1774	1600	1600	1599	1691	1495
Grp Volume(v), veh/h	223	841	956	438	93	102
Grp Sat Flow(s),veh/h/ln	1774	1600	1600	1599	1691	1495
Q Serve(g_s), s	14.3	22.6	60.7	15.4	6.1	7.7
Cycle Q Clear(g_c), s	14.3	22.6	60.7	15.4	6.1	7.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	250	1318	1034	1034	149	132
V/C Ratio(X)	0.89	0.64	0.92	0.42	0.62	0.77
Avail Cap(c_a), veh/h	258	1366	1076	1075	307	271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	3.8	18.0	10.0	50.9	51.6
Incr Delay (d2), s/veh	29.2	1.1	13.0	0.4	4.2	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	10.0	30.3	6.9	3.0	6.6
LnGrp Delay(d),s/veh	78.0	4.9	31.0	10.4	55.1	60.9
LnGrp LOS	E	A	C	B	E	E
Approach Vol, veh/h		1064	1394		195	
Approach Delay, s/veh		20.2	24.5		58.1	
Approach LOS		C	C		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		101.3		14.4	20.5	80.8		
Change Period (Y+Rc), s		6.0		* 4.2	* 4.2	6.0		
Max Green Setting (Gmax), s		98.8		* 21	* 17	77.8		
Max Q Clear Time (g_c+I1), s		24.6		9.7	16.3	62.7		
Green Ext Time (p_c), s		33.7		0.5	0.0	12.0		

Intersection Summary

HCM 2010 Ctrl Delay	25.3
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	789	24	18	1108	20	66	2	24	31	1	59
Future Volume (veh/h)	33	789	24	18	1108	20	66	2	24	31	1	59
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1600	1759	1900	1600	1681	1900	1723	1900	1900	1900	1863
Adj Flow Rate, veh/h	38	917	28	21	1288	23	77	2	28	36	1	69
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	3	0	8	0	0	13	0	0	0	0	0	2
Cap, veh/h	59	1203	1124	44	1188	1060	158	12	165	192	5	189
Arrive On Green	0.03	0.75	0.75	0.02	0.74	0.74	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1757	1600	1495	1810	1600	1428	1347	98	1375	1169	39	1577
Grp Volume(v), veh/h	38	917	28	21	1288	23	77	0	30	37	0	69
Grp Sat Flow(s),veh/h/ln	1757	1600	1495	1810	1600	1428	1347	0	1474	1207	0	1577
Q Serve(g_s), s	2.9	45.7	0.6	1.6	101.7	0.6	7.7	0.0	2.5	3.2	0.0	5.5
Cycle Q Clear(g_c), s	2.9	45.7	0.6	1.6	101.7	0.6	13.4	0.0	2.5	5.7	0.0	5.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.93	0.97		1.00
Lane Grp Cap(c), veh/h	59	1203	1124	44	1188	1060	158	0	177	202	0	189
V/C Ratio(X)	0.65	0.76	0.02	0.48	1.08	0.02	0.49	0.00	0.17	0.18	0.00	0.37
Avail Cap(c_a), veh/h	77	1203	1124	79	1188	1060	272	0	301	321	0	322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	65.4	9.9	4.3	66.0	17.6	4.6	61.7	0.0	54.2	56.4	0.0	55.5
Incr Delay (d2), s/veh	11.3	3.1	0.0	8.0	52.2	0.0	2.3	0.0	0.5	0.4	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	20.9	0.3	0.9	61.4	0.2	2.9	0.0	1.0	1.3	0.0	2.5
LnGrp Delay(d),s/veh	76.7	13.0	4.3	74.0	69.8	4.6	64.1	0.0	54.6	56.8	0.0	56.7
LnGrp LOS	E	B	A	E	F	A	E		D	E		E
Approach Vol, veh/h		983			1332			107			106	
Approach Delay, s/veh		15.2			68.8			61.4			56.7	
Approach LOS		B			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.0	109.0		21.0	8.3	107.7		21.0
Change Period (Y+Rc), s	3.7	6.0		4.6	3.7	6.0		4.6
Max Green Setting (Gmax), s	6.0	101.7		28.0	6.0	101.7		28.0
Max Q Clear Time (g_c+I1), s	3.6	47.7		7.7	4.9	103.7		15.4
Green Ext Time (p_c), s	0.0	35.9		0.7	0.0	0.0		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	47.1
HCM 2010 LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	686	155	230	1052	184	251
Future Volume (veh/h)	686	155	230	1052	184	251
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1845	1827	1600	1881	1881
Adj Flow Rate, veh/h	715	161	240	1096	192	261
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	3	4	0	1	1
Cap, veh/h	933	914	313	1151	314	429
Arrive On Green	0.58	0.58	0.09	0.72	0.18	0.18
Sat Flow, veh/h	1600	1568	3375	1600	1792	1599
Grp Volume(v), veh/h	715	161	240	1096	192	261
Grp Sat Flow(s),veh/h/ln	1600	1568	1688	1600	1792	1599
Q Serve(g_s), s	32.6	4.6	6.7	59.1	9.6	13.8
Cycle Q Clear(g_c), s	32.6	4.6	6.7	59.1	9.6	13.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	933	914	313	1151	314	429
V/C Ratio(X)	0.77	0.18	0.77	0.95	0.61	0.61
Avail Cap(c_a), veh/h	1008	988	370	1253	444	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.2	9.4	42.9	12.1	36.9	31.0
Incr Delay (d2), s/veh	3.3	0.1	7.9	14.8	1.9	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.2	2.0	3.5	30.3	4.9	6.2
LnGrp Delay(d),s/veh	18.5	9.5	50.8	26.9	38.8	32.4
LnGrp LOS	B	A	D	C	D	C
Approach Vol, veh/h	876			1336	453	
Approach Delay, s/veh	16.9			31.2	35.1	
Approach LOS	B			C	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	13.2	62.5				75.7		21.2
Change Period (Y+Rc), s	4.2	6.0				6.0		4.2
Max Green Setting (Gmax), s	11.1	61.0				75.8		24.0
Max Q Clear Time (g_c+I1), s	8.7	34.6				61.1		15.8
Green Ext Time (p_c), s	0.2	11.8				8.6		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	27.2
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	864	43	154	1044	5	149	0	262	0	1	0
Future Volume (veh/h)	0	864	43	154	1044	5	149	0	262	0	1	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1845	1759	1597	1900	1900	1810	1863	1900	1900	1900
Adj Flow Rate, veh/h	0	1005	50	179	1214	6	173	0	305	0	1	0
Adj No. of Lanes	1	1	1	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	3	8	0	0	0	0	2	0	0	0
Cap, veh/h	1	1002	982	182	1210	6	301	0	460	0	351	299
Arrive On Green	0.00	0.63	0.63	0.14	1.00	1.00	0.18	0.00	0.18	0.00	0.18	0.00
Sat Flow, veh/h	1810	1600	1568	1675	1588	8	1367	0	1583	0	1900	1615
Grp Volume(v), veh/h	0	1005	50	179	0	1220	173	0	305	0	1	0
Grp Sat Flow(s),veh/h/ln	1810	1600	1568	1675	0	1596	1367	0	1583	0	1900	1615
Q Serve(g_s), s	0.0	94.0	1.8	16.0	0.0	114.1	17.7	0.0	25.4	0.0	0.1	0.0
Cycle Q Clear(g_c), s	0.0	94.0	1.8	16.0	0.0	114.1	17.7	0.0	25.4	0.0	0.1	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1	1002	982	182	0	1216	301	0	460	0	351	299
V/C Ratio(X)	0.00	1.00	0.05	0.98	0.00	1.00	0.57	0.00	0.66	0.00	0.00	0.00
Avail Cap(c_a), veh/h	97	1002	982	182	0	1216	305	0	464	0	357	304
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.65	0.65	0.09	0.00	0.09	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	28.0	10.8	64.0	0.0	0.0	57.1	0.0	46.8	0.0	49.8	0.0
Incr Delay (d2), s/veh	0.0	23.7	0.1	16.2	0.0	8.6	2.6	0.0	3.5	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	47.8	0.8	8.2	0.0	2.9	6.9	0.0	11.6	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	51.7	10.9	80.2	0.0	8.6	59.6	0.0	50.3	0.0	49.8	0.0
LnGrp LOS		F	B	F		F	E		D		D	
Approach Vol, veh/h		1055			1399			478			1	
Approach Delay, s/veh		49.8			17.8			53.7			49.8	
Approach LOS		D			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.3	98.0		31.7	0.0	118.3		31.7
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	16.6	91.5		* 28	8.3	99.8		* 28
Max Q Clear Time (g_c+I1), s	18.0	96.0		2.1	0.0	116.1		27.4
Green Ext Time (p_c), s	0.0	0.0		2.1	0.0	0.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	35.1
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	993	105	150	1017	1	153	0	239	0	0	1
Future Volume (veh/h)	0	993	105	150	1017	1	153	0	239	0	0	1
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1827	1810	1600	1900	1900	1827	1810	1900	1900	1900
Adj Flow Rate, veh/h	0	1128	119	170	1156	1	174	0	272	0	0	1
Adj No. of Lanes	1	1	1	2	1	0	0	1	1	0	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	4	5	0	0	0	0	5	0	0	0
Cap, veh/h	1	1017	974	172	1159	1	244	0	210	0	104	88
Arrive On Green	0.00	1.00	1.00	0.05	0.73	0.71	0.14	0.00	0.14	0.00	0.00	0.05
Sat Flow, veh/h	1810	1600	1533	3343	1598	1	1740	0	1503	0	1900	1615
Grp Volume(v), veh/h	0	1128	119	170	0	1157	174	0	272	0	0	1
Grp Sat Flow(s),veh/h/ln	1810	1600	1533	1672	0	1600	1740	0	1503	0	1900	1615
Q Serve(g_s), s	0.0	95.3	0.0	7.6	0.0	107.7	14.3	0.0	21.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	95.3	0.0	7.6	0.0	107.7	14.3	0.0	21.0	0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1	1017	974	172	0	1160	244	0	210	0	104	88
V/C Ratio(X)	0.00	1.11	0.12	0.99	0.00	1.00	0.71	0.00	1.29	0.00	0.00	0.01
Avail Cap(c_a), veh/h	93	1017	974	172	0	1160	244	0	210	0	307	261
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.31	0.31	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	71.1	0.0	20.4	61.6	0.0	64.5	0.0	0.0	67.1
Incr Delay (d2), s/veh	0.0	54.3	0.1	65.8	0.0	25.7	9.5	0.0	162.2	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	15.3	0.0	5.1	0.0	55.2	7.6	0.0	18.2	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	54.3	0.1	136.9	0.0	46.2	71.1	0.0	226.7	0.0	0.0	67.1
LnGrp LOS		F	A	F		D	E		F			E
Approach Vol, veh/h		1247			1327			446			1	
Approach Delay, s/veh		49.1			57.8			166.0			67.1	
Approach LOS		D			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.7	101.1		12.2	0.0	112.8		25.0
Change Period (Y+Rc), s	3.7	* 6		* 4.2	3.7	6.0		4.2
Max Green Setting (Gmax), s	8.0	* 81		* 24	8.0	79.1		20.8
Max Q Clear Time (g_c+I1), s	9.6	97.3		2.1	0.0	109.7		23.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary

HCM 2010 Ctrl Delay	70.2
HCM 2010 LOS	E

Notes

Intersection						
Int Delay, s/veh	68.9					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	111	1123	790	1	12	364
Future Vol, veh/h	111	1123	790	1	12	364
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	230	-	-	250	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	4	3	6	67	0	1
Mvmt Flow	131	1321	929	1	14	428

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	929	0	-	0	2511	929
Stage 1	-	-	-	-	929	-
Stage 2	-	-	-	-	1582	-
Critical Hdwy	4.14	-	-	-	6.4	6.21
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.236	-	-	-	3.5	3.309
Pot Cap-1 Maneuver	728	-	-	-	32	~ 326
Stage 1	-	-	-	-	388	-
Stage 2	-	-	-	-	188	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	728	-	-	-	26	~ 326
Mov Cap-2 Maneuver	-	-	-	-	26	-
Stage 1	-	-	-	-	388	-
Stage 2	-	-	-	-	154	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	$ 436.9
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	728	-	-	-	238
HCM Lane V/C Ratio	0.179	-	-	-	1.859
HCM Control Delay (s)	11	-	-	-	$ 436.9
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.7	-	-	-	30.9

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	655	14	51	991	121	27	17	167	223	15	136
Future Volume (veh/h)	53	655	14	51	991	121	27	17	167	223	15	136
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1900	1900	1584	1827	1900	1890	1900	1900	1882	1881
Adj Flow Rate, veh/h	56	697	15	54	1054	129	29	18	178	237	16	145
Adj No. of Lanes	1	1	1	1	1	1	0	1	0	0	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	1	4	0	0	0	0	0	1
Cap, veh/h	87	937	926	87	927	890	27	29	110	130	6	437
Arrive On Green	0.05	0.59	0.59	0.05	0.59	0.59	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1810	1600	1582	1810	1584	1521	0	106	401	304	20	1599
Grp Volume(v), veh/h	56	697	15	54	1054	129	225	0	0	253	0	145
Grp Sat Flow(s),veh/h/ln	1810	1600	1582	1810	1584	1521	506	0	0	324	0	1599
Q Serve(g_s), s	4.5	47.7	0.6	4.4	87.3	5.7	0.0	0.0	0.0	0.0	0.0	10.8
Cycle Q Clear(g_c), s	4.5	47.7	0.6	4.4	87.3	5.7	40.8	0.0	0.0	40.8	0.0	10.8
Prop In Lane	1.00		1.00	1.00		1.00	0.13		0.79	0.94		1.00
Lane Grp Cap(c), veh/h	87	937	926	87	927	890	166	0	0	135	0	437
V/C Ratio(X)	0.64	0.74	0.02	0.62	1.14	0.14	1.36	0.00	0.00	1.87	0.00	0.33
Avail Cap(c_a), veh/h	97	937	926	98	927	890	166	0	0	135	0	437
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	69.7	22.7	12.9	69.7	31.0	14.0	49.4	0.0	0.0	61.3	0.0	43.3
Incr Delay (d2), s/veh	12.7	3.4	0.0	10.8	75.0	0.1	195.1	0.0	0.0	418.1	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	21.8	0.3	2.4	57.4	2.4	14.7	0.0	0.0	21.3	0.0	4.8
LnGrp Delay(d),s/veh	82.4	26.1	12.9	80.5	106.0	14.1	244.4	0.0	0.0	479.4	0.0	43.9
LnGrp LOS	F	C	B	F	F	B	F			F		D
Approach Vol, veh/h		768			1237			225			398	
Approach Delay, s/veh		29.9			95.3			244.4			320.7	
Approach LOS		C			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.8	93.4		45.0	10.9	93.3		45.0
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	8.1	87.2		* 41	8.0	87.3		* 41
Max Q Clear Time (g_c+I1), s	6.4	49.7		42.8	6.5	89.3		42.8
Green Ext Time (p_c), s	0.0	15.9		0.0	0.0	0.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		123.1
HCM 2010 LOS		F

Notes

Intersection	
Int Delay, s/veh	8.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	13	287	50	13	10	116	33	40	10	41	12
Future Vol, veh/h	12	13	287	50	13	10	116	33	40	10	41	12
Conflicting Peds, #/hr	0	0	1	0	0	0	1	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	92	93	92	92	92	93	93	92	92	93	93
Heavy Vehicles, %	5	2	1	2	2	2	2	1	2	2	2	8
Mvmt Flow	13	14	309	54	14	11	125	35	43	11	44	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	392	401	53	387	387	57	58	0	0	79	0	0
Stage 1	73	73	-	307	307	-	-	-	-	-	-	-
Stage 2	319	328	-	80	80	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.52	6.21	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.15	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.018	3.309	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	562	538	1017	572	547	1009	1546	-	-	1519	-	-
Stage 1	929	834	-	703	661	-	-	-	-	-	-	-
Stage 2	686	647	-	929	828	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	506	488	1015	362	497	1009	1545	-	-	1519	-	-
Mov Cap-2 Maneuver	506	488	-	362	497	-	-	-	-	-	-	-
Stage 1	849	827	-	643	605	-	-	-	-	-	-	-
Stage 2	606	592	-	631	822	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.3	15.6	4.6	1.2
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1545	-	-	496	1015	419	1519	-	-
HCM Lane V/C Ratio	0.081	-	-	0.055	0.304	0.189	0.007	-	-
HCM Control Delay (s)	7.5	0	-	12.7	10.1	15.6	7.4	0	-
HCM Lane LOS	A	A	-	B	B	C	A	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.2	1.3	0.7	0	-	-

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	37	1	10	31	12	8	0	25	0	0	0
Future Vol, veh/h	1	37	1	10	31	12	8	0	25	0	0	0
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Heavy Vehicles, %	0	0	0	0	8	0	0	0	0	0	0	0
Mvmt Flow	2	60	2	16	50	19	13	0	40	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	7.5	7.7	7.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	24%	3%	24%	0%
Vol Thru, %	0%	95%	76%	0%
Vol Right, %	76%	3%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	33	39	41	12
LT Vol	8	1	10	0
Through Vol	0	37	31	0
RT Vol	25	1	0	12
Lane Flow Rate	53	63	66	19
Geometry Grp	2	5	7	7
Degree of Util (X)	0.055	0.072	0.087	0.022
Departure Headway (Hd)	3.743	4.146	4.747	4.06
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	940	861	755	881
Service Time	1.834	2.189	2.473	1.786
HCM Lane V/C Ratio	0.056	0.073	0.087	0.022
HCM Control Delay	7.1	7.5	7.9	6.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.2	0.3	0.1

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	166	21	7	26	0	28	0	42	1	4	2
Future Vol, veh/h	0	166	21	7	26	0	28	0	42	1	4	2
Conflicting Peds, #/hr	1	0	1	1	0	4	2	0	1	4	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	1	0	0	0	0	0	0	5	0	25	0
Mvmt Flow	0	182	23	8	29	0	31	0	46	1	4	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	183	0	0	235	227	187	253	227	34
Stage 1	-	-	-	-	-	-	183	183	-	44	44	-
Stage 2	-	-	-	-	-	-	52	44	-	209	183	-
Critical Hdwy	-	-	-	4.1	-	-	7.1	6.5	6.25	7.1	6.75	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.75	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.75	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.5	4	3.345	3.5	4.225	3.3
Pot Cap-1 Maneuver	0	-	-	1404	-	0	724	676	847	704	634	1045
Stage 1	0	-	-	-	-	0	823	752	-	975	815	-
Stage 2	0	-	-	-	-	0	966	862	-	798	707	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1399	-	-	712	671	843	660	630	1041
Mov Cap-2 Maneuver	-	-	-	-	-	-	712	671	-	660	630	-
Stage 1	-	-	-	-	-	-	823	751	-	975	810	-
Stage 2	-	-	-	-	-	-	949	857	-	752	706	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.6	10.1	10.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	785	-	-	1399	-	715
HCM Lane V/C Ratio	0.098	-	-	0.005	-	0.011
HCM Control Delay (s)	10.1	-	-	7.6	0	10.1
HCM Lane LOS	B	-	-	A	A	B
HCM 95th %tile Q(veh)	0.3	-	-	0	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	926	77	99	608	35	109	36	206	12	11	21
Future Volume (veh/h)	53	926	77	99	608	35	109	36	206	12	11	21
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		1.00	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1865	1900	1900	1850	1900	1900	1859	1900
Adj Flow Rate, veh/h	60	1040	87	111	683	39	122	40	0	13	12	24
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	2	0	0	2	2	8	8	0	9	9	9
Cap, veh/h	200	1400	635	274	1487	85	312	83	300	130	111	149
Arrive On Green	0.11	0.40	0.40	0.15	0.44	0.44	0.19	0.19	0.00	0.19	0.19	0.19
Sat Flow, veh/h	1810	3539	1605	1810	3406	194	1043	449	1615	238	601	805
Grp Volume(v), veh/h	60	1040	87	111	355	367	162	0	0	49	0	0
Grp Sat Flow(s),veh/h/ln	1810	1770	1605	1810	1771	1829	1491	0	1615	1644	0	0
Q Serve(g_s), s	1.6	13.4	1.8	2.9	7.5	7.5	3.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.6	13.4	1.8	2.9	7.5	7.5	5.1	0.0	0.0	1.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.11	0.75		1.00	0.27		0.49
Lane Grp Cap(c), veh/h	200	1400	635	274	774	799	395	0	300	391	0	0
V/C Ratio(X)	0.30	0.74	0.14	0.40	0.46	0.46	0.41	0.00	0.00	0.13	0.00	0.00
Avail Cap(c_a), veh/h	358	1718	779	340	843	871	943	0	912	982	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.7	13.7	10.3	20.4	10.5	10.5	19.6	0.0	0.0	18.2	0.0	0.0
Incr Delay (d2), s/veh	0.3	1.0	0.0	0.4	0.2	0.2	0.3	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	6.7	0.8	1.5	3.7	3.8	2.2	0.0	0.0	0.6	0.0	0.0
LnGrp Delay(d),s/veh	22.0	14.7	10.3	20.7	10.7	10.7	19.9	0.0	0.0	18.2	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	B			B		
Approach Vol, veh/h		1187			833			162			49	
Approach Delay, s/veh		14.8			12.0			19.9			18.2	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.1	26.2		14.9	9.9	28.4		14.9
Change Period (Y+Rc), s	4.0	5.2		5.0	4.0	5.2		5.0
Max Green Setting (Gmax), s	10.0	25.8		30.0	10.5	25.3		30.0
Max Q Clear Time (g_c+I1), s	4.9	15.4		3.3	3.6	9.5		7.1
Green Ext Time (p_c), s	0.0	5.7		0.2	0.0	7.2		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	14.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	193	362	96	224	553	170	279	956	411	140	470	292
Future Volume (veh/h)	193	362	96	224	553	170	279	956	411	140	470	292
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1863	1845	1881	1881	1881	1845	1881	1863
Adj Flow Rate, veh/h	197	369	98	229	564	173	285	976	419	143	480	298
Adj No. of Lanes	2	2	0	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	2	3	1	1	1	3	1	2
Cap, veh/h	344	747	196	344	948	415	272	1322	581	173	1132	495
Arrive On Green	0.10	0.27	0.27	0.10	0.27	0.27	0.15	0.37	0.37	0.10	0.32	0.32
Sat Flow, veh/h	3476	2788	730	3476	3539	1549	1792	3574	1570	1757	3574	1562
Grp Volume(v), veh/h	197	235	232	229	564	173	285	976	419	143	480	298
Grp Sat Flow(s),veh/h/ln	1738	1787	1732	1738	1770	1549	1792	1787	1570	1757	1787	1562
Q Serve(g_s), s	5.5	11.2	11.4	6.4	14.0	9.3	15.3	23.9	23.1	8.0	10.7	16.2
Cycle Q Clear(g_c), s	5.5	11.2	11.4	6.4	14.0	9.3	15.3	23.9	23.1	8.0	10.7	16.2
Prop In Lane	1.00		0.42	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	344	478	464	344	948	415	272	1322	581	173	1132	495
V/C Ratio(X)	0.57	0.49	0.50	0.67	0.59	0.42	1.05	0.74	0.72	0.83	0.42	0.60
Avail Cap(c_a), veh/h	355	599	581	355	1187	519	272	1322	581	214	1206	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.4	31.1	31.2	43.8	32.1	30.4	42.7	27.5	27.3	44.6	27.2	29.1
Incr Delay (d2), s/veh	2.1	1.1	1.2	4.5	0.9	1.0	67.6	2.4	4.7	18.9	0.4	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	5.6	5.6	3.3	6.9	4.1	12.6	12.2	10.7	4.8	5.3	7.2
LnGrp Delay(d),s/veh	45.5	32.2	32.4	48.2	33.0	31.3	110.4	29.9	32.0	63.5	27.5	31.2
LnGrp LOS	D	C	C	D	C	C	F	C	C	E	C	C
Approach Vol, veh/h		664			966			1680			921	
Approach Delay, s/veh		36.2			36.3			44.1			34.3	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	31.6	19.0	36.5	13.7	31.6	13.6	41.9
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	10.3	33.8	15.3	34.0	10.3	33.8	12.3	37.0
Max Q Clear Time (g_c+I1), s	9.4	13.4	17.3	18.2	7.5	16.0	10.0	25.9
Green Ext Time (p_c), s	0.1	9.4	0.0	12.6	0.2	8.7	0.1	9.7

Intersection Summary	
HCM 2010 Ctrl Delay	39.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	821	220	171	541	51	257	327	196	139	248	154
Future Volume (veh/h)	184	821	220	171	541	51	257	327	196	139	248	154
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1881	1881	1881	1881	1881	1881	1881	1900	1881	1858	1900
Adj Flow Rate, veh/h	188	838	224	174	552	52	262	334	200	142	253	157
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	1	1	1	1	1	1	1	1	1	3	3
Cap, veh/h	184	1164	513	179	1150	512	209	553	323	193	528	315
Arrive On Green	0.10	0.33	0.33	0.10	0.32	0.32	0.12	0.26	0.26	0.11	0.25	0.25
Sat Flow, veh/h	1774	3574	1574	1792	3574	1592	1792	2141	1250	1792	2112	1261
Grp Volume(v), veh/h	188	838	224	174	552	52	262	277	257	142	210	200
Grp Sat Flow(s),veh/h/ln	1774	1787	1574	1792	1787	1592	1792	1787	1604	1792	1766	1607
Q Serve(g_s), s	8.3	16.5	8.9	7.7	9.9	1.8	9.3	10.9	11.3	6.1	8.1	8.5
Cycle Q Clear(g_c), s	8.3	16.5	8.9	7.7	9.9	1.8	9.3	10.9	11.3	6.1	8.1	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		0.78
Lane Grp Cap(c), veh/h	184	1164	513	179	1150	512	209	462	415	193	441	402
V/C Ratio(X)	1.02	0.72	0.44	0.97	0.48	0.10	1.26	0.60	0.62	0.73	0.48	0.50
Avail Cap(c_a), veh/h	184	1356	597	179	1343	598	209	584	524	202	570	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.8	23.7	21.2	35.8	21.7	19.0	35.3	26.0	26.1	34.5	25.5	25.7
Incr Delay (d2), s/veh	71.5	1.6	0.6	58.1	0.3	0.1	148.0	1.5	1.8	12.5	1.0	1.2
Initial Q Delay(d3),s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	8.4	3.9	6.7	4.9	0.8	13.1	5.6	5.2	3.7	4.0	3.9
LnGrp Delay(d),s/veh	107.5	25.3	21.8	93.9	22.0	19.1	183.3	27.5	28.0	47.0	26.5	26.8
LnGrp LOS	F	C	C	F	C	B	F	C	C	D	C	C
Approach Vol, veh/h		1250			778			796			552	
Approach Delay, s/veh		37.0			37.9			78.9			31.9	
Approach LOS		D			D			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	25.2	11.7	30.6	13.0	24.6	12.0	30.3
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	9.0	26.1	8.0	30.3	9.3	25.8	8.3	30.0
Max Q Clear Time (g_c+I1), s	10.1	13.3	9.7	18.5	11.3	10.5	10.3	11.9
Green Ext Time (p_c), s	0.0	4.2	0.0	6.4	0.0	4.6	0.0	8.2

Intersection Summary	
HCM 2010 Ctrl Delay	46.3
HCM 2010 LOS	D

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	99	83	821	476	148	274
Future Volume (veh/h)	99	83	821	476	148	274
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1827	1881	1900	1900
Adj Flow Rate, veh/h	104	87	864	501	156	288
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	4	1	0	0
Cap, veh/h	188	168	1016	889	211	1399
Arrive On Green	0.11	0.11	0.56	0.56	0.12	0.74
Sat Flow, veh/h	1792	1599	1827	1599	1810	1900
Grp Volume(v), veh/h	104	87	864	501	156	288
Grp Sat Flow(s),veh/h/ln	1792	1599	1827	1599	1810	1900
Q Serve(g_s), s	3.5	3.3	25.6	13.0	5.4	3.0
Cycle Q Clear(g_c), s	3.5	3.3	25.6	13.0	5.4	3.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	188	168	1016	889	211	1399
V/C Ratio(X)	0.55	0.52	0.85	0.56	0.74	0.21
Avail Cap(c_a), veh/h	473	422	1386	1213	278	1854
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	27.2	12.0	9.2	27.5	2.6
Incr Delay (d2), s/veh	2.5	2.4	3.9	0.6	7.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	3.1	13.8	5.8	3.1	1.5
LnGrp Delay(d),s/veh	29.9	29.7	16.0	9.8	34.5	2.7
LnGrp LOS	C	C	B	A	C	A
Approach Vol, veh/h	191		1365			444
Approach Delay, s/veh	29.8		13.7			13.9
Approach LOS	C		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		52.7		11.7	11.6	41.1		
Change Period (Y+Rc), s		5.3		4.9	4.1	5.3		
Max Green Setting (Gmax), s		62.8		17.0	9.9	48.8		
Max Q Clear Time (g_c+I1), s		5.0		5.5	7.4	27.6		
Green Ext Time (p_c), s		10.0		0.5	0.1	8.1		

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	36	33	1287	324	20
Future Vol, veh/h	30	36	33	1287	324	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	40	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	15	2	5	0
Mvmt Flow	32	38	35	1355	341	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1765	341	341	0	-	0
Stage 1	341	-	-	-	-	-
Stage 2	1424	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.25	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.335	-	-	-
Pot Cap-1 Maneuver	93	706	1149	-	-	-
Stage 1	725	-	-	-	-	-
Stage 2	224	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	90	706	1149	-	-	-
Mov Cap-2 Maneuver	179	-	-	-	-	-
Stage 1	725	-	-	-	-	-
Stage 2	217	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1149	-	179	706	-	-
HCM Lane V/C Ratio	0.03	-	0.176	0.054	-	-
HCM Control Delay (s)	8.2	-	29.4	10.4	-	-
HCM Lane LOS	A	-	D	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	0.2	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	40	95	1205	7	11	357
Future Volume (veh/h)	40	95	1205	7	11	357
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1881	1387	1508	1881
Adj Flow Rate, veh/h	43	103	1310	8	12	388
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	3	1	37	26	1
Cap, veh/h	148	166	1416	887	29	1526
Arrive On Green	0.09	0.09	0.75	0.75	0.02	0.81
Sat Flow, veh/h	1723	1568	1881	1179	1436	1881
Grp Volume(v), veh/h	43	103	1310	8	12	388
Grp Sat Flow(s),veh/h/ln	1723	1568	1881	1179	1436	1881
Q Serve(g_s), s	2.2	6.0	54.6	0.2	0.8	4.7
Cycle Q Clear(g_c), s	2.2	6.0	54.6	0.2	0.8	4.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	148	166	1416	887	29	1526
V/C Ratio(X)	0.29	0.62	0.93	0.01	0.42	0.25
Avail Cap(c_a), veh/h	376	374	1729	1083	104	1938
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	41.1	9.7	3.0	46.6	2.2
Incr Delay (d2), s/veh	1.1	3.7	8.1	0.0	9.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	5.4	30.9	0.1	0.4	2.4
LnGrp Delay(d),s/veh	42.3	44.9	17.8	3.0	56.0	2.3
LnGrp LOS	D	D	B	A	E	A
Approach Vol, veh/h	146		1318			400
Approach Delay, s/veh	44.1		17.8			3.9
Approach LOS	D		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		83.7		12.5	5.6	78.1		
Change Period (Y+Rc), s		5.7		* 4.2	3.7	5.7		
Max Green Setting (Gmax), s		99.1		* 21	7.0	88.4		
Max Q Clear Time (g_c+I1), s		6.7		8.0	2.8	56.6		
Green Ext Time (p_c), s		21.4		0.4	0.0	15.8		

Intersection Summary	
HCM 2010 Ctrl Delay	16.8
HCM 2010 LOS	B

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	705	81	57	1250	70	29
Future Volume (veh/h)	705	81	57	1250	70	29
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1569	1900	1900	1584	1900	1845
Adj Flow Rate, veh/h	742	85	60	1316	74	31
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	0	1	0	3
Cap, veh/h	1233	1269	86	1365	109	94
Arrive On Green	0.79	0.79	0.05	0.86	0.06	0.06
Sat Flow, veh/h	1569	1615	1810	1584	1810	1568
Grp Volume(v), veh/h	742	85	60	1316	74	31
Grp Sat Flow(s),veh/h/ln	1569	1615	1810	1584	1810	1568
Q Serve(g_s), s	25.1	1.6	4.3	88.4	5.2	2.5
Cycle Q Clear(g_c), s	25.1	1.6	4.3	88.4	5.2	2.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1233	1269	86	1365	109	94
V/C Ratio(X)	0.60	0.07	0.70	0.96	0.68	0.33
Avail Cap(c_a), veh/h	1308	1346	158	1504	222	192
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.7	3.2	61.2	7.4	60.1	58.8
Incr Delay (d2), s/veh	0.8	0.0	9.7	15.0	7.3	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.0	0.7	2.4	43.0	2.8	1.1
LnGrp Delay(d),s/veh	6.5	3.2	70.9	22.3	67.4	60.8
LnGrp LOS	A	A	E	C	E	E
Approach Vol, veh/h	827			1376	105	
Approach Delay, s/veh	6.1			24.4	65.4	
Approach LOS	A			C	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	9.9	108.5				118.4		12.0
Change Period (Y+Rc), s	3.7	6.0				6.0		4.2
Max Green Setting (Gmax), s	11.4	108.7				123.8		16.0
Max Q Clear Time (g_c+I1), s	6.3	27.1				90.4		7.2
Green Ext Time (p_c), s	0.1	34.6				21.9		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	19.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	254	670	2	5	966	716	4	23	13	274	4	111
Future Volume (veh/h)	254	670	2	5	966	716	4	23	13	274	4	111
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1569	1900	1900	1584	1845	1900	1841	1900	1863	1900	1845
Adj Flow Rate, veh/h	276	728	2	5	1050	778	4	25	14	298	4	121
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	2	2	0	1	3	0	5	5	2	0	3
Cap, veh/h	311	1758	5	24	1252	846	120	73	41	425	235	191
Arrive On Green	0.17	0.58	0.58	0.01	0.42	0.42	0.07	0.07	0.07	0.12	0.12	0.12
Sat Flow, veh/h	1792	3049	8	1810	3010	1568	1810	1110	621	3442	1900	1544
Grp Volume(v), veh/h	276	356	374	5	1050	778	4	0	39	298	4	121
Grp Sat Flow(s),veh/h/ln	1792	1490	1567	1810	1505	1568	1810	0	1731	1721	1900	1544
Q Serve(g_s), s	13.4	11.8	11.8	0.2	27.9	37.1	0.2	0.0	1.9	7.4	0.2	6.7
Cycle Q Clear(g_c), s	13.4	11.8	11.8	0.2	27.9	37.1	0.2	0.0	1.9	7.4	0.2	6.7
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	311	859	903	24	1252	846	120	0	114	425	235	191
V/C Ratio(X)	0.89	0.41	0.41	0.21	0.84	0.92	0.03	0.00	0.34	0.70	0.02	0.63
Avail Cap(c_a), veh/h	325	859	903	203	1252	846	183	0	175	1080	596	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	10.5	10.5	43.6	23.4	18.0	39.0	0.0	39.8	37.5	34.3	37.2
Incr Delay (d2), s/veh	23.7	0.3	0.3	4.4	5.2	15.1	0.1	0.0	1.7	2.1	0.0	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	4.9	5.2	0.2	12.4	22.6	0.1	0.0	1.0	3.6	0.1	3.0
LnGrp Delay(d),s/veh	59.7	10.8	10.8	47.9	28.6	33.1	39.1	0.0	41.5	39.6	34.4	40.7
LnGrp LOS	E	B	B	D	C	C	D		D	D	C	D
Approach Vol, veh/h		1006			1833			43			423	
Approach Delay, s/veh		24.2			30.5			41.3			39.9	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.4	57.4		16.3	19.7	43.1		10.1
Change Period (Y+Rc), s	* 4.2	6.0		5.3	* 4.2	6.0		4.2
Max Green Setting (Gmax), s	* 10	43.3		28.0	* 16	37.1		9.0
Max Q Clear Time (g_c+I1), s	2.2	13.8		9.4	15.4	39.1		3.9
Green Ext Time (p_c), s	0.0	15.4		1.6	0.1	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	30.0
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	851	0	0	1018	12	0	0	0	0	0	659
Future Volume (veh/h)	109	851	0	0	1018	12	0	0	0	0	0	659
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1681	1569	0	0	1569	1900				0	1863	1863
Adj Flow Rate, veh/h	121	946	0	0	1131	13				0	0	732
Adj No. of Lanes	1	2	0	0	2	0				0	1	2
Peak Hour Factor	0.90	0.90	0.92	0.92	0.90	0.90				0.90	0.92	0.90
Percent Heavy Veh, %	13	2	0	0	2	2				0	2	2
Cap, veh/h	156	2735	0	0	2310	27				0	0	0
Arrive On Green	0.10	0.92	0.00	0.00	0.77	0.77				0.00	0.00	0.00
Sat Flow, veh/h	1601	3059	0	0	3097	35					0	
Grp Volume(v), veh/h	121	946	0	0	558	586					0.0	
Grp Sat Flow(s),veh/h/ln	1601	1490	0	0	1491	1563						
Q Serve(g_s), s	5.4	2.8	0.0	0.0	10.3	10.3						
Cycle Q Clear(g_c), s	5.4	2.8	0.0	0.0	10.3	10.3						
Prop In Lane	1.00		0.00	0.00		0.02						
Lane Grp Cap(c), veh/h	156	2735	0	0	1141	1196						
V/C Ratio(X)	0.77	0.35	0.00	0.00	0.49	0.49						
Avail Cap(c_a), veh/h	945	3557	0	0	1141	1196						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	32.1	0.4	0.0	0.0	3.2	3.2						
Incr Delay (d2), s/veh	7.9	0.1	0.0	0.0	0.4	0.4						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	2.7	1.1	0.0	0.0	4.2	4.4						
LnGrp Delay(d),s/veh	40.0	0.4	0.0	0.0	3.6	3.6						
LnGrp LOS	D	A			A	A						
Approach Vol, veh/h		1067			1144							
Approach Delay, s/veh		4.9			3.6							
Approach LOS		A			A							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		72.9			11.1	61.8		
Change Period (Y+Rc), s		* 6			4.0	6.0		
Max Green Setting (Gmax), s		* 87			43.0	37.0		
Max Q Clear Time (g_c+I1), s		4.8			7.4	12.3		
Green Ext Time (p_c), s		7.1			0.4	12.0		

Intersection Summary	
HCM 2010 Ctrl Delay	4.2
HCM 2010 LOS	A

Notes

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	78	772	932	127	345	117
Future Volume (veh/h)	78	772	932	127	345	117
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1584	1584	1845	1900	1881
Adj Flow Rate, veh/h	82	813	981	134	363	123
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	0	1
Cap, veh/h	93	1122	985	975	374	330
Arrive On Green	0.05	0.71	0.62	0.62	0.21	0.21
Sat Flow, veh/h	1792	1584	1584	1568	1810	1599
Grp Volume(v), veh/h	82	813	981	134	363	123
Grp Sat Flow(s),veh/h/ln	1792	1584	1584	1568	1810	1599
Q Serve(g_s), s	5.5	36.9	73.8	4.2	23.9	7.9
Cycle Q Clear(g_c), s	5.5	36.9	73.8	4.2	23.9	7.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	93	1122	985	975	374	330
V/C Ratio(X)	0.89	0.72	1.00	0.14	0.97	0.37
Avail Cap(c_a), veh/h	93	1122	985	975	374	330
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.5	10.5	22.6	9.4	47.2	40.9
Incr Delay (d2), s/veh	58.1	2.6	27.7	0.1	38.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	16.6	39.5	1.8	15.9	7.4
LnGrp Delay(d),s/veh	114.7	13.0	50.2	9.5	85.9	41.6
LnGrp LOS	F	B	D	A	F	D
Approach Vol, veh/h		895	1115		486	
Approach Delay, s/veh		22.4	45.3		74.7	
Approach LOS		C	D		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		91.0		29.0	10.4	80.6		
Change Period (Y+Rc), s		6.0		* 4.2	* 4.2	6.0		
Max Green Setting (Gmax), s		85.0		* 25	* 6.2	74.6		
Max Q Clear Time (g_c+I1), s		38.9		25.9	7.5	75.8		
Green Ext Time (p_c), s		22.5		0.0	0.0	0.0		

Intersection Summary

HCM 2010 Ctrl Delay	42.8
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	1004	71	8	942	23	41	3	8	19	2	41
Future Volume (veh/h)	52	1004	71	8	942	23	41	3	8	19	2	41
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1584	1900	1900	1584	1900	1900	1900	1900	1900	1900	1845
Adj Flow Rate, veh/h	54	1035	73	8	971	24	42	3	8	20	2	42
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	0	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	1	0	0	1	0	0	0	0	0	0	3
Cap, veh/h	86	1220	1244	22	1163	1186	146	32	85	156	12	109
Arrive On Green	0.05	0.77	0.77	0.01	0.73	0.73	0.07	0.07	0.07	0.07	0.07	0.07
Sat Flow, veh/h	1810	1584	1615	1810	1584	1615	1384	459	1225	1211	177	1568
Grp Volume(v), veh/h	54	1035	73	8	971	24	42	0	11	22	0	42
Grp Sat Flow(s),veh/h/ln	1810	1584	1615	1810	1584	1615	1384	0	1684	1388	0	1568
Q Serve(g_s), s	2.8	41.7	1.0	0.4	40.5	0.4	2.9	0.0	0.6	1.1	0.0	2.5
Cycle Q Clear(g_c), s	2.8	41.7	1.0	0.4	40.5	0.4	4.6	0.0	0.6	1.7	0.0	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.73	0.91		1.00
Lane Grp Cap(c), veh/h	86	1220	1244	22	1163	1186	146	0	117	169	0	109
V/C Ratio(X)	0.63	0.85	0.06	0.37	0.83	0.02	0.29	0.00	0.09	0.13	0.00	0.39
Avail Cap(c_a), veh/h	113	1508	1538	113	1508	1538	453	0	490	492	0	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.0	7.3	2.7	47.2	8.8	3.4	44.7	0.0	42.0	42.5	0.0	42.8
Incr Delay (d2), s/veh	7.3	4.4	0.0	10.1	3.8	0.0	1.1	0.0	0.3	0.3	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	19.3	0.5	0.3	18.5	0.2	1.1	0.0	0.3	0.6	0.0	1.1
LnGrp Delay(d),s/veh	52.3	11.7	2.7	57.3	12.5	3.5	45.7	0.0	42.3	42.9	0.0	45.1
LnGrp LOS	D	B	A	E	B	A	D		D	D		D
Approach Vol, veh/h		1162			1003			53			64	
Approach Delay, s/veh		13.1			12.7			45.0			44.3	
Approach LOS		B			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	80.2		11.3	8.3	76.7		11.3
Change Period (Y+Rc), s	3.7	6.0		4.6	3.7	6.0		4.6
Max Green Setting (Gmax), s	6.0	91.7		28.0	6.0	91.7		28.0
Max Q Clear Time (g_c+I1), s	2.4	43.7		4.5	4.8	42.5		6.6
Green Ext Time (p_c), s	0.0	27.8		0.3	0.0	28.2		0.3

Intersection Summary		
HCM 2010 Ctrl Delay		14.5
HCM 2010 LOS		B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	786	137	194	782	193	327
Future Volume (veh/h)	786	137	194	782	193	327
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1553	1863	1881	1584	1863	1827
Adj Flow Rate, veh/h	819	143	202	815	201	341
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	2	1	1	2	4
Cap, veh/h	837	853	320	1067	393	487
Arrive On Green	0.54	0.54	0.09	0.67	0.22	0.22
Sat Flow, veh/h	1553	1583	3476	1584	1774	1553
Grp Volume(v), veh/h	819	143	202	815	201	341
Grp Sat Flow(s),veh/h/ln	1553	1583	1738	1584	1774	1553
Q Serve(g_s), s	50.1	4.5	5.5	33.6	9.7	18.8
Cycle Q Clear(g_c), s	50.1	4.5	5.5	33.6	9.7	18.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	837	853	320	1067	393	487
V/C Ratio(X)	0.98	0.17	0.63	0.76	0.51	0.70
Avail Cap(c_a), veh/h	838	854	325	1071	438	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.9	11.4	42.6	10.7	33.3	29.4
Incr Delay (d2), s/veh	25.9	0.1	3.8	3.3	1.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.2	2.0	2.8	15.5	4.9	8.5
LnGrp Delay(d),s/veh	47.8	11.5	46.4	14.0	34.3	33.2
LnGrp LOS	D	B	D	B	C	C
Approach Vol, veh/h	962			1017	542	
Approach Delay, s/veh	42.4			20.4	33.6	
Approach LOS	D			C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	13.2	58.4				71.6		25.7
Change Period (Y+Rc), s	4.2	6.0				6.0		4.2
Max Green Setting (Gmax), s	9.1	52.5				65.8		24.0
Max Q Clear Time (g_c+I1), s	7.5	52.1				35.6		20.8
Green Ext Time (p_c), s	0.1	0.3				9.9		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	31.6
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1036	72	191	909	8	76	0	138	8	1	4
Future Volume (veh/h)	5	1036	72	191	909	8	76	0	138	8	1	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1584	1845	1863	1569	1900	1900	1881	1863	1900	1900	1900
Adj Flow Rate, veh/h	5	1079	75	199	947	8	79	0	144	8	1	4
Adj No. of Lanes	1	1	1	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	3	2	2	2	0	0	2	0	0	0
Cap, veh/h	18	989	954	192	1125	10	48	0	463	48	3	301
Arrive On Green	0.01	0.62	0.61	0.22	1.00	1.00	0.18	0.00	0.18	0.19	0.19	0.19
Sat Flow, veh/h	1810	1584	1568	1774	1553	13	0	0	1583	13	19	1615
Grp Volume(v), veh/h	5	1079	75	199	0	955	79	0	144	9	0	4
Grp Sat Flow(s),veh/h/ln	1810	1584	1568	1774	0	1567	0	0	1583	31	0	1615
Q Serve(g_s), s	0.4	93.6	2.9	16.2	0.0	0.0	0.0	0.0	10.6	0.3	0.0	0.3
Cycle Q Clear(g_c), s	0.4	93.6	2.9	16.2	0.0	0.0	27.7	0.0	10.6	28.0	0.0	0.3
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.89		1.00
Lane Grp Cap(c), veh/h	18	989	954	192	0	1134	48	0	463	51	0	301
V/C Ratio(X)	0.28	1.09	0.08	1.04	0.00	0.84	1.65	0.00	0.31	0.18	0.00	0.01
Avail Cap(c_a), veh/h	100	989	954	192	0	1134	48	0	463	51	0	301
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.40	0.40	0.40	0.19	0.00	0.19	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	73.7	28.2	12.1	58.8	0.0	0.0	74.9	0.0	41.3	65.1	0.0	49.7
Incr Delay (d2), s/veh	3.5	48.6	0.1	39.1	0.0	1.6	366.4	0.0	0.4	2.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	54.0	1.3	10.0	0.0	0.5	6.9	0.0	4.7	0.4	0.0	0.1
LnGrp Delay(d),s/veh	77.2	76.8	12.1	98.0	0.0	1.6	441.3	0.0	41.7	67.5	0.0	49.8
LnGrp LOS	E	F	B	F		A	F		D	E		D
Approach Vol, veh/h		1159			1154			223			13	
Approach Delay, s/veh		72.6			18.2			183.2			62.0	
Approach LOS		E			B			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.2	97.6		32.2	5.2	112.6		32.2
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	16.5	91.6		* 28	8.3	99.8		* 28
Max Q Clear Time (g_c+I1), s	18.2	95.6		30.0	2.4	2.0		29.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	18.2		0.0

Intersection Summary

HCM 2010 Ctrl Delay	57.6
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	1075	73	148	1066	1	54	0	77	0	0	0
Future Volume (veh/h)	3	1075	73	148	1066	1	54	0	77	0	0	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1569	1881	1863	1569	1900	1900	1900	1845	1900	1900	1900
Adj Flow Rate, veh/h	3	1120	76	154	1110	1	56	0	80	0	0	0
Adj No. of Lanes	1	1	1	2	1	0	0	1	1	0	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	1	2	2	2	0	0	3	0	0	0
Cap, veh/h	8	1277	1285	177	1349	1	93	0	78	0	1	1
Arrive On Green	0.01	1.00	1.00	0.05	0.86	0.85	0.05	0.00	0.05	0.00	0.00	0.00
Sat Flow, veh/h	1810	1569	1579	3442	1567	1	1810	0	1526	0	1900	1615
Grp Volume(v), veh/h	3	1120	76	154	0	1111	56	0	80	0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1569	1579	1721	0	1568	1810	0	1526	0	1900	1615
Q Serve(g_s), s	0.2	0.0	0.0	6.7	0.0	50.6	4.5	0.0	7.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	0.0	6.7	0.0	50.6	4.5	0.0	7.7	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	8	1277	1285	177	0	1351	93	0	78	0	1	1
V/C Ratio(X)	0.39	0.88	0.06	0.87	0.00	0.82	0.60	0.00	1.02	0.00	0.00	0.00
Avail Cap(c_a), veh/h	93	1277	1285	177	0	1351	93	0	78	0	300	255
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.19	0.19	0.19	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	74.2	0.0	0.0	70.7	0.0	5.0	69.7	0.0	71.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	6.0	1.9	0.0	34.6	0.0	5.8	10.5	0.0	107.7	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.7	0.0	4.0	0.0	23.5	2.5	0.0	5.6	0.0	0.0	0.0
LnGrp Delay(d),s/veh	80.1	1.9	0.0	105.2	0.0	10.7	80.1	0.0	179.1	0.0	0.0	0.0
LnGrp LOS	F	A	A	F		B	F		F			
Approach Vol, veh/h		1199			1265			136			0	
Approach Delay, s/veh		1.9			22.2			138.4			0.0	
Approach LOS		A			C			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.7	126.1		0.0	4.6	133.2		12.2
Change Period (Y+Rc), s	3.7	* 6		* 4.2	3.7	6.0		4.2
Max Green Setting (Gmax), s	8.0	* 94		* 24	8.0	91.9		8.0
Max Q Clear Time (g_c+I1), s	8.7	2.0		0.0	2.2	52.6		9.7
Green Ext Time (p_c), s	0.0	26.5		0.0	0.0	20.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.9
HCM 2010 LOS	B

Notes

Intersection						
Int Delay, s/veh	3.2					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	78	1107	1183	55	12	51
Future Vol, veh/h	78	1107	1183	55	12	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	230	-	-	250	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	1	2	0	0	0
Mvmt Flow	81	1153	1232	57	13	53

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1232	0	-	0	2548	1232
Stage 1	-	-	-	-	1232	-
Stage 2	-	-	-	-	1316	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	573	-	-	-	30	218
Stage 1	-	-	-	-	278	-
Stage 2	-	-	-	-	253	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	573	-	-	-	26	218
Mov Cap-2 Maneuver	-	-	-	-	26	-
Stage 1	-	-	-	-	278	-
Stage 2	-	-	-	-	217	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	111.3
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	573	-	-	-	91
HCM Lane V/C Ratio	0.142	-	-	-	0.721
HCM Control Delay (s)	12.3	-	-	-	111.3
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.5	-	-	-	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	826	32	93	774	280	42	26	80	109	23	62
Future Volume (veh/h)	80	826	32	93	774	280	42	26	80	109	23	62
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1900	1863	1600	1881	1900	1869	1900	1900	1735	1652
Adj Flow Rate, veh/h	93	960	37	108	900	326	49	30	93	127	27	72
Adj No. of Lanes	1	1	1	1	1	1	0	1	0	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	2	0	1	3	3	3	12	12	15
Cap, veh/h	116	960	949	120	965	945	39	32	38	165	26	307
Arrive On Green	0.06	0.60	0.60	0.07	0.60	0.60	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1810	1600	1582	1774	1600	1566	0	148	175	505	119	1404
Grp Volume(v), veh/h	93	960	37	108	900	326	172	0	0	154	0	72
Grp Sat Flow(s),veh/h/ln	1810	1600	1582	1774	1600	1566	323	0	0	624	0	1404
Q Serve(g_s), s	6.1	72.0	1.1	7.3	61.2	12.5	0.0	0.0	0.0	0.0	0.0	5.1
Cycle Q Clear(g_c), s	6.1	72.0	1.1	7.3	61.2	12.5	26.2	0.0	0.0	26.2	0.0	5.1
Prop In Lane	1.00		1.00	1.00		1.00	0.28		0.54	0.82		1.00
Lane Grp Cap(c), veh/h	116	960	949	120	965	945	109	0	0	191	0	307
V/C Ratio(X)	0.80	1.00	0.04	0.90	0.93	0.35	1.58	0.00	0.00	0.81	0.00	0.23
Avail Cap(c_a), veh/h	121	960	949	120	965	945	109	0	0	191	0	307
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.4	24.0	9.8	55.6	21.6	11.9	44.7	0.0	0.0	48.3	0.0	38.6
Incr Delay (d2), s/veh	30.4	29.0	0.0	53.4	15.4	0.3	298.9	0.0	0.0	22.8	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	39.2	0.5	5.3	30.9	5.4	12.7	0.0	0.0	6.3	0.0	2.0
LnGrp Delay(d),s/veh	85.8	53.0	9.9	109.0	37.0	12.2	343.6	0.0	0.0	71.1	0.0	39.2
LnGrp LOS	F	D	A	F	D	B	F			E		D
Approach Vol, veh/h		1090			1334			172			226	
Approach Delay, s/veh		54.4			36.8			343.6			60.9	
Approach LOS		D			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.8	78.0		30.2	11.4	78.4		30.2
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	8.1	72.0		* 26	8.0	72.1		* 26
Max Q Clear Time (g_c+I1), s	9.3	74.0		28.2	8.1	63.2		28.2
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	7.0		0.0

Intersection Summary			
HCM 2010 Ctrl Delay		64.2	
HCM 2010 LOS		E	

Notes

Intersection	
Int Delay, s/veh	7.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	136	364	65	34	1
Future Vol, veh/h	25	136	364	65	34	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	15	10	2	4	11	0
Mvmt Flow	27	148	396	71	37	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	900	38	38	0	-	0
Stage 1	38	-	-	-	-	-
Stage 2	862	-	-	-	-	-
Critical Hdwy	6.55	6.3	4.12	-	-	-
Critical Hdwy Stg 1	5.55	-	-	-	-	-
Critical Hdwy Stg 2	5.55	-	-	-	-	-
Follow-up Hdwy	3.635	3.39	2.218	-	-	-
Pot Cap-1 Maneuver	293	1012	1572	-	-	-
Stage 1	952	-	-	-	-	-
Stage 2	393	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	216	1012	1572	-	-	-
Mov Cap-2 Maneuver	216	-	-	-	-	-
Stage 1	952	-	-	-	-	-
Stage 2	290	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.5	6.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1572	-	216	1012	-	-
HCM Lane V/C Ratio	0.252	-	0.126	0.146	-	-
HCM Control Delay (s)	8.1	0	24.1	9.2	-	-
HCM Lane LOS	A	A	C	A	-	-
HCM 95th %tile Q(veh)	1	-	0.4	0.5	-	-

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	32	1	7	62	11	0	0	0	0	0	0
Future Vol, veh/h	4	32	1	7	62	11	0	0	0	0	0	0
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Heavy Vehicles, %	0	0	0	0	8	0	0	0	0	0	0	0
Mvmt Flow	6	52	2	11	100	18	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	7.4	7.8	0
HCM LOS	A	A	-

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	0%	11%	10%	0%
Vol Thru, %	100%	86%	90%	0%
Vol Right, %	0%	3%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	37	69	11
LT Vol	0	4	7	0
Through Vol	0	32	62	0
RT Vol	0	1	0	11
Lane Flow Rate	0	60	111	18
Geometry Grp	2	5	7	7
Degree of Util (X)	0	0.068	0.142	0.02
Departure Headway (Hd)	4.331	4.098	4.579	3.964
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	871	787	907
Service Time	2.331	2.136	2.287	1.672
HCM Lane V/C Ratio	0	0.069	0.141	0.02
HCM Control Delay	7.3	7.4	8	6.8
HCM Lane LOS	N	A	A	A
HCM 95th-tile Q	0	0.2	0.5	0.1

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	15	46	23	64	0	47	0	17	0	21	7
Future Vol, veh/h	0	15	46	23	64	0	47	0	17	0	21	7
Conflicting Peds, #/hr	4	0	1	0	0	3	1	0	0	3	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	5	0	5	0	7	0	13	0	10	0
Mvmt Flow	0	17	52	26	72	0	53	0	19	0	24	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	18	0	0	161	142	21	153	142	76
Stage 1	-	-	-	-	-	-	18	18	-	124	124	-
Stage 2	-	-	-	-	-	-	143	124	-	29	18	-
Critical Hdwy	-	-	-	4.1	-	-	7.17	6.5	6.33	7.1	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.17	5.5	-	6.1	5.6	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.17	5.5	-	6.1	5.6	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.563	4	3.417	3.5	4.09	3.3
Pot Cap-1 Maneuver	0	-	-	1612	-	0	793	753	1026	819	735	991
Stage 1	0	-	-	-	-	0	988	884	-	885	778	-
Stage 2	0	-	-	-	-	0	848	797	-	993	865	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1608	-	-	754	740	1023	791	722	988
Mov Cap-2 Maneuver	-	-	-	-	-	-	754	740	-	791	722	-
Stage 1	-	-	-	-	-	-	988	883	-	885	765	-
Stage 2	-	-	-	-	-	-	799	783	-	972	864	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.9	9.9	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	811	-	-	1608	-	774
HCM Lane V/C Ratio	0.089	-	-	0.016	-	0.041
HCM Control Delay (s)	9.9	-	-	7.3	0	9.8
HCM Lane LOS	A	-	-	A	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	491	64	128	1356	21	84	8	78	25	25	24
Future Volume (veh/h)	22	491	64	128	1356	21	84	8	78	25	25	24
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		1.00	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1845	1863	1862	1900	1900	1833	1743	1900	1876	1900
Adj Flow Rate, veh/h	24	546	71	142	1507	23	93	9	0	28	28	27
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	4	3	2	2	2	0	0	9	0	0	0
Cap, veh/h	101	1526	685	288	1947	30	354	29	264	152	135	96
Arrive On Green	0.06	0.44	0.44	0.16	0.55	0.52	0.18	0.18	0.00	0.18	0.18	0.16
Sat Flow, veh/h	1810	3471	1559	1774	3567	54	1278	160	1482	356	759	537
Grp Volume(v), veh/h	24	546	71	142	747	783	102	0	0	83	0	0
Grp Sat Flow(s),veh/h/ln	1810	1736	1559	1774	1769	1852	1439	0	1482	1652	0	0
Q Serve(g_s), s	0.7	5.7	1.5	4.0	18.1	18.1	0.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.7	5.7	1.5	4.0	18.1	18.1	3.0	0.0	0.0	2.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	0.91		1.00	0.34		0.33
Lane Grp Cap(c), veh/h	101	1526	685	288	966	1011	382	0	264	383	0	0
V/C Ratio(X)	0.24	0.36	0.10	0.49	0.77	0.77	0.27	0.00	0.00	0.22	0.00	0.00
Avail Cap(c_a), veh/h	349	2102	944	456	1185	1241	909	0	843	1005	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.6	10.2	9.0	20.8	9.7	9.8	19.6	0.0	0.0	19.5	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.1	0.0	0.5	2.0	1.9	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.7	0.6	2.0	9.2	9.7	1.3	0.0	0.0	1.1	0.0	0.0
LnGrp Delay(d),s/veh	25.1	10.2	9.0	21.3	11.7	11.7	19.7	0.0	0.0	19.6	0.0	0.0
LnGrp LOS	C	B	A	C	B	B	B			B		
Approach Vol, veh/h		641			1672			102			83	
Approach Delay, s/veh		10.6			12.5			19.7			19.6	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.8	28.0		13.7	7.0	33.7		13.7
Change Period (Y+Rc), s	4.0	5.2		5.0	4.0	5.2		5.0
Max Green Setting (Gmax), s	14.0	31.8		30.0	10.5	35.3		30.0
Max Q Clear Time (g_c+I1), s	6.0	7.7		4.2	2.7	20.1		5.0
Green Ext Time (p_c), s	0.0	10.7		0.2	0.0	8.4		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	12.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	450	129	369	408	95	145	330	175	93	748	310
Future Volume (veh/h)	200	450	129	369	408	95	145	330	175	93	748	310
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1837	1900	1881	1827	1863	1810	1863	1845	1759	1827	1810
Adj Flow Rate, veh/h	217	489	140	401	443	103	158	359	190	101	813	337
Adj No. of Lanes	2	2	0	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	4	2	5	2	3	8	4	5
Cap, veh/h	321	776	221	439	1120	503	182	1199	526	149	1118	484
Arrive On Green	0.09	0.29	0.28	0.13	0.32	0.32	0.11	0.34	0.34	0.09	0.32	0.32
Sat Flow, veh/h	3408	2670	759	3476	3471	1558	1723	3539	1551	1675	3471	1504
Grp Volume(v), veh/h	217	318	311	401	443	103	158	359	190	101	813	337
Grp Sat Flow(s),veh/h/ln	1704	1745	1684	1738	1736	1558	1723	1770	1551	1675	1736	1504
Q Serve(g_s), s	6.3	16.3	16.5	11.7	10.2	4.9	9.3	7.7	9.5	6.0	21.3	20.1
Cycle Q Clear(g_c), s	6.3	16.3	16.5	11.7	10.2	4.9	9.3	7.7	9.5	6.0	21.3	20.1
Prop In Lane	1.00		0.45	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	321	507	489	439	1120	503	182	1199	526	149	1118	484
V/C Ratio(X)	0.68	0.63	0.63	0.91	0.40	0.20	0.87	0.30	0.36	0.68	0.73	0.70
Avail Cap(c_a), veh/h	398	600	580	439	1228	551	184	1225	537	163	1167	506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	31.7	31.9	44.4	27.0	25.3	45.3	25.0	25.6	45.4	30.9	30.5
Incr Delay (d2), s/veh	3.3	2.1	2.3	23.3	0.3	0.3	32.6	0.2	0.6	9.7	2.4	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	8.2	8.0	7.0	4.9	2.1	6.1	3.8	4.2	3.2	10.5	8.9
LnGrp Delay(d),s/veh	48.4	33.8	34.1	67.7	27.4	25.6	77.9	25.2	26.2	55.1	33.3	34.9
LnGrp LOS	D	C	C	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h		846			947			707			1251	
Approach Delay, s/veh		37.7			44.2			37.3			35.5	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	33.9	14.9	37.1	13.7	37.2	13.1	38.9
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	13.3	34.8	11.3	34.0	12.3	35.8	10.3	35.0
Max Q Clear Time (g_c+I1), s	13.7	18.5	11.3	23.3	8.3	12.2	8.0	11.5
Green Ext Time (p_c), s	0.0	8.2	0.0	8.2	0.2	10.0	0.0	15.0

Intersection Summary	
HCM 2010 Ctrl Delay	38.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	461	224	178	836	71	307	245	84	74	305	115
Future Volume (veh/h)	128	461	224	178	836	71	307	245	84	74	305	115
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1792	1845	1863	1900	1845	1836	1900	1863	1788	1900
Adj Flow Rate, veh/h	136	490	238	189	889	76	327	261	89	79	324	122
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	3	6	3	2	0	3	3	3	2	6	6
Cap, veh/h	166	1039	448	205	1120	510	344	800	266	155	493	182
Arrive On Green	0.10	0.30	0.30	0.12	0.32	0.32	0.20	0.31	0.31	0.09	0.20	0.20
Sat Flow, veh/h	1723	3505	1513	1757	3539	1612	1757	2565	853	1774	2426	896
Grp Volume(v), veh/h	136	490	238	189	889	76	327	175	175	79	225	221
Grp Sat Flow(s),veh/h/ln	1723	1752	1513	1757	1770	1612	1757	1744	1674	1774	1698	1623
Q Serve(g_s), s	6.8	10.1	11.6	9.4	20.3	3.0	16.3	6.8	7.1	3.8	10.7	11.1
Cycle Q Clear(g_c), s	6.8	10.1	11.6	9.4	20.3	3.0	16.3	6.8	7.1	3.8	10.7	11.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.51	1.00		0.55
Lane Grp Cap(c), veh/h	166	1039	448	205	1120	510	344	544	522	155	346	330
V/C Ratio(X)	0.82	0.47	0.53	0.92	0.79	0.15	0.95	0.32	0.33	0.51	0.65	0.67
Avail Cap(c_a), veh/h	174	1190	514	205	1258	573	344	653	627	201	496	474
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	25.4	26.0	38.6	27.6	21.7	35.1	23.2	23.3	38.5	32.3	32.4
Incr Delay (d2), s/veh	24.6	0.3	1.0	41.9	3.2	0.1	35.7	0.4	0.5	2.6	2.5	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	4.9	5.0	7.0	10.4	1.3	11.3	3.3	3.3	2.0	5.2	5.2
LnGrp Delay(d),s/veh	63.8	25.8	26.9	80.5	30.8	21.8	70.8	23.7	23.8	41.1	34.8	35.3
LnGrp LOS	E	C	C	F	C	C	E	C	C	D	C	D
Approach Vol, veh/h		864			1154			677			525	
Approach Delay, s/veh		32.1			38.4			46.5			36.0	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	32.2	14.0	30.8	21.0	22.6	12.2	32.6
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	10.3	33.1	10.3	30.0	17.3	25.8	8.9	31.4
Max Q Clear Time (g_c+I1), s	15.3	9.1	11.4	13.6	18.3	13.1	8.8	22.3
Green Ext Time (p_c), s	0.1	4.3	0.0	7.9	0.0	3.4	0.0	5.4

Intersection Summary	
HCM 2010 Ctrl Delay	38.0
HCM 2010 LOS	D

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	489	160	304	101	131	586
Future Volume (veh/h)	489	160	304	101	131	586
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1827	1881	1900	1900
Adj Flow Rate, veh/h	556	182	345	115	149	666
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	1	1	4	1	0	0
Cap, veh/h	650	580	504	441	222	887
Arrive On Green	0.36	0.36	0.28	0.28	0.12	0.47
Sat Flow, veh/h	1792	1599	1827	1599	1810	1900
Grp Volume(v), veh/h	556	182	345	115	149	666
Grp Sat Flow(s),veh/h/ln	1792	1599	1827	1599	1810	1900
Q Serve(g_s), s	17.1	4.9	10.1	3.4	4.7	17.2
Cycle Q Clear(g_c), s	17.1	4.9	10.1	3.4	4.7	17.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	650	580	504	441	222	887
V/C Ratio(X)	0.86	0.31	0.69	0.26	0.67	0.75
Avail Cap(c_a), veh/h	872	778	846	741	269	1293
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	13.7	19.3	16.9	25.1	13.1
Incr Delay (d2), s/veh	6.4	0.3	1.7	0.3	4.8	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	5.0	5.3	1.5	2.7	9.2
LnGrp Delay(d),s/veh	24.1	14.0	21.0	17.2	29.9	14.5
LnGrp LOS	C	B	C	B	C	B
Approach Vol, veh/h	738		460			815
Approach Delay, s/veh	21.6		20.1			17.4
Approach LOS	C		C			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		33.2		26.6	11.4	21.8		
Change Period (Y+Rc), s		5.3		4.9	4.1	5.3		
Max Green Setting (Gmax), s		40.7		29.1	8.9	27.7		
Max Q Clear Time (g_c+I1), s		19.2		19.1	6.7	12.1		
Green Ext Time (p_c), s		4.7		2.5	0.1	4.3		

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	28	45	18	350	1079	44
Future Vol, veh/h	28	45	18	350	1079	44
Conflicting Peds, #/hr	1	0	0	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	40	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	12	20	19	3	3	5
Mvmt Flow	32	52	21	402	1240	51

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1686	1241	1241	0	-	0
Stage 1	1241	-	-	-	-	-
Stage 2	445	-	-	-	-	-
Critical Hdwy	6.52	6.4	4.29	-	-	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.48	2.371	-	-	-
Pot Cap-1 Maneuver	98	196	506	-	-	-
Stage 1	260	-	-	-	-	-
Stage 2	625	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	94	196	506	-	-	-
Mov Cap-2 Maneuver	200	-	-	-	-	-
Stage 1	260	-	-	-	-	-
Stage 2	599	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	28.5	0.6	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	506	-	200	196	-	-
HCM Lane V/C Ratio	0.041	-	0.161	0.264	-	-
HCM Control Delay (s)	12.4	-	26.4	29.8	-	-
HCM Lane LOS	B	-	D	D	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	1	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	13	19	360	48	103	968
Future Volume (veh/h)	13	19	360	48	103	968
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1532	1583	1845	1792	1696	1863
Adj Flow Rate, veh/h	14	21	391	52	112	1052
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	20	3	6	12	2
Cap, veh/h	93	250	902	745	197	1303
Arrive On Green	0.06	0.06	0.49	0.49	0.12	0.70
Sat Flow, veh/h	1459	1346	1845	1524	1616	1863
Grp Volume(v), veh/h	14	21	391	52	112	1052
Grp Sat Flow(s),veh/h/ln	1459	1346	1845	1524	1616	1863
Q Serve(g_s), s	0.4	0.5	5.7	0.8	2.7	16.3
Cycle Q Clear(g_c), s	0.4	0.5	5.7	0.8	2.7	16.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	93	250	902	745	197	1303
V/C Ratio(X)	0.15	0.08	0.43	0.07	0.57	0.81
Avail Cap(c_a), veh/h	733	840	1491	1231	448	2187
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.5	14.1	6.9	5.7	17.3	4.3
Incr Delay (d2), s/veh	0.7	0.1	0.4	0.0	2.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.4	2.9	0.3	1.4	8.4
LnGrp Delay(d),s/veh	19.2	14.2	7.3	5.7	19.9	5.8
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	35		443			1164
Approach Delay, s/veh	16.2		7.1			7.2
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		34.9		6.9	8.8	26.2		
Change Period (Y+Rc), s		5.7		* 4.2	3.7	5.7		
Max Green Setting (Gmax), s		49.1		* 21	11.6	33.8		
Max Q Clear Time (g_c+I1), s		18.3		2.5	4.7	7.7		
Green Ext Time (p_c), s		10.9		0.1	0.2	10.3		

Intersection Summary	
HCM 2010 Ctrl Delay	7.4
HCM 2010 LOS	A

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	960	112	49	876	196	57
Future Volume (veh/h)	960	112	49	876	196	57
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1900	1845	1600	1881	1900
Adj Flow Rate, veh/h	1116	130	57	1019	228	66
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	3	0	1	0
Cap, veh/h	1045	122	75	1296	218	197
Arrive On Green	0.74	0.74	0.04	0.81	0.12	0.12
Sat Flow, veh/h	1407	164	1757	1600	1792	1615
Grp Volume(v), veh/h	0	1246	57	1019	228	66
Grp Sat Flow(s),veh/h/ln	0	1571	1757	1600	1792	1615
Q Serve(g_s), s	0.0	110.9	4.8	49.8	18.2	5.6
Cycle Q Clear(g_c), s	0.0	110.9	4.8	49.8	18.2	5.6
Prop In Lane		0.10	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	1167	75	1296	218	197
V/C Ratio(X)	0.00	1.07	0.76	0.79	1.04	0.34
Avail Cap(c_a), veh/h	0	1167	82	1303	218	197
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.2	70.8	7.4	65.6	60.0
Incr Delay (d2), s/veh	0.0	46.5	31.2	3.4	73.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	62.4	3.0	22.7	13.4	2.6
LnGrp Delay(d),s/veh	0.0	65.8	102.0	10.8	138.6	61.0
LnGrp LOS		F	F	B	F	E
Approach Vol, veh/h	1246			1076	294	
Approach Delay, s/veh	65.8			15.6	121.2	
Approach LOS	E			B	F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.0	116.9				126.9		22.4
Change Period (Y+Rc), s	3.7	6.0				6.0		4.2
Max Green Setting (Gmax), s	7.3	110.9				121.6		18.2
Max Q Clear Time (g_c+I1), s	16.8	112.9				51.8		20.2
Green Ext Time (p_c), s	0.0	0.0				34.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	51.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	857	3	6	798	300	10	19	7	674	15	323
Future Volume (veh/h)	93	857	3	6	798	300	10	19	7	674	15	323
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.94	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1652	1598	1900	1900	1600	1776	1900	1900	1900	1845	1827	1863
Adj Flow Rate, veh/h	107	985	3	7	917	345	11	22	8	775	17	371
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	15	0	0	0	0	7	0	0	0	3	4	2
Cap, veh/h	163	1306	4	32	1018	924	116	84	30	946	507	433
Arrive On Green	0.10	0.42	0.42	0.02	0.34	0.34	0.06	0.06	0.06	0.28	0.28	0.28
Sat Flow, veh/h	1573	3104	9	1810	3040	1507	1810	1306	475	3408	1827	1562
Grp Volume(v), veh/h	107	482	506	7	917	345	11	0	30	775	17	371
Grp Sat Flow(s),veh/h/ln	1573	1518	1596	1810	1520	1507	1810	0	1781	1704	1827	1562
Q Serve(g_s), s	5.9	24.2	24.2	0.3	25.8	10.3	0.5	0.0	1.4	19.1	0.6	20.2
Cycle Q Clear(g_c), s	5.9	24.2	24.2	0.3	25.8	10.3	0.5	0.0	1.4	19.1	0.6	20.2
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	163	639	672	32	1018	924	116	0	114	946	507	433
V/C Ratio(X)	0.66	0.75	0.75	0.22	0.90	0.37	0.09	0.00	0.26	0.82	0.03	0.86
Avail Cap(c_a), veh/h	175	639	672	202	1128	978	182	0	179	1064	570	487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	22.0	22.0	43.4	28.4	8.7	39.5	0.0	40.0	30.3	23.6	30.7
Incr Delay (d2), s/veh	7.8	5.1	4.8	3.3	9.3	0.3	0.3	0.0	1.2	4.7	0.0	12.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	10.9	11.5	0.2	12.1	7.4	0.3	0.0	0.7	9.6	0.3	10.2
LnGrp Delay(d),s/veh	46.4	27.1	26.9	46.7	37.7	9.0	39.9	0.0	41.2	35.0	23.7	43.6
LnGrp LOS	D	C	C	D	D	A	D		D	C	C	D
Approach Vol, veh/h		1095			1269			41			1163	
Approach Delay, s/veh		28.9			30.0			40.8			37.6	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.8	43.8		30.2	13.5	36.1		10.0
Change Period (Y+Rc), s	* 4.2	6.0		5.3	* 4.2	6.0		4.2
Max Green Setting (Gmax), s	* 10	33.3		28.0	* 10	33.3		9.0
Max Q Clear Time (g_c+I1), s	2.3	26.2		22.2	7.9	27.8		3.4
Green Ext Time (p_c), s	0.0	5.1		2.7	0.1	2.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.2
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	444	1038	0	0	1072	36	0	0	0	0	0	89
Future Volume (veh/h)	444	1038	0	0	1072	36	0	0	0	0	0	89
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1600	0	0	1598	1900				0	1863	1759
Adj Flow Rate, veh/h	477	1116	0	0	1153	39				0	0	96
Adj No. of Lanes	1	2	0	0	2	0				0	1	2
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93				0.93	0.92	0.93
Percent Heavy Veh, %	1	0	0	0	0	0				0	2	8
Cap, veh/h	526	2884	0	0	1809	61				0	0	0
Arrive On Green	0.29	0.95	0.00	0.00	0.60	0.60				0.00	0.00	0.00
Sat Flow, veh/h	1792	3120	0	0	3078	101					0	
Grp Volume(v), veh/h	477	1116	0	0	584	608					0.0	
Grp Sat Flow(s),veh/h/ln	1792	1520	0	0	1519	1581						
Q Serve(g_s), s	19.9	2.3	0.0	0.0	19.3	19.3						
Cycle Q Clear(g_c), s	19.9	2.3	0.0	0.0	19.3	19.3						
Prop In Lane	1.00		0.00	0.00		0.06						
Lane Grp Cap(c), veh/h	526	2884	0	0	916	954						
V/C Ratio(X)	0.91	0.39	0.00	0.00	0.64	0.64						
Avail Cap(c_a), veh/h	622	2969	0	0	916	954						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	26.5	0.2	0.0	0.0	9.9	9.9						
Incr Delay (d2), s/veh	15.4	0.1	0.0	0.0	1.5	1.4						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	12.1	0.8	0.0	0.0	8.3	8.7						
LnGrp Delay(d),s/veh	41.9	0.2	0.0	0.0	11.4	11.4						
LnGrp LOS	D	A			B	B						
Approach Vol, veh/h		1593			1192							
Approach Delay, s/veh		12.7			11.4							
Approach LOS		B			B							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		77.8			26.9	51.0		
Change Period (Y+Rc), s		4.0			4.0	4.0		
Max Green Setting (Gmax), s		76.0			27.0	45.0		
Max Q Clear Time (g_c+I1), s		4.3			21.9	21.3		
Green Ext Time (p_c), s		13.9			0.9	11.8		

Intersection Summary	
HCM 2010 Ctrl Delay	12.1
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	217	837	930	395	85	95
Future Volume (veh/h)	217	837	930	395	85	95
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1600	1600	1881	1776	1759
Adj Flow Rate, veh/h	241	930	1033	439	94	106
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	0	0	1	7	8
Cap, veh/h	257	1345	1065	1064	147	130
Arrive On Green	0.15	0.84	0.67	0.67	0.09	0.09
Sat Flow, veh/h	1774	1600	1600	1599	1691	1495
Grp Volume(v), veh/h	241	930	1033	439	94	106
Grp Sat Flow(s),veh/h/ln	1774	1600	1600	1599	1691	1495
Q Serve(g_s), s	18.9	31.1	85.7	17.8	7.6	9.8
Cycle Q Clear(g_c), s	18.9	31.1	85.7	17.8	7.6	9.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	257	1345	1065	1064	147	130
V/C Ratio(X)	0.94	0.69	0.97	0.41	0.64	0.81
Avail Cap(c_a), veh/h	257	1352	1072	1071	253	223
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.5	4.3	22.2	10.8	62.1	63.1
Incr Delay (d2), s/veh	39.2	1.7	20.6	0.4	4.6	11.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.1	14.1	43.7	7.9	3.7	8.3
LnGrp Delay(d),s/veh	98.7	6.0	42.8	11.2	66.6	74.7
LnGrp LOS	F	A	D	B	E	E
Approach Vol, veh/h		1171	1472		200	
Approach Delay, s/veh		25.0	33.4		70.9	
Approach LOS		C	C		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		124.2		16.4	24.6	99.6		
Change Period (Y+Rc), s		6.0		* 4.2	* 4.2	6.0		
Max Green Setting (Gmax), s		118.8		* 21	* 20	94.2		
Max Q Clear Time (g_c+I1), s		33.1		11.8	20.9	87.7		
Green Ext Time (p_c), s		42.7		0.4	0.0	5.9		

Intersection Summary

HCM 2010 Ctrl Delay	32.6
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	874	24	23	1194	23	69	4	26	32	1	60
Future Volume (veh/h)	33	874	24	23	1194	23	69	4	26	32	1	60
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1600	1759	1900	1600	1681	1900	1736	1900	1900	1900	1863
Adj Flow Rate, veh/h	38	1016	28	27	1388	27	80	5	30	37	1	70
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	3	0	8	0	0	13	0	0	0	0	0	2
Cap, veh/h	59	1189	1111	51	1181	1054	160	27	161	195	5	197
Arrive On Green	0.03	0.74	0.74	0.03	0.74	0.74	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1757	1600	1495	1810	1600	1428	1346	215	1288	1145	37	1577
Grp Volume(v), veh/h	38	1016	28	27	1388	27	80	0	35	38	0	70
Grp Sat Flow(s),veh/h/ln	1757	1600	1495	1810	1600	1428	1346	0	1503	1182	0	1577
Q Serve(g_s), s	2.9	61.6	0.7	2.0	101.7	0.7	8.0	0.0	2.9	3.4	0.0	5.6
Cycle Q Clear(g_c), s	2.9	61.6	0.7	2.0	101.7	0.7	14.2	0.0	2.9	6.2	0.0	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	0.97		1.00
Lane Grp Cap(c), veh/h	59	1189	1111	51	1181	1054	160	0	188	205	0	197
V/C Ratio(X)	0.65	0.85	0.03	0.53	1.18	0.03	0.50	0.00	0.19	0.19	0.00	0.35
Avail Cap(c_a), veh/h	76	1189	1111	79	1181	1054	265	0	305	314	0	320
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	65.8	12.5	4.6	66.1	18.1	4.8	62.0	0.0	54.0	56.4	0.0	55.2
Incr Delay (d2), s/veh	11.4	6.5	0.0	8.4	88.2	0.0	2.4	0.0	0.5	0.4	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	28.9	0.3	1.1	73.2	0.3	3.1	0.0	1.2	1.3	0.0	2.5
LnGrp Delay(d),s/veh	77.2	18.9	4.6	74.5	106.3	4.8	64.4	0.0	54.5	56.9	0.0	56.3
LnGrp LOS	E	B	A	E	F	A	E		D	E		E
Approach Vol, veh/h		1082			1442			115			108	
Approach Delay, s/veh		20.6			103.8			61.4			56.5	
Approach LOS		C			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.6	108.4		21.8	8.3	107.7		21.8
Change Period (Y+Rc), s	3.7	6.0		4.6	3.7	6.0		4.6
Max Green Setting (Gmax), s	6.0	101.7		28.0	6.0	101.7		28.0
Max Q Clear Time (g_c+I1), s	4.0	63.6		8.2	4.9	103.7		16.2
Green Ext Time (p_c), s	0.0	31.4		0.7	0.0	0.0		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	67.4
HCM 2010 LOS	E

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	724	205	249	1132	197	269
Future Volume (veh/h)	724	205	249	1132	197	269
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1845	1827	1600	1881	1881
Adj Flow Rate, veh/h	754	214	259	1179	205	280
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	3	4	0	1	1
Cap, veh/h	992	972	311	1192	313	427
Arrive On Green	0.62	0.62	0.09	0.75	0.17	0.17
Sat Flow, veh/h	1600	1568	3375	1600	1792	1599
Grp Volume(v), veh/h	754	214	259	1179	205	280
Grp Sat Flow(s),veh/h/ln	1600	1568	1688	1600	1792	1599
Q Serve(g_s), s	43.2	7.7	9.6	91.0	13.6	19.8
Cycle Q Clear(g_c), s	43.2	7.7	9.6	91.0	13.6	19.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	992	972	311	1192	313	427
V/C Ratio(X)	0.76	0.22	0.83	0.99	0.65	0.66
Avail Cap(c_a), veh/h	992	972	344	1202	337	448
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	10.7	56.9	15.7	49.0	41.5
Incr Delay (d2), s/veh	3.5	0.1	14.6	23.1	4.1	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.8	3.4	5.1	47.0	7.1	9.1
LnGrp Delay(d),s/veh	20.9	10.8	71.5	38.9	53.1	44.7
LnGrp LOS	C	B	E	D	D	D
Approach Vol, veh/h	968			1438	485	
Approach Delay, s/veh	18.7			44.8	48.3	
Approach LOS	B			D	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.0	85.1				101.0		26.5
Change Period (Y+Rc), s	4.2	6.0				6.0		4.2
Max Green Setting (Gmax), s	11.8	78.6				95.8		24.0
Max Q Clear Time (g_c+I1), s	11.6	45.2				93.0		21.8
Green Ext Time (p_c), s	0.1	15.1				2.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	36.6
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	939	43	154	1255	5	149	0	262	0	1	0
Future Volume (veh/h)	1	939	43	154	1255	5	149	0	262	0	1	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1845	1759	1598	1900	1900	1810	1863	1900	1900	1900
Adj Flow Rate, veh/h	1	1092	50	179	1459	6	173	0	305	0	1	0
Adj No. of Lanes	1	1	1	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	3	8	0	0	0	0	2	0	0	0
Cap, veh/h	1	1012	992	168	1164	5	305	0	450	0	356	303
Arrive On Green	0.00	0.63	0.63	0.13	0.97	0.96	0.19	0.00	0.18	0.00	0.19	0.00
Sat Flow, veh/h	1810	1600	1568	1675	1590	7	1367	0	1583	0	1900	1615
Grp Volume(v), veh/h	1	1092	50	179	0	1465	173	0	305	0	1	0
Grp Sat Flow(s),veh/h/ln	1810	1600	1568	1675	0	1597	1367	0	1583	0	1900	1615
Q Serve(g_s), s	0.1	94.9	1.8	15.0	0.0	109.8	17.6	0.0	25.6	0.0	0.1	0.0
Cycle Q Clear(g_c), s	0.1	94.9	1.8	15.0	0.0	109.8	17.7	0.0	25.6	0.0	0.1	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1	1012	992	168	0	1169	305	0	450	0	356	303
V/C Ratio(X)	0.83	1.08	0.05	1.07	0.00	1.25	0.57	0.00	0.68	0.00	0.00	0.00
Avail Cap(c_a), veh/h	109	1012	992	168	0	1169	314	0	461	0	370	314
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.64	0.09	0.00	0.09	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	75.0	27.6	10.5	65.0	0.0	2.0	56.7	0.0	47.6	0.0	49.5	0.0
Incr Delay (d2), s/veh	252.4	47.3	0.1	41.9	0.0	114.6	2.3	0.0	3.8	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	54.9	0.8	8.9	0.0	69.9	6.9	0.0	11.7	0.0	0.0	0.0
LnGrp Delay(d),s/veh	327.4	74.9	10.5	106.9	0.0	116.6	59.0	0.0	51.4	0.0	49.5	0.0
LnGrp LOS	F	F	B	F		F	E		D		D	
Approach Vol, veh/h		1143			1644			478			1	
Approach Delay, s/veh		72.3			115.5			54.2			49.5	
Approach LOS		E			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.0	98.9		32.1	4.0	113.8		32.1
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	15.3	91.8		* 29	9.3	97.8		* 29
Max Q Clear Time (g_c+I1), s	17.8	96.9		2.1	2.1	111.8		27.6
Green Ext Time (p_c), s	0.0	0.0		2.1	0.0	0.0		0.3

Intersection Summary

HCM 2010 Ctrl Delay	91.4
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1070	106	152	1204	1	169	0	242	1	0	1
Future Volume (veh/h)	0	1070	106	152	1204	1	169	0	242	1	0	1
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1827	1810	1600	1900	1900	1827	1810	1900	1900	1900
Adj Flow Rate, veh/h	0	1216	120	173	1368	1	192	0	275	1	0	1
Adj No. of Lanes	1	1	1	2	1	0	0	1	1	0	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	4	5	0	0	0	0	5	0	0	0
Cap, veh/h	1	1038	995	172	1181	1	220	0	190	99	0	88
Arrive On Green	0.00	1.00	1.00	0.05	0.74	0.73	0.13	0.00	0.13	0.05	0.00	0.05
Sat Flow, veh/h	1810	1600	1533	3343	1599	1	1740	0	1503	1809	0	1615
Grp Volume(v), veh/h	0	1216	120	173	0	1369	192	0	275	1	0	1
Grp Sat Flow(s),veh/h/ln	1810	1600	1533	1672	0	1600	1740	0	1503	1810	0	1615
Q Serve(g_s), s	0.0	0.0	0.0	7.7	0.0	110.8	16.2	0.0	19.0	0.1	0.0	0.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.7	0.0	110.8	16.2	0.0	19.0	0.1	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1	1038	995	172	0	1182	220	0	190	99	0	88
V/C Ratio(X)	0.00	1.17	0.12	1.01	0.00	1.16	0.87	0.00	1.44	0.01	0.00	0.01
Avail Cap(c_a), veh/h	93	1038	995	172	0	1182	220	0	190	292	0	261
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.13	0.13	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	71.2	0.0	19.6	64.3	0.0	65.5	67.1	0.0	67.1
Incr Delay (d2), s/veh	0.0	78.8	0.0	70.8	0.0	81.1	29.3	0.0	227.1	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	22.7	0.0	5.2	0.0	74.9	9.6	0.0	19.9	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	78.8	0.0	142.0	0.0	100.7	93.6	0.0	292.6	67.1	0.0	67.1
LnGrp LOS		F	A	F		F	F		F	E		E
Approach Vol, veh/h		1336			1542			467			2	
Approach Delay, s/veh		71.7			105.3			210.8			67.1	
Approach LOS		E			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.7	103.1		12.2	0.0	114.8		23.0
Change Period (Y+Rc), s	3.7	* 6		* 4.2	3.7	6.0		4.2
Max Green Setting (Gmax), s	8.0	* 83		* 24	8.0	81.1		18.8
Max Q Clear Time (g_c+I1), s	9.7	2.0		2.1	0.0	112.8		21.0
Green Ext Time (p_c), s	0.0	43.2		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	106.6
HCM 2010 LOS	F

Notes

Intersection						
Int Delay, s/veh	131.9					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	111	1207	875	2	12	445
Future Vol, veh/h	111	1207	875	2	12	445
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	230	-	-	250	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	4	3	6	67	0	1
Mvmt Flow	131	1420	1029	2	14	524

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1029	0	-	0	2710	1029
Stage 1	-	-	-	-	1029	-
Stage 2	-	-	-	-	1681	-
Critical Hdwy	4.14	-	-	-	6.4	6.21
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.236	-	-	-	3.5	3.309
Pot Cap-1 Maneuver	667	-	-	-	24	~ 285
Stage 1	-	-	-	-	348	-
Stage 2	-	-	-	-	168	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	667	-	-	-	19	~ 285
Mov Cap-2 Maneuver	-	-	-	-	19	-
Stage 1	-	-	-	-	348	-
Stage 2	-	-	-	-	135	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	$ 762.7
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	667	-	-	-	208
HCM Lane V/C Ratio	0.196	-	-	-	2.585
HCM Control Delay (s)	11.7	-	-	-	$ 762.7
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.7	-	-	-	45.6

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	673	14	51	1015	139	27	20	171	247	19	148
Future Volume (veh/h)	64	673	14	51	1015	139	27	20	171	247	19	148
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1900	1900	1584	1827	1900	1891	1900	1900	1883	1881
Adj Flow Rate, veh/h	68	716	15	54	1080	148	29	21	182	263	20	157
Adj No. of Lanes	1	1	1	1	1	1	0	1	0	0	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	1	4	0	0	0	0	0	1
Cap, veh/h	91	917	906	87	904	868	27	31	113	130	6	458
Arrive On Green	0.05	0.57	0.57	0.05	0.57	0.57	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1810	1600	1582	1810	1584	1521	0	108	394	292	22	1599
Grp Volume(v), veh/h	68	716	15	54	1080	148	232	0	0	283	0	157
Grp Sat Flow(s),veh/h/ln	1810	1600	1582	1810	1584	1521	502	0	0	315	0	1599
Q Serve(g_s), s	5.5	51.7	0.6	4.4	85.3	6.9	0.0	0.0	0.0	0.0	0.0	11.6
Cycle Q Clear(g_c), s	5.5	51.7	0.6	4.4	85.3	6.9	42.8	0.0	0.0	42.8	0.0	11.6
Prop In Lane	1.00		1.00	1.00		1.00	0.12		0.78	0.93		1.00
Lane Grp Cap(c), veh/h	91	917	906	87	904	868	171	0	0	136	0	458
V/C Ratio(X)	0.75	0.78	0.02	0.62	1.20	0.17	1.36	0.00	0.00	2.07	0.00	0.34
Avail Cap(c_a), veh/h	97	917	906	98	904	868	171	0	0	136	0	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	70.1	24.7	13.8	69.9	32.1	15.3	50.2	0.0	0.0	60.6	0.0	42.2
Incr Delay (d2), s/veh	26.5	4.5	0.0	10.9	98.6	0.1	194.4	0.0	0.0	507.4	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	23.8	0.3	2.5	61.9	2.9	15.1	0.0	0.0	24.8	0.0	5.2
LnGrp Delay(d),s/veh	96.5	29.2	13.8	80.8	130.7	15.4	244.6	0.0	0.0	568.0	0.0	42.9
LnGrp LOS	F	C	B	F	F	B	F			F		D
Approach Vol, veh/h		799			1282			232			440	
Approach Delay, s/veh		34.6			115.3			244.6			380.6	
Approach LOS		C			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.9	91.7		47.0	11.2	91.3		47.0
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	8.1	85.2		* 43	8.0	85.3		* 43
Max Q Clear Time (g_c+I1), s	6.4	53.7		44.8	7.5	87.3		44.8
Green Ext Time (p_c), s	0.0	15.6		0.0	0.0	0.0		0.0

Intersection Summary			
HCM 2010 Ctrl Delay		145.2	
HCM 2010 LOS		F	

Notes

Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	33	304	123	102	128	17
Future Vol, veh/h	33	304	123	102	128	17
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	5	1	2	1	2	8
Mvmt Flow	35	327	132	110	138	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	522	149	157	0	-	0
Stage 1	148	-	-	-	-	-
Stage 2	374	-	-	-	-	-
Critical Hdwy	6.45	6.21	4.12	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.309	2.218	-	-	-
Pot Cap-1 Maneuver	510	900	1423	-	-	-
Stage 1	872	-	-	-	-	-
Stage 2	689	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	459	899	1422	-	-	-
Mov Cap-2 Maneuver	459	-	-	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	620	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.5	4.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1422	-	459	899	-	-
HCM Lane V/C Ratio	0.093	-	0.077	0.364	-	-
HCM Control Delay (s)	7.8	0	13.5	11.3	-	-
HCM Lane LOS	A	A	B	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.2	1.7	-	-

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	112	0	0	117	7	0	0	0	0	0	0
Future Vol, veh/h	1	112	0	0	117	7	0	0	0	0	0	0
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Heavy Vehicles, %	0	0	0	0	8	0	0	0	0	0	0	0
Mvmt Flow	2	181	0	0	189	11	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	8.3	8.9	0
HCM LOS	A	A	-

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	0%	1%	0%	0%
Vol Thru, %	100%	99%	100%	0%
Vol Right, %	0%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	113	117	7
LT Vol	0	1	0	0
Through Vol	0	112	117	0
RT Vol	0	0	0	7
Lane Flow Rate	0	182	189	11
Geometry Grp	2	5	7	7
Degree of Util (X)	0	0.21	0.248	0.012
Departure Headway (Hd)	4.766	4.146	4.723	3.886
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	857	761	920
Service Time	2.766	2.212	2.449	1.612
HCM Lane V/C Ratio	0	0.212	0.248	0.012
HCM Control Delay	7.8	8.3	9	6.7
HCM Lane LOS	N	A	A	A
HCM 95th-tile Q	0	0.8	1	0

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	175	23	7	28	0	31	0	44	1	4	2
Future Vol, veh/h	0	175	23	7	28	0	31	0	44	1	4	2
Conflicting Peds, #/hr	1	0	1	1	0	4	2	0	1	4	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	1	0	0	0	0	0	0	5	0	25	0
Mvmt Flow	0	192	25	8	31	0	34	0	48	1	4	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	193	0	0	247	239	197	266	239	36
Stage 1	-	-	-	-	-	-	193	193	-	46	46	-
Stage 2	-	-	-	-	-	-	54	46	-	220	193	-
Critical Hdwy	-	-	-	4.1	-	-	7.1	6.5	6.25	7.1	6.75	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.75	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.75	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.5	4	3.345	3.5	4.225	3.3
Pot Cap-1 Maneuver	0	-	-	1392	-	0	711	666	837	691	624	1042
Stage 1	0	-	-	-	-	0	813	745	-	973	813	-
Stage 2	0	-	-	-	-	0	963	861	-	787	700	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1387	-	-	699	661	834	646	620	1038
Mov Cap-2 Maneuver	-	-	-	-	-	-	699	661	-	646	620	-
Stage 1	-	-	-	-	-	-	813	744	-	973	808	-
Stage 2	-	-	-	-	-	-	946	856	-	739	699	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.5	10.2	10.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	772	-	-	1387	-	705
HCM Lane V/C Ratio	0.107	-	-	0.006	-	0.011
HCM Control Delay (s)	10.2	-	-	7.6	0	10.2
HCM Lane LOS	B	-	-	A	A	B
HCM 95th %tile Q(veh)	0.4	-	-	0	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	973	82	108	639	37	116	38	218	13	12	22
Future Volume (veh/h)	56	973	82	108	639	37	116	38	218	13	12	22
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		1.00	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1865	1900	1900	1849	1900	1900	1859	1900
Adj Flow Rate, veh/h	63	1093	92	121	718	42	130	43	0	15	13	25
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	2	0	0	2	2	8	8	0	9	9	9
Cap, veh/h	204	1426	647	278	1510	88	312	78	297	134	111	144
Arrive On Green	0.11	0.40	0.40	0.15	0.44	0.44	0.18	0.18	0.00	0.18	0.18	0.18
Sat Flow, veh/h	1810	3539	1605	1810	3401	199	1067	425	1615	272	605	783
Grp Volume(v), veh/h	63	1093	92	121	374	386	173	0	0	53	0	0
Grp Sat Flow(s),veh/h/ln	1810	1770	1605	1810	1772	1828	1492	0	1615	1660	0	0
Q Serve(g_s), s	1.8	14.6	2.0	3.3	8.1	8.2	4.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.8	14.6	2.0	3.3	8.1	8.2	5.7	0.0	0.0	1.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.11	0.75		1.00	0.28		0.47
Lane Grp Cap(c), veh/h	204	1426	647	278	787	812	390	0	297	390	0	0
V/C Ratio(X)	0.31	0.77	0.14	0.44	0.48	0.48	0.44	0.00	0.00	0.14	0.00	0.00
Avail Cap(c_a), veh/h	347	1668	757	331	819	845	915	0	885	955	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	22.3	14.1	10.3	21.0	10.7	10.7	20.4	0.0	0.0	18.8	0.0	0.0
Incr Delay (d2), s/veh	0.3	1.5	0.0	0.4	0.2	0.2	0.3	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	7.3	0.9	1.7	4.0	4.1	2.4	0.0	0.0	0.7	0.0	0.0
LnGrp Delay(d),s/veh	22.6	15.6	10.4	21.4	10.9	10.9	20.7	0.0	0.0	18.9	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	C			B		
Approach Vol, veh/h		1248			881			173			53	
Approach Delay, s/veh		15.6			12.3			20.7			18.9	
Approach LOS		B			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.4	27.3		15.1	10.2	29.5		15.1
Change Period (Y+Rc), s	4.0	5.2		5.0	4.0	5.2		5.0
Max Green Setting (Gmax), s	10.0	25.8		30.0	10.5	25.3		30.0
Max Q Clear Time (g_c+I1), s	5.3	16.6		3.4	3.8	10.2		7.7
Green Ext Time (p_c), s	0.0	5.5		0.2	0.0	7.5		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	400	106	246	610	187	307	1051	451	154	516	321
Future Volume (veh/h)	213	400	106	246	610	187	307	1051	451	154	516	321
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1863	1845	1881	1881	1881	1845	1881	1863
Adj Flow Rate, veh/h	217	408	108	251	622	191	313	1072	460	157	527	328
Adj No. of Lanes	2	2	0	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	2	3	1	1	1	3	1	2
Cap, veh/h	336	761	199	336	966	423	265	1322	581	175	1149	502
Arrive On Green	0.10	0.27	0.27	0.10	0.27	0.27	0.15	0.37	0.37	0.10	0.32	0.32
Sat Flow, veh/h	3476	2789	730	3476	3539	1549	1792	3574	1570	1757	3574	1563
Grp Volume(v), veh/h	217	260	256	251	622	191	313	1072	460	157	527	328
Grp Sat Flow(s),veh/h/ln	1738	1787	1732	1738	1770	1549	1792	1787	1570	1757	1787	1563
Q Serve(g_s), s	6.2	12.8	13.0	7.3	16.0	10.6	15.3	27.9	27.0	9.1	12.1	18.6
Cycle Q Clear(g_c), s	6.2	12.8	13.0	7.3	16.0	10.6	15.3	27.9	27.0	9.1	12.1	18.6
Prop In Lane	1.00		0.42	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	336	488	473	336	966	423	265	1322	581	175	1149	502
V/C Ratio(X)	0.65	0.53	0.54	0.75	0.64	0.45	1.18	0.81	0.79	0.90	0.46	0.65
Avail Cap(c_a), veh/h	380	585	567	347	1124	492	265	1350	593	175	1177	514
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.9	31.9	32.0	45.4	33.1	31.1	44.0	29.3	29.0	46.0	27.9	30.1
Incr Delay (d2), s/veh	3.1	1.3	1.4	8.3	1.3	1.1	112.6	4.0	7.5	40.0	0.4	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	6.5	6.4	3.9	7.9	4.6	15.8	14.4	12.9	6.4	6.1	8.5
LnGrp Delay(d),s/veh	48.1	33.2	33.4	53.7	34.4	32.2	156.6	33.3	36.5	85.9	28.3	33.4
LnGrp LOS	D	C	C	D	C	C	F	C	D	F	C	C
Approach Vol, veh/h		733			1064			1845			1012	
Approach Delay, s/veh		37.7			38.6			55.0			38.9	
Approach LOS		D			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	32.8	19.0	37.8	13.7	32.8	14.0	42.8
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	10.3	33.8	15.3	34.0	11.3	32.8	10.3	39.0
Max Q Clear Time (g_c+I1), s	9.3	15.0	17.3	20.6	8.2	18.0	11.1	29.9
Green Ext Time (p_c), s	0.1	9.9	0.0	11.9	0.2	8.5	0.0	8.3

Intersection Summary	
HCM 2010 Ctrl Delay	45.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	906	242	188	599	56	283	359	216	153	272	171
Future Volume (veh/h)	203	906	242	188	599	56	283	359	216	153	272	171
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1881	1881	1881	1881	1881	1881	1881	1900	1881	1859	1900
Adj Flow Rate, veh/h	207	924	247	192	611	57	289	366	220	156	278	174
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	1	1	1	1	1	1	1	1	1	3	3
Cap, veh/h	177	1188	523	179	1188	529	200	559	329	190	538	326
Arrive On Green	0.10	0.33	0.33	0.10	0.33	0.33	0.11	0.26	0.26	0.11	0.26	0.26
Sat Flow, veh/h	1774	3574	1574	1792	3574	1592	1792	2133	1257	1792	2100	1271
Grp Volume(v), veh/h	207	924	247	192	611	57	289	305	281	156	232	220
Grp Sat Flow(s),veh/h/ln	1774	1787	1574	1792	1787	1592	1792	1787	1603	1792	1766	1606
Q Serve(g_s), s	8.3	19.4	10.3	8.3	11.4	2.1	9.3	12.7	13.0	7.1	9.4	9.8
Cycle Q Clear(g_c), s	8.3	19.4	10.3	8.3	11.4	2.1	9.3	12.7	13.0	7.1	9.4	9.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		0.79
Lane Grp Cap(c), veh/h	177	1188	523	179	1188	529	200	468	420	190	453	412
V/C Ratio(X)	1.17	0.78	0.47	1.07	0.51	0.11	1.44	0.65	0.67	0.82	0.51	0.53
Avail Cap(c_a), veh/h	177	1289	568	179	1289	574	200	561	503	194	548	498
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	25.0	22.0	37.4	22.4	19.2	36.9	27.3	27.5	36.4	26.5	26.6
Incr Delay (d2), s/veh	120.5	2.9	0.7	88.3	0.3	0.1	225.0	2.3	2.9	23.1	1.1	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	10.0	4.6	8.5	5.7	0.9	17.1	6.5	6.1	4.7	4.7	4.5
LnGrp Delay(d),s/veh	157.9	27.9	22.6	125.7	22.7	19.3	262.0	29.7	30.4	59.5	27.6	27.9
LnGrp LOS	F	C	C	F	C	B	F	C	C	E	C	C
Approach Vol, veh/h		1378			860			875			608	
Approach Delay, s/veh		46.5			45.5			106.6			35.9	
Approach LOS		D			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	26.4	12.0	32.2	13.0	25.9	12.0	32.2
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	9.0	26.1	8.3	30.0	9.3	25.8	8.3	30.0
Max Q Clear Time (g_c+I1), s	9.1	15.0	10.3	21.4	11.3	11.8	10.3	13.4
Green Ext Time (p_c), s	0.0	4.3	0.0	5.6	0.0	4.9	0.0	8.7

Intersection Summary	
HCM 2010 Ctrl Delay	58.7
HCM 2010 LOS	E

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	110	92	902	525	163	300
Future Volume (veh/h)	110	92	902	525	163	300
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1827	1881	1900	1900
Adj Flow Rate, veh/h	116	97	949	553	172	316
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	4	1	0	0
Cap, veh/h	174	155	1069	935	213	1444
Arrive On Green	0.10	0.10	0.58	0.58	0.12	0.76
Sat Flow, veh/h	1792	1599	1827	1599	1810	1900
Grp Volume(v), veh/h	116	97	949	553	172	316
Grp Sat Flow(s),veh/h/ln	1792	1599	1827	1599	1810	1900
Q Serve(g_s), s	4.5	4.2	32.0	15.7	6.6	3.4
Cycle Q Clear(g_c), s	4.5	4.2	32.0	15.7	6.6	3.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	174	155	1069	935	213	1444
V/C Ratio(X)	0.67	0.62	0.89	0.59	0.81	0.22
Avail Cap(c_a), veh/h	426	381	1248	1093	251	1671
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	31.0	12.8	9.4	30.7	2.5
Incr Delay (d2), s/veh	4.3	4.1	7.3	0.6	15.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	3.8	18.0	6.9	4.2	1.8
LnGrp Delay(d),s/veh	35.5	35.1	20.1	10.0	46.1	2.5
LnGrp LOS	D	D	C	B	D	A
Approach Vol, veh/h	213		1502			488
Approach Delay, s/veh	35.3		16.4			17.9
Approach LOS	D		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		59.6		11.8	12.5	47.1		
Change Period (Y+Rc), s		5.3		4.9	4.1	5.3		
Max Green Setting (Gmax), s		62.8		17.0	9.9	48.8		
Max Q Clear Time (g_c+I1), s		5.4		6.5	8.6	34.0		
Green Ext Time (p_c), s		12.1		0.6	0.1	7.7		

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	29	31	30	1420	361	22
Future Vol, veh/h	29	31	30	1420	361	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	40	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	15	2	5	0
Mvmt Flow	31	33	32	1495	380	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1938	380	380	0	-	0
Stage 1	380	-	-	-	-	-
Stage 2	1558	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.25	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.335	-	-	-
Pot Cap-1 Maneuver	73	671	1111	-	-	-
Stage 1	696	-	-	-	-	-
Stage 2	193	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	71	671	1111	-	-	-
Mov Cap-2 Maneuver	154	-	-	-	-	-
Stage 1	696	-	-	-	-	-
Stage 2	187	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1111	-	154	671	-	-
HCM Lane V/C Ratio	0.028	-	0.198	0.049	-	-
HCM Control Delay (s)	8.3	-	34.1	10.6	-	-
HCM Lane LOS	A	-	D	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	0.2	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	44	105	1323	8	12	388
Future Volume (veh/h)	44	105	1323	8	12	388
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1881	1387	1508	1881
Adj Flow Rate, veh/h	48	114	1438	9	13	422
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	3	1	37	26	1
Cap, veh/h	151	169	1484	930	29	1575
Arrive On Green	0.09	0.09	0.79	0.79	0.02	0.84
Sat Flow, veh/h	1723	1568	1881	1179	1436	1881
Grp Volume(v), veh/h	48	114	1438	9	13	422
Grp Sat Flow(s),veh/h/ln	1723	1568	1881	1179	1436	1881
Q Serve(g_s), s	3.5	9.2	90.4	0.2	1.2	6.2
Cycle Q Clear(g_c), s	3.5	9.2	90.4	0.2	1.2	6.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	151	169	1484	930	29	1575
V/C Ratio(X)	0.32	0.67	0.97	0.01	0.45	0.27
Avail Cap(c_a), veh/h	274	281	1543	967	76	1696
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.5	56.7	12.5	3.0	64.0	2.3
Incr Delay (d2), s/veh	1.2	4.6	15.9	0.0	10.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	8.1	52.5	0.1	0.6	3.2
LnGrp Delay(d),s/veh	57.7	61.3	28.3	3.0	74.6	2.4
LnGrp LOS	E	E	C	A	E	A
Approach Vol, veh/h	162		1447			435
Approach Delay, s/veh	60.2		28.2			4.5
Approach LOS	E		C			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		116.3		15.8	6.4	110.0		
Change Period (Y+Rc), s		5.7		* 4.2	3.7	5.7		
Max Green Setting (Gmax), s		119.1		* 21	7.0	108.4		
Max Q Clear Time (g_c+I1), s		8.2		11.2	3.2	92.4		
Green Ext Time (p_c), s		31.2		0.4	0.0	11.9		

Intersection Summary	
HCM 2010 Ctrl Delay	25.7
HCM 2010 LOS	C

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	726	81	65	1277	71	36
Future Volume (veh/h)	726	81	65	1277	71	36
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1569	1900	1900	1584	1900	1845
Adj Flow Rate, veh/h	764	85	68	1344	75	38
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	0	1	0	3
Cap, veh/h	1243	1280	87	1375	104	90
Arrive On Green	0.79	0.79	0.05	0.87	0.06	0.06
Sat Flow, veh/h	1569	1615	1810	1584	1810	1568
Grp Volume(v), veh/h	764	85	68	1344	75	38
Grp Sat Flow(s),veh/h/ln	1569	1615	1810	1584	1810	1568
Q Serve(g_s), s	27.0	1.6	5.1	101.2	5.6	3.2
Cycle Q Clear(g_c), s	27.0	1.6	5.1	101.2	5.6	3.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1243	1280	87	1375	104	90
V/C Ratio(X)	0.61	0.07	0.78	0.98	0.72	0.42
Avail Cap(c_a), veh/h	1243	1280	160	1432	211	183
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.7	3.1	64.4	7.9	63.4	62.3
Incr Delay (d2), s/veh	1.0	0.0	13.7	18.4	8.9	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	0.7	2.9	49.2	3.1	1.5
LnGrp Delay(d),s/veh	6.7	3.1	78.2	26.3	72.4	65.4
LnGrp LOS	A	A	E	C	E	E
Approach Vol, veh/h	849			1412	113	
Approach Delay, s/veh	6.4			28.8	70.0	
Approach LOS	A			C	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.3	114.5				124.9		12.1
Change Period (Y+Rc), s	3.7	6.0				6.0		4.2
Max Green Setting (Gmax), s	12.1	108.0				123.8		16.0
Max Q Clear Time (g_c+I1), s	7.1	29.0				103.2		7.6
Green Ext Time (p_c), s	0.1	36.7				15.6		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	22.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	258	706	7	3	991	727	10	32	14	286	18	121
Future Volume (veh/h)	258	706	7	3	991	727	10	32	14	286	18	121
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1569	1900	1900	1584	1845	1900	1836	1900	1863	1900	1845
Adj Flow Rate, veh/h	280	767	8	3	1077	790	11	35	15	311	20	132
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	2	2	0	1	3	0	5	5	2	0	3
Cap, veh/h	314	1725	18	15	1214	833	140	95	41	440	243	197
Arrive On Green	0.18	0.57	0.57	0.01	0.40	0.40	0.08	0.08	0.08	0.13	0.13	0.13
Sat Flow, veh/h	1792	3022	32	1810	3010	1568	1810	1220	523	3442	1900	1544
Grp Volume(v), veh/h	280	378	397	3	1077	790	11	0	50	311	20	132
Grp Sat Flow(s),veh/h/ln	1792	1490	1563	1810	1505	1568	1810	0	1743	1721	1900	1544
Q Serve(g_s), s	13.9	13.3	13.3	0.2	30.3	36.8	0.5	0.0	2.5	7.9	0.8	7.4
Cycle Q Clear(g_c), s	13.9	13.3	13.3	0.2	30.3	36.8	0.5	0.0	2.5	7.9	0.8	7.4
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	314	851	892	15	1214	833	140	0	135	440	243	197
V/C Ratio(X)	0.89	0.44	0.44	0.21	0.89	0.95	0.08	0.00	0.37	0.71	0.08	0.67
Avail Cap(c_a), veh/h	324	851	892	198	1214	833	179	0	172	1056	583	474
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	11.3	11.3	45.0	25.3	18.7	39.0	0.0	39.9	38.1	35.1	37.9
Incr Delay (d2), s/veh	24.7	0.4	0.3	6.8	8.2	19.8	0.2	0.0	1.7	2.1	0.1	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	5.5	5.8	0.1	14.0	24.3	0.3	0.0	1.3	3.9	0.5	3.4
LnGrp Delay(d),s/veh	61.5	11.6	11.6	51.8	33.5	38.4	39.3	0.0	41.6	40.3	35.2	41.8
LnGrp LOS	E	B	B	D	C	D	D		D	D	D	D
Approach Vol, veh/h		1055			1870			61			463	
Approach Delay, s/veh		24.8			35.6			41.2			40.5	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	58.1		16.9	20.2	42.8		11.3
Change Period (Y+Rc), s	* 4.2	6.0		5.3	* 4.2	6.0		4.2
Max Green Setting (Gmax), s	* 10	43.3		28.0	* 17	36.8		9.0
Max Q Clear Time (g_c+I1), s	2.2	15.3		9.9	15.9	38.8		4.5
Green Ext Time (p_c), s	0.0	15.6		1.7	0.1	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	33.1
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	897	0	0	1057	12	0	0	0	0	0	659
Future Volume (veh/h)	109	897	0	0	1057	12	0	0	0	0	0	659
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1681	1569	0	0	1569	1900				0	1863	1863
Adj Flow Rate, veh/h	121	997	0	0	1174	13				0	0	732
Adj No. of Lanes	1	2	0	0	2	0				0	1	2
Peak Hour Factor	0.90	0.90	0.92	0.92	0.90	0.90				0.90	0.92	0.90
Percent Heavy Veh, %	13	2	0	0	2	2				0	2	2
Cap, veh/h	157	2732	0	0	2305	26				0	0	0
Arrive On Green	0.10	0.92	0.00	0.00	0.76	0.76				0.00	0.00	0.00
Sat Flow, veh/h	1601	3059	0	0	3099	33					0	
Grp Volume(v), veh/h	121	997	0	0	579	608					0.0	
Grp Sat Flow(s),veh/h/ln	1601	1490	0	0	1491	1563						
Q Serve(g_s), s	5.3	3.0	0.0	0.0	10.8	10.8						
Cycle Q Clear(g_c), s	5.3	3.0	0.0	0.0	10.8	10.8						
Prop In Lane	1.00		0.00	0.00		0.02						
Lane Grp Cap(c), veh/h	157	2732	0	0	1138	1193						
V/C Ratio(X)	0.77	0.36	0.00	0.00	0.51	0.51						
Avail Cap(c_a), veh/h	1179	4430	0	0	1138	1193						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	31.7	0.4	0.0	0.0	3.3	3.3						
Incr Delay (d2), s/veh	7.8	0.1	0.0	0.0	0.4	0.4						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	2.7	1.1	0.0	0.0	4.5	4.7						
LnGrp Delay(d),s/veh	39.5	0.5	0.0	0.0	3.8	3.7						
LnGrp LOS	D	A			A	A						
Approach Vol, veh/h		1118			1187							
Approach Delay, s/veh		4.7			3.7							
Approach LOS		A			A							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		72.0			11.0	60.9		
Change Period (Y+Rc), s		* 6			4.0	6.0		
Max Green Setting (Gmax), s		* 1.1E2			53.0	47.0		
Max Q Clear Time (g_c+I1), s		5.0			7.3	12.8		
Green Ext Time (p_c), s		8.0			0.4	14.7		

Intersection Summary	
HCM 2010 Ctrl Delay	4.2
HCM 2010 LOS	A

Notes

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	80	808	962	127	349	121
Future Volume (veh/h)	80	808	962	127	349	121
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1584	1584	1845	1900	1881
Adj Flow Rate, veh/h	84	851	1013	134	367	127
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	0	1
Cap, veh/h	94	1142	1008	997	363	321
Arrive On Green	0.05	0.72	0.64	0.64	0.20	0.20
Sat Flow, veh/h	1792	1584	1584	1568	1810	1599
Grp Volume(v), veh/h	84	851	1013	134	367	127
Grp Sat Flow(s),veh/h/ln	1792	1584	1584	1568	1810	1599
Q Serve(g_s), s	6.1	42.1	82.7	4.4	26.1	9.0
Cycle Q Clear(g_c), s	6.1	42.1	82.7	4.4	26.1	9.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	94	1142	1008	997	363	321
V/C Ratio(X)	0.90	0.75	1.01	0.13	1.01	0.40
Avail Cap(c_a), veh/h	94	1142	1008	997	363	321
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.2	11.0	23.7	9.4	52.0	45.1
Incr Delay (d2), s/veh	60.5	2.9	29.6	0.1	49.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	19.1	44.1	1.9	18.0	8.3
LnGrp Delay(d),s/veh	121.8	13.9	53.3	9.5	101.8	45.9
LnGrp LOS	F	B	F	A	F	D
Approach Vol, veh/h		935	1147		494	
Approach Delay, s/veh		23.6	48.2		87.4	
Approach LOS		C	D		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		99.7		30.3	11.0	88.7		
Change Period (Y+Rc), s		6.0		* 4.2	* 4.2	6.0		
Max Green Setting (Gmax), s		93.7		* 26	* 6.8	82.7		
Max Q Clear Time (g_c+I1), s		44.1		28.1	8.1	84.7		
Green Ext Time (p_c), s		24.9		0.0	0.0	0.0		

Intersection Summary

HCM 2010 Ctrl Delay	46.8
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	1060	71	11	975	30	44	4	9	21	2	44
Future Volume (veh/h)	65	1060	71	11	975	30	44	4	9	21	2	44
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1584	1900	1900	1584	1900	1900	1900	1900	1900	1900	1845
Adj Flow Rate, veh/h	67	1093	73	11	1005	31	45	4	9	22	2	45
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	0	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	1	0	0	1	0	0	0	0	0	0	3
Cap, veh/h	87	1236	1260	28	1185	1208	138	38	85	151	11	114
Arrive On Green	0.05	0.78	0.78	0.02	0.75	0.75	0.07	0.07	0.07	0.07	0.07	0.07
Sat Flow, veh/h	1810	1584	1615	1810	1584	1615	1380	521	1172	1202	152	1568
Grp Volume(v), veh/h	67	1093	73	11	1005	31	45	0	13	24	0	45
Grp Sat Flow(s),veh/h/ln	1810	1584	1615	1810	1584	1615	1380	0	1693	1355	0	1568
Q Serve(g_s), s	4.0	53.2	1.1	0.7	47.6	0.5	3.5	0.0	0.8	1.5	0.0	3.0
Cycle Q Clear(g_c), s	4.0	53.2	1.1	0.7	47.6	0.5	5.7	0.0	0.8	2.2	0.0	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.69	0.92		1.00
Lane Grp Cap(c), veh/h	87	1236	1260	28	1185	1208	138	0	123	163	0	114
V/C Ratio(X)	0.77	0.88	0.06	0.39	0.85	0.03	0.33	0.00	0.11	0.15	0.00	0.39
Avail Cap(c_a), veh/h	110	1481	1509	100	1472	1501	393	0	436	431	0	403
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.2	8.5	2.8	53.0	9.5	3.5	50.5	0.0	47.1	48.0	0.0	48.2
Incr Delay (d2), s/veh	22.6	6.3	0.0	8.5	4.5	0.0	1.4	0.0	0.4	0.4	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	24.9	0.5	0.4	21.8	0.2	1.4	0.0	0.4	0.7	0.0	1.4
LnGrp Delay(d),s/veh	73.8	14.8	2.8	61.6	13.9	3.5	51.9	0.0	47.5	48.4	0.0	50.4
LnGrp LOS	E	B	A	E	B	A	D		D	D		D
Approach Vol, veh/h		1233			1047			58			69	
Approach Delay, s/veh		17.3			14.1			50.9			49.7	
Approach LOS		B			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.4	90.9		12.5	8.9	87.4		12.5
Change Period (Y+Rc), s	3.7	6.0		4.6	3.7	6.0		4.6
Max Green Setting (Gmax), s	6.3	101.7		28.0	6.6	101.1		28.0
Max Q Clear Time (g_c+I1), s	2.7	55.2		5.0	6.0	49.6		7.7
Green Ext Time (p_c), s	0.0	29.7		0.4	0.0	31.6		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	17.7
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	836	146	212	815	203	341
Future Volume (veh/h)	836	146	212	815	203	341
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1553	1863	1881	1584	1863	1827
Adj Flow Rate, veh/h	871	152	221	849	211	355
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	2	1	1	2	4
Cap, veh/h	830	846	318	1059	404	496
Arrive On Green	0.53	0.53	0.09	0.67	0.23	0.23
Sat Flow, veh/h	1553	1583	3476	1584	1774	1553
Grp Volume(v), veh/h	871	152	221	849	211	355
Grp Sat Flow(s),veh/h/ln	1553	1583	1738	1584	1774	1553
Q Serve(g_s), s	52.5	4.9	6.1	37.6	10.2	19.8
Cycle Q Clear(g_c), s	52.5	4.9	6.1	37.6	10.2	19.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	830	846	318	1059	404	496
V/C Ratio(X)	1.05	0.18	0.70	0.80	0.52	0.72
Avail Cap(c_a), veh/h	830	846	322	1061	433	521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	11.8	43.3	11.6	33.3	29.5
Incr Delay (d2), s/veh	45.0	0.1	6.3	4.5	1.0	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	32.7	2.1	3.2	17.6	5.2	9.1
LnGrp Delay(d),s/veh	67.9	11.9	49.6	16.1	34.3	34.0
LnGrp LOS	F	B	D	B	C	C
Approach Vol, veh/h	1023			1070	566	
Approach Delay, s/veh	59.6			23.1	34.1	
Approach LOS	E			C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	13.2	58.5				71.7		26.6
Change Period (Y+Rc), s	4.2	6.0				6.0		4.2
Max Green Setting (Gmax), s	9.1	52.5				65.8		24.0
Max Q Clear Time (g_c+I1), s	8.1	54.5				39.6		21.8
Green Ext Time (p_c), s	0.1	0.0				10.4		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	39.5
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1084	72	193	958	8	76	0	139	8	1	4
Future Volume (veh/h)	5	1084	72	193	958	8	76	0	139	8	1	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1584	1845	1863	1569	1900	1900	1881	1863	1900	1900	1900
Adj Flow Rate, veh/h	5	1129	75	201	998	8	79	0	145	8	1	4
Adj No. of Lanes	1	1	1	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	3	2	2	2	0	0	2	0	0	0
Cap, veh/h	18	1001	967	177	1125	9	48	0	451	48	3	301
Arrive On Green	0.01	0.63	0.62	0.20	1.00	1.00	0.18	0.00	0.18	0.19	0.19	0.19
Sat Flow, veh/h	1810	1584	1568	1774	1554	12	0	0	1583	12	19	1615
Grp Volume(v), veh/h	5	1129	75	201	0	1006	79	0	145	9	0	4
Grp Sat Flow(s),veh/h/ln	1810	1584	1568	1774	0	1567	0	0	1583	31	0	1615
Q Serve(g_s), s	0.4	94.8	2.9	15.0	0.0	0.0	0.0	0.0	10.8	0.3	0.0	0.3
Cycle Q Clear(g_c), s	0.4	94.8	2.9	15.0	0.0	0.0	27.7	0.0	10.8	28.0	0.0	0.3
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.89		1.00
Lane Grp Cap(c), veh/h	18	1001	967	177	0	1134	48	0	451	51	0	301
V/C Ratio(X)	0.28	1.13	0.08	1.13	0.00	0.89	1.65	0.00	0.32	0.18	0.00	0.01
Avail Cap(c_a), veh/h	100	1001	967	177	0	1134	48	0	451	51	0	301
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.30	0.30	0.30	0.09	0.00	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	73.7	27.6	11.6	60.0	0.0	0.0	74.9	0.0	42.2	65.1	0.0	49.7
Incr Delay (d2), s/veh	2.6	61.9	0.0	66.8	0.0	1.1	366.4	0.0	0.4	2.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	58.4	1.3	10.6	0.0	0.3	6.9	0.0	4.8	0.4	0.0	0.1
LnGrp Delay(d),s/veh	76.3	89.5	11.6	126.8	0.0	1.1	441.3	0.0	42.7	67.5	0.0	49.8
LnGrp LOS	E	F	B	F		A	F		D	E		D
Approach Vol, veh/h		1209			1207			224			13	
Approach Delay, s/veh		84.6			22.0			183.2			62.0	
Approach LOS		F			C			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.0	98.8		32.2	5.2	112.6		32.2
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	15.3	92.8		* 28	8.3	99.8		* 28
Max Q Clear Time (g_c+I1), s	17.0	96.8		30.0	2.4	2.0		29.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	21.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	64.3
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	1138	74	163	1115	2	55	0	83	1	0	1
Future Volume (veh/h)	3	1138	74	163	1115	2	55	0	83	1	0	1
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1569	1881	1863	1569	1900	1900	1900	1845	1900	1900	1900
Adj Flow Rate, veh/h	3	1185	77	170	1161	2	57	0	86	1	0	1
Adj No. of Lanes	1	1	1	2	1	0	0	1	1	0	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	1	2	2	2	0	0	3	0	0	0
Cap, veh/h	8	1149	1157	177	1221	2	93	0	78	93	0	83
Arrive On Green	0.01	1.00	1.00	0.05	0.78	0.77	0.05	0.00	0.05	0.05	0.00	0.05
Sat Flow, veh/h	1810	1569	1579	3442	1566	3	1810	0	1526	1809	0	1615
Grp Volume(v), veh/h	3	1185	77	170	0	1163	57	0	86	1	0	1
Grp Sat Flow(s),veh/h/ln	1810	1569	1579	1721	0	1568	1810	0	1526	1810	0	1615
Q Serve(g_s), s	0.2	0.0	0.0	7.4	0.0	94.8	4.6	0.0	7.7	0.1	0.0	0.1
Cycle Q Clear(g_c), s	0.2	0.0	0.0	7.4	0.0	94.8	4.6	0.0	7.7	0.1	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	8	1149	1157	177	0	1223	93	0	78	93	0	83
V/C Ratio(X)	0.39	1.03	0.07	0.96	0.00	0.95	0.61	0.00	1.10	0.01	0.00	0.01
Avail Cap(c_a), veh/h	93	1149	1157	177	0	1223	93	0	78	286	0	255
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	74.2	0.0	0.0	71.0	0.0	14.1	69.7	0.0	71.2	67.5	0.0	67.5
Incr Delay (d2), s/veh	2.9	17.7	0.0	56.5	0.0	16.4	11.4	0.0	130.9	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	5.6	0.0	4.9	0.0	46.0	2.6	0.0	6.1	0.0	0.0	0.0
LnGrp Delay(d),s/veh	77.0	17.7	0.0	127.5	0.0	30.5	81.1	0.0	202.4	67.6	0.0	67.6
LnGrp LOS	E	F	A	F		C	F		F	E		E
Approach Vol, veh/h		1265			1333			143			2	
Approach Delay, s/veh		16.7			42.9			154.0			67.6	
Approach LOS		B			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.7	113.9		12.2	4.6	121.0		12.2
Change Period (Y+Rc), s	3.7	* 6		* 4.2	3.7	6.0		4.2
Max Green Setting (Gmax), s	8.0	* 94		* 24	8.0	91.9		8.0
Max Q Clear Time (g_c+I1), s	9.4	2.0		2.1	2.2	96.8		9.7
Green Ext Time (p_c), s	0.0	31.4		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.6
HCM 2010 LOS	D

Notes

Intersection						
Int Delay, s/veh	4.2					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	78	1177	1231	55	12	51
Future Vol, veh/h	78	1177	1231	55	12	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	230	-	-	250	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	1	2	0	0	0
Mvmt Flow	81	1226	1282	57	13	53

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1282	0	-	0	2671	1282
Stage 1	-	-	-	-	1282	-
Stage 2	-	-	-	-	1389	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	548	-	-	-	25	204
Stage 1	-	-	-	-	263	-
Stage 2	-	-	-	-	233	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	548	-	-	-	21	204
Mov Cap-2 Maneuver	-	-	-	-	21	-
Stage 1	-	-	-	-	263	-
Stage 2	-	-	-	-	199	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	156.5
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	548	-	-	-	77
HCM Lane V/C Ratio	0.148	-	-	-	0.852
HCM Control Delay (s)	12.7	-	-	-	156.5
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.5	-	-	-	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	826	32	93	774	276	42	26	80	108	23	62
Future Volume (veh/h)	78	826	32	93	774	276	42	26	80	108	23	62
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1900	1863	1600	1881	1900	1869	1900	1900	1735	1652
Adj Flow Rate, veh/h	91	960	37	108	900	321	49	30	93	126	27	72
Adj No. of Lanes	1	1	1	1	1	1	0	1	0	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	2	0	1	3	3	3	12	12	15
Cap, veh/h	115	960	949	120	966	946	39	32	38	165	27	307
Arrive On Green	0.06	0.60	0.60	0.07	0.60	0.60	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1810	1600	1582	1774	1600	1566	0	148	175	504	122	1404
Grp Volume(v), veh/h	91	960	37	108	900	321	172	0	0	153	0	72
Grp Sat Flow(s),veh/h/ln	1810	1600	1582	1774	1600	1566	323	0	0	626	0	1404
Q Serve(g_s), s	6.0	72.0	1.1	7.3	61.1	12.3	0.0	0.0	0.0	0.0	0.0	5.1
Cycle Q Clear(g_c), s	6.0	72.0	1.1	7.3	61.1	12.3	26.2	0.0	0.0	26.2	0.0	5.1
Prop In Lane	1.00		1.00	1.00		1.00	0.28		0.54	0.82		1.00
Lane Grp Cap(c), veh/h	115	960	949	120	966	946	109	0	0	191	0	307
V/C Ratio(X)	0.79	1.00	0.04	0.90	0.93	0.34	1.58	0.00	0.00	0.80	0.00	0.23
Avail Cap(c_a), veh/h	121	960	949	120	966	946	109	0	0	191	0	307
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.4	24.0	9.8	55.6	21.5	11.8	44.7	0.0	0.0	48.1	0.0	38.6
Incr Delay (d2), s/veh	29.1	29.0	0.0	53.4	15.2	0.3	298.9	0.0	0.0	21.8	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	39.2	0.5	5.3	30.8	5.3	12.7	0.0	0.0	6.2	0.0	2.0
LnGrp Delay(d),s/veh	84.5	53.0	9.9	109.0	36.7	12.1	343.6	0.0	0.0	70.0	0.0	39.2
LnGrp LOS	F	D	A	F	D	B	F			E		D
Approach Vol, veh/h		1088			1329			172			225	
Approach Delay, s/veh		54.2			36.6			343.6			60.1	
Approach LOS		D			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.8	78.0		30.2	11.3	78.5		30.2
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	8.1	72.0		* 26	8.0	72.1		* 26
Max Q Clear Time (g_c+I1), s	9.3	74.0		28.2	8.0	63.1		28.2
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	7.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	64.1
HCM 2010 LOS	E

Notes

Intersection												
Int Delay, s/veh	8.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	12	136	17	2	6	364	27	32	5	16	3
Future Vol, veh/h	12	12	136	17	2	6	364	27	32	5	16	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	15	2	10	2	2	2	2	4	2	2	11	0
Mvmt Flow	13	13	148	18	2	7	396	29	35	5	17	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	872	885	19	874	870	47	21	0	0	64	0	0
Stage 1	30	30	-	838	838	-	-	-	-	-	-	-
Stage 2	842	855	-	36	32	-	-	-	-	-	-	-
Critical Hdwy	7.25	6.52	6.3	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.25	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.25	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.635	4.018	3.39	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	257	284	1036	270	290	1022	1595	-	-	1538	-	-
Stage 1	954	870	-	361	382	-	-	-	-	-	-	-
Stage 2	341	375	-	980	868	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	203	210	1036	177	215	1022	1595	-	-	1538	-	-
Mov Cap-2 Maneuver	203	210	-	177	215	-	-	-	-	-	-	-
Stage 1	708	867	-	268	283	-	-	-	-	-	-	-
Stage 2	249	278	-	825	865	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.5	23.2	6.9	1.5
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1595	-	-	206	1036	225	1538	-	-
HCM Lane V/C Ratio	0.248	-	-	0.127	0.143	0.121	0.004	-	-
HCM Control Delay (s)	8	0	-	25	9.1	23.2	7.3	0	-
HCM Lane LOS	A	A	-	D	A	C	A	A	-
HCM 95th %tile Q(veh)	1	-	-	0.4	0.5	0.4	0	-	-

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	13	2	7	34	4	20	0	7	0	0	0
Future Vol, veh/h	4	13	2	7	34	4	20	0	7	0	0	0
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Heavy Vehicles, %	0	0	0	0	8	0	0	0	0	0	0	0
Mvmt Flow	6	21	3	11	55	6	32	0	11	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	7.3	7.7	7.3
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	74%	21%	17%	0%
Vol Thru, %	0%	68%	83%	0%
Vol Right, %	26%	11%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	27	19	41	4
LT Vol	20	4	7	0
Through Vol	0	13	34	0
RT Vol	7	2	0	4
Lane Flow Rate	44	31	66	6
Geometry Grp	2	5	7	7
Degree of Util (X)	0.049	0.035	0.086	0.007
Departure Headway (Hd)	4.068	4.111	4.678	4.028
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	871	867	766	888
Service Time	2.136	2.154	2.403	1.753
HCM Lane V/C Ratio	0.051	0.036	0.086	0.007
HCM Control Delay	7.3	7.3	7.8	6.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.1	0.3	0

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	15	53	23	64	0	49	0	17	0	21	7
Future Vol, veh/h	0	15	53	23	64	0	49	0	17	0	21	7
Conflicting Peds, #/hr	4	0	1	0	0	3	1	0	0	3	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	5	0	5	0	7	0	13	0	10	0
Mvmt Flow	0	17	60	26	72	0	55	0	19	0	24	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	18	0	0	161	142	21	153	142	76
Stage 1	-	-	-	-	-	-	18	18	-	124	124	-
Stage 2	-	-	-	-	-	-	143	124	-	29	18	-
Critical Hdwy	-	-	-	4.1	-	-	7.17	6.5	6.33	7.1	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.17	5.5	-	6.1	5.6	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.17	5.5	-	6.1	5.6	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.563	4	3.417	3.5	4.09	3.3
Pot Cap-1 Maneuver	0	-	-	1612	-	0	793	753	1026	819	735	991
Stage 1	0	-	-	-	-	0	988	884	-	885	778	-
Stage 2	0	-	-	-	-	0	848	797	-	993	865	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1608	-	-	754	740	1023	791	722	988
Mov Cap-2 Maneuver	-	-	-	-	-	-	754	740	-	791	722	-
Stage 1	-	-	-	-	-	-	988	883	-	885	765	-
Stage 2	-	-	-	-	-	-	799	783	-	972	864	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.9	9.9	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	809	-	-	1608	-	774
HCM Lane V/C Ratio	0.092	-	-	0.016	-	0.041
HCM Control Delay (s)	9.9	-	-	7.3	0	9.8
HCM Lane LOS	A	-	-	A	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	491	66	133	1356	21	85	8	79	25	25	24
Future Volume (veh/h)	22	491	66	133	1356	21	85	8	79	25	25	24
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		1.00	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1845	1863	1862	1900	1900	1833	1743	1900	1876	1900
Adj Flow Rate, veh/h	24	546	73	148	1507	23	94	9	0	28	28	27
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	4	3	2	2	2	0	0	9	0	0	0
Cap, veh/h	101	1519	682	291	1946	30	355	28	264	152	135	96
Arrive On Green	0.06	0.44	0.44	0.16	0.55	0.52	0.18	0.18	0.00	0.18	0.18	0.16
Sat Flow, veh/h	1810	3471	1559	1774	3567	54	1280	159	1482	356	759	538
Grp Volume(v), veh/h	24	546	73	148	747	783	103	0	0	83	0	0
Grp Sat Flow(s),veh/h/ln	1810	1736	1559	1774	1769	1852	1438	0	1482	1652	0	0
Q Serve(g_s), s	0.7	5.7	1.5	4.2	18.1	18.2	0.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.7	5.7	1.5	4.2	18.1	18.2	3.0	0.0	0.0	2.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	0.91		1.00	0.34		0.33
Lane Grp Cap(c), veh/h	101	1519	682	291	965	1011	383	0	264	383	0	0
V/C Ratio(X)	0.24	0.36	0.11	0.51	0.77	0.77	0.27	0.00	0.00	0.22	0.00	0.00
Avail Cap(c_a), veh/h	348	2100	943	455	1183	1239	908	0	842	1004	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.6	10.2	9.0	20.8	9.7	9.8	19.6	0.0	0.0	19.5	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.1	0.0	0.5	2.0	1.9	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.7	0.7	2.1	9.3	9.7	1.4	0.0	0.0	1.1	0.0	0.0
LnGrp Delay(d),s/veh	25.1	10.3	9.1	21.3	11.8	11.7	19.7	0.0	0.0	19.6	0.0	0.0
LnGrp LOS	C	B	A	C	B	B	B			B		
Approach Vol, veh/h		643			1678			103			83	
Approach Delay, s/veh		10.7			12.6			19.7			19.6	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.9	27.9		13.7	7.0	33.8		13.7
Change Period (Y+Rc), s	4.0	5.2		5.0	4.0	5.2		5.0
Max Green Setting (Gmax), s	14.0	31.8		30.0	10.5	35.3		30.0
Max Q Clear Time (g_c+I1), s	6.2	7.7		4.2	2.7	20.2		5.0
Green Ext Time (p_c), s	0.0	10.7		0.2	0.0	8.4		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	12.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	450	129	369	408	95	145	330	175	93	749	310
Future Volume (veh/h)	200	450	129	369	408	95	145	330	175	93	749	310
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1837	1900	1881	1827	1863	1810	1863	1845	1759	1827	1810
Adj Flow Rate, veh/h	217	489	140	401	443	103	158	359	190	101	814	337
Adj No. of Lanes	2	2	0	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	4	2	5	2	3	8	4	5
Cap, veh/h	321	775	221	439	1120	503	182	1199	526	149	1118	484
Arrive On Green	0.09	0.29	0.28	0.13	0.32	0.32	0.11	0.34	0.34	0.09	0.32	0.32
Sat Flow, veh/h	3408	2670	759	3476	3471	1558	1723	3539	1551	1675	3471	1504
Grp Volume(v), veh/h	217	318	311	401	443	103	158	359	190	101	814	337
Grp Sat Flow(s),veh/h/ln	1704	1745	1684	1738	1736	1558	1723	1770	1551	1675	1736	1504
Q Serve(g_s), s	6.3	16.3	16.5	11.7	10.2	4.9	9.3	7.7	9.5	6.0	21.4	20.1
Cycle Q Clear(g_c), s	6.3	16.3	16.5	11.7	10.2	4.9	9.3	7.7	9.5	6.0	21.4	20.1
Prop In Lane	1.00		0.45	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	321	507	489	439	1120	503	182	1199	526	149	1118	484
V/C Ratio(X)	0.68	0.63	0.63	0.91	0.40	0.20	0.87	0.30	0.36	0.68	0.73	0.70
Avail Cap(c_a), veh/h	397	600	580	439	1228	551	184	1224	537	163	1167	506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	31.7	31.9	44.4	27.1	25.3	45.3	25.0	25.6	45.5	30.9	30.5
Incr Delay (d2), s/veh	3.3	2.1	2.3	23.3	0.3	0.3	32.6	0.2	0.6	9.7	2.5	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	8.2	8.0	7.0	4.9	2.1	6.1	3.8	4.2	3.2	10.6	8.9
LnGrp Delay(d),s/veh	48.4	33.8	34.1	67.7	27.4	25.6	77.9	25.2	26.2	55.1	33.3	34.9
LnGrp LOS	D	C	C	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h		846			947			707			1252	
Approach Delay, s/veh		37.7			44.3			37.3			35.5	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	33.9	14.9	37.1	13.7	37.2	13.1	38.9
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	13.3	34.8	11.3	34.0	12.3	35.8	10.3	35.0
Max Q Clear Time (g_c+I1), s	13.7	18.5	11.3	23.4	8.3	12.2	8.0	11.5
Green Ext Time (p_c), s	0.0	8.2	0.0	8.2	0.2	10.0	0.0	15.0

Intersection Summary	
HCM 2010 Ctrl Delay	38.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	461	225	177	837	71	310	245	84	74	305	116
Future Volume (veh/h)	128	461	225	177	837	71	310	245	84	74	305	116
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1792	1845	1863	1900	1845	1836	1900	1863	1788	1900
Adj Flow Rate, veh/h	136	490	239	188	890	76	330	261	89	79	324	123
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	3	6	3	2	0	3	3	3	2	6	6
Cap, veh/h	166	1039	449	205	1120	510	344	801	266	155	493	184
Arrive On Green	0.10	0.30	0.30	0.12	0.32	0.32	0.20	0.31	0.31	0.09	0.20	0.20
Sat Flow, veh/h	1723	3505	1513	1757	3539	1612	1757	2565	853	1774	2420	901
Grp Volume(v), veh/h	136	490	239	188	890	76	330	175	175	79	226	221
Grp Sat Flow(s),veh/h/ln	1723	1752	1513	1757	1770	1612	1757	1744	1674	1774	1698	1622
Q Serve(g_s), s	6.8	10.1	11.7	9.4	20.3	3.0	16.4	6.8	7.1	3.8	10.8	11.1
Cycle Q Clear(g_c), s	6.8	10.1	11.7	9.4	20.3	3.0	16.4	6.8	7.1	3.8	10.8	11.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.51	1.00		0.56
Lane Grp Cap(c), veh/h	166	1039	449	205	1120	510	344	544	523	155	346	330
V/C Ratio(X)	0.82	0.47	0.53	0.92	0.79	0.15	0.96	0.32	0.33	0.51	0.65	0.67
Avail Cap(c_a), veh/h	173	1189	513	205	1257	572	344	653	627	201	496	473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	25.4	26.0	38.6	27.6	21.7	35.2	23.3	23.4	38.6	32.3	32.5
Incr Delay (d2), s/veh	24.7	0.3	1.0	40.9	3.3	0.1	37.9	0.4	0.5	2.6	2.5	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	4.9	5.0	6.9	10.4	1.3	11.6	3.3	3.3	2.0	5.3	5.2
LnGrp Delay(d),s/veh	63.9	25.8	27.0	79.6	30.9	21.8	73.2	23.7	23.8	41.2	34.8	35.3
LnGrp LOS	E	C	C	E	C	C	E	C	C	D	C	D
Approach Vol, veh/h		865			1154			680			526	
Approach Delay, s/veh		32.1			38.2			47.7			36.0	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	32.2	14.0	30.8	21.0	22.6	12.2	32.6
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	10.3	33.1	10.3	30.0	17.3	25.8	8.9	31.4
Max Q Clear Time (g_c+I1), s	15.8	9.1	11.4	13.7	18.4	13.1	8.8	22.3
Green Ext Time (p_c), s	0.1	4.3	0.0	7.9	0.0	3.4	0.0	5.4

Intersection Summary	
HCM 2010 Ctrl Delay	38.2
HCM 2010 LOS	D

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	488	161	306	101	131	586
Future Volume (veh/h)	488	161	306	101	131	586
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1827	1881	1900	1900
Adj Flow Rate, veh/h	555	183	348	115	149	666
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	1	1	4	1	0	0
Cap, veh/h	649	579	506	443	221	889
Arrive On Green	0.36	0.36	0.28	0.28	0.12	0.47
Sat Flow, veh/h	1792	1599	1827	1599	1810	1900
Grp Volume(v), veh/h	555	183	348	115	149	666
Grp Sat Flow(s),veh/h/ln	1792	1599	1827	1599	1810	1900
Q Serve(g_s), s	17.2	4.9	10.2	3.4	4.7	17.2
Cycle Q Clear(g_c), s	17.2	4.9	10.2	3.4	4.7	17.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	649	579	506	443	221	889
V/C Ratio(X)	0.86	0.32	0.69	0.26	0.67	0.75
Avail Cap(c_a), veh/h	870	777	845	739	269	1290
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.7	13.8	19.4	16.9	25.2	13.1
Incr Delay (d2), s/veh	6.5	0.3	1.7	0.3	4.9	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	5.0	5.4	1.5	2.7	9.2
LnGrp Delay(d),s/veh	24.1	14.1	21.0	17.2	30.0	14.5
LnGrp LOS	C	B	C	B	C	B
Approach Vol, veh/h	738		463			815
Approach Delay, s/veh	21.6		20.1			17.4
Approach LOS	C		C			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		33.3		26.6	11.4	21.9		
Change Period (Y+Rc), s		5.3		4.9	4.1	5.3		
Max Green Setting (Gmax), s		40.7		29.1	8.9	27.7		
Max Q Clear Time (g_c+I1), s		19.2		19.2	6.7	12.2		
Green Ext Time (p_c), s		4.8		2.5	0.1	4.3		

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	28	45	18	352	1078	44
Future Vol, veh/h	28	45	18	352	1078	44
Conflicting Peds, #/hr	1	0	0	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	40	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	12	20	19	3	3	5
Mvmt Flow	32	52	21	405	1239	51

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1687	1240	1240	0	-	0
Stage 1	1240	-	-	-	-	-
Stage 2	447	-	-	-	-	-
Critical Hdwy	6.52	6.4	4.29	-	-	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.48	2.371	-	-	-
Pot Cap-1 Maneuver	97	196	507	-	-	-
Stage 1	260	-	-	-	-	-
Stage 2	624	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	93	196	507	-	-	-
Mov Cap-2 Maneuver	199	-	-	-	-	-
Stage 1	260	-	-	-	-	-
Stage 2	598	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	28.5	0.6	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	507	-	199	196	-	-
HCM Lane V/C Ratio	0.041	-	0.162	0.264	-	-
HCM Control Delay (s)	12.4	-	26.5	29.8	-	-
HCM Lane LOS	B	-	D	D	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	1	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	13	19	362	48	103	967
Future Volume (veh/h)	13	19	362	48	103	967
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1532	1583	1845	1792	1696	1863
Adj Flow Rate, veh/h	14	21	393	52	112	1051
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	20	3	6	12	2
Cap, veh/h	93	250	902	745	197	1302
Arrive On Green	0.06	0.06	0.49	0.49	0.12	0.70
Sat Flow, veh/h	1459	1346	1845	1524	1616	1863
Grp Volume(v), veh/h	14	21	393	52	112	1051
Grp Sat Flow(s),veh/h/ln	1459	1346	1845	1524	1616	1863
Q Serve(g_s), s	0.4	0.5	5.8	0.8	2.7	16.3
Cycle Q Clear(g_c), s	0.4	0.5	5.8	0.8	2.7	16.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	93	250	902	745	197	1302
V/C Ratio(X)	0.15	0.08	0.44	0.07	0.57	0.81
Avail Cap(c_a), veh/h	733	840	1492	1233	449	2189
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.5	14.1	6.9	5.7	17.3	4.3
Incr Delay (d2), s/veh	0.7	0.1	0.4	0.0	2.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.4	2.9	0.3	1.4	8.4
LnGrp Delay(d),s/veh	19.2	14.2	7.3	5.7	19.9	5.8
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	35		445			1163
Approach Delay, s/veh	16.2		7.1			7.2
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		34.9		6.9	8.8	26.1		
Change Period (Y+Rc), s		5.7		* 4.2	3.7	5.7		
Max Green Setting (Gmax), s		49.1		* 21	11.6	33.8		
Max Q Clear Time (g_c+I1), s		18.3		2.5	4.7	7.8		
Green Ext Time (p_c), s		10.9		0.1	0.2	10.3		

Intersection Summary	
HCM 2010 Ctrl Delay	7.4
HCM 2010 LOS	A

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	958	112	49	876	196	57
Future Volume (veh/h)	958	112	49	876	196	57
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1900	1845	1600	1881	1900
Adj Flow Rate, veh/h	1114	130	57	1019	228	66
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	3	0	1	0
Cap, veh/h	1045	122	75	1296	218	197
Arrive On Green	0.74	0.74	0.04	0.81	0.12	0.12
Sat Flow, veh/h	1407	164	1757	1600	1792	1615
Grp Volume(v), veh/h	0	1244	57	1019	228	66
Grp Sat Flow(s),veh/h/ln	0	1571	1757	1600	1792	1615
Q Serve(g_s), s	0.0	110.9	4.8	49.8	18.2	5.6
Cycle Q Clear(g_c), s	0.0	110.9	4.8	49.8	18.2	5.6
Prop In Lane		0.10	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	1167	75	1296	218	197
V/C Ratio(X)	0.00	1.07	0.76	0.79	1.04	0.34
Avail Cap(c_a), veh/h	0	1167	82	1303	218	197
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.2	70.8	7.4	65.6	60.0
Incr Delay (d2), s/veh	0.0	46.0	31.2	3.4	73.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	62.2	3.0	22.7	13.4	2.6
LnGrp Delay(d),s/veh	0.0	65.2	102.0	10.8	138.6	61.0
LnGrp LOS		F	F	B	F	E
Approach Vol, veh/h	1244			1076	294	
Approach Delay, s/veh	65.2			15.6	121.2	
Approach LOS	E			B	F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.0	116.9				126.9		22.4
Change Period (Y+Rc), s	3.7	6.0				6.0		4.2
Max Green Setting (Gmax), s	7.3	110.9				121.6		18.2
Max Q Clear Time (g_c+I1), s	16.8	112.9				51.8		20.2
Green Ext Time (p_c), s	0.0	0.0				34.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	51.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	856	3	6	796	302	10	19	7	675	15	321
Future Volume (veh/h)	93	856	3	6	796	302	10	19	7	675	15	321
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.94	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1652	1598	1900	1900	1600	1776	1900	1900	1900	1845	1827	1863
Adj Flow Rate, veh/h	107	984	3	7	915	347	11	22	8	776	17	369
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	15	0	0	0	0	7	0	0	0	3	4	2
Cap, veh/h	164	1307	4	32	1018	923	116	84	31	944	506	432
Arrive On Green	0.10	0.42	0.42	0.02	0.33	0.33	0.06	0.06	0.06	0.28	0.28	0.28
Sat Flow, veh/h	1573	3104	9	1810	3040	1507	1810	1306	475	3408	1827	1562
Grp Volume(v), veh/h	107	481	506	7	915	347	11	0	30	776	17	369
Grp Sat Flow(s),veh/h/ln	1573	1518	1596	1810	1520	1507	1810	0	1781	1704	1827	1562
Q Serve(g_s), s	5.9	24.1	24.1	0.3	25.6	10.4	0.5	0.0	1.4	19.1	0.6	20.0
Cycle Q Clear(g_c), s	5.9	24.1	24.1	0.3	25.6	10.4	0.5	0.0	1.4	19.1	0.6	20.0
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	164	639	672	32	1018	923	116	0	114	944	506	432
V/C Ratio(X)	0.65	0.75	0.75	0.22	0.90	0.38	0.09	0.00	0.26	0.82	0.03	0.85
Avail Cap(c_a), veh/h	176	639	672	202	1131	979	182	0	179	1066	572	489
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.6	22.0	22.0	43.3	28.3	8.8	39.4	0.0	39.9	30.3	23.6	30.6
Incr Delay (d2), s/veh	7.7	5.0	4.8	3.3	9.2	0.3	0.3	0.0	1.2	4.8	0.0	12.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	10.9	11.4	0.2	12.0	7.5	0.3	0.0	0.7	9.6	0.3	10.1
LnGrp Delay(d),s/veh	46.2	27.0	26.8	46.6	37.5	9.0	39.8	0.0	41.1	35.1	23.6	43.2
LnGrp LOS	D	C	C	D	D	A	D		D	D	C	D
Approach Vol, veh/h		1094			1269			41			1162	
Approach Delay, s/veh		28.8			29.8			40.7			37.5	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.8	43.7		30.1	13.5	36.0		10.0
Change Period (Y+Rc), s	* 4.2	6.0		5.3	* 4.2	6.0		4.2
Max Green Setting (Gmax), s	* 10	33.3		28.0	* 10	33.3		9.0
Max Q Clear Time (g_c+I1), s	2.3	26.1		22.0	7.9	27.6		3.4
Green Ext Time (p_c), s	0.0	5.1		2.8	0.1	2.3		0.0

Intersection Summary

HCM 2010 Ctrl Delay	32.1
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	444	1038	0	0	1072	36	0	0	0	0	0	89
Future Volume (veh/h)	444	1038	0	0	1072	36	0	0	0	0	0	89
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1600	0	0	1598	1900				0	1863	1759
Adj Flow Rate, veh/h	477	1116	0	0	1153	39				0	0	96
Adj No. of Lanes	1	2	0	0	2	0				0	1	2
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93				0.93	0.92	0.93
Percent Heavy Veh, %	1	0	0	0	0	0				0	2	8
Cap, veh/h	526	2884	0	0	1809	61				0	0	0
Arrive On Green	0.29	0.95	0.00	0.00	0.60	0.60				0.00	0.00	0.00
Sat Flow, veh/h	1792	3120	0	0	3078	101					0	
Grp Volume(v), veh/h	477	1116	0	0	584	608					0.0	
Grp Sat Flow(s),veh/h/ln	1792	1520	0	0	1519	1581						
Q Serve(g_s), s	19.9	2.3	0.0	0.0	19.3	19.3						
Cycle Q Clear(g_c), s	19.9	2.3	0.0	0.0	19.3	19.3						
Prop In Lane	1.00		0.00	0.00		0.06						
Lane Grp Cap(c), veh/h	526	2884	0	0	916	954						
V/C Ratio(X)	0.91	0.39	0.00	0.00	0.64	0.64						
Avail Cap(c_a), veh/h	622	2969	0	0	916	954						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	26.5	0.2	0.0	0.0	9.9	9.9						
Incr Delay (d2), s/veh	15.4	0.1	0.0	0.0	1.5	1.4						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	12.1	0.8	0.0	0.0	8.3	8.7						
LnGrp Delay(d),s/veh	41.9	0.2	0.0	0.0	11.4	11.4						
LnGrp LOS	D	A			B	B						
Approach Vol, veh/h		1593			1192							
Approach Delay, s/veh		12.7			11.4							
Approach LOS		B			B							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		77.8			26.9	51.0		
Change Period (Y+Rc), s		4.0			4.0	4.0		
Max Green Setting (Gmax), s		76.0			27.0	45.0		
Max Q Clear Time (g_c+I1), s		4.3			21.9	21.3		
Green Ext Time (p_c), s		13.9			0.9	11.8		

Intersection Summary

HCM 2010 Ctrl Delay	12.1
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	217	837	930	395	85	95
Future Volume (veh/h)	217	837	930	395	85	95
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1600	1600	1881	1776	1759
Adj Flow Rate, veh/h	241	930	1033	439	94	106
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	0	0	1	7	8
Cap, veh/h	257	1345	1065	1064	147	130
Arrive On Green	0.15	0.84	0.67	0.67	0.09	0.09
Sat Flow, veh/h	1774	1600	1600	1599	1691	1495
Grp Volume(v), veh/h	241	930	1033	439	94	106
Grp Sat Flow(s),veh/h/ln	1774	1600	1600	1599	1691	1495
Q Serve(g_s), s	18.9	31.1	85.7	17.8	7.6	9.8
Cycle Q Clear(g_c), s	18.9	31.1	85.7	17.8	7.6	9.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	257	1345	1065	1064	147	130
V/C Ratio(X)	0.94	0.69	0.97	0.41	0.64	0.81
Avail Cap(c_a), veh/h	257	1352	1072	1071	253	223
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.5	4.3	22.2	10.8	62.1	63.1
Incr Delay (d2), s/veh	39.2	1.7	20.6	0.4	4.6	11.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.1	14.1	43.7	7.9	3.7	8.3
LnGrp Delay(d),s/veh	98.7	6.0	42.8	11.2	66.6	74.7
LnGrp LOS	F	A	D	B	E	E
Approach Vol, veh/h		1171	1472		200	
Approach Delay, s/veh		25.0	33.4		70.9	
Approach LOS		C	C		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		124.2		16.4	24.6	99.6		
Change Period (Y+Rc), s		6.0		* 4.2	* 4.2	6.0		
Max Green Setting (Gmax), s		118.8		* 21	* 20	94.2		
Max Q Clear Time (g_c+I1), s		33.1		11.8	20.9	87.7		
Green Ext Time (p_c), s		42.7		0.4	0.0	5.9		

Intersection Summary

HCM 2010 Ctrl Delay	32.6
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	874	24	23	1194	23	69	4	26	32	1	60
Future Volume (veh/h)	33	874	24	23	1194	23	69	4	26	32	1	60
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1600	1759	1900	1600	1681	1900	1736	1900	1900	1900	1863
Adj Flow Rate, veh/h	38	1016	28	27	1388	27	80	5	30	37	1	70
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	3	0	8	0	0	13	0	0	0	0	0	2
Cap, veh/h	59	1189	1111	51	1181	1054	160	27	161	195	5	197
Arrive On Green	0.03	0.74	0.74	0.03	0.74	0.74	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1757	1600	1495	1810	1600	1428	1346	215	1288	1145	37	1577
Grp Volume(v), veh/h	38	1016	28	27	1388	27	80	0	35	38	0	70
Grp Sat Flow(s),veh/h/ln	1757	1600	1495	1810	1600	1428	1346	0	1503	1182	0	1577
Q Serve(g_s), s	2.9	61.6	0.7	2.0	101.7	0.7	8.0	0.0	2.9	3.4	0.0	5.6
Cycle Q Clear(g_c), s	2.9	61.6	0.7	2.0	101.7	0.7	14.2	0.0	2.9	6.2	0.0	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	0.97		1.00
Lane Grp Cap(c), veh/h	59	1189	1111	51	1181	1054	160	0	188	205	0	197
V/C Ratio(X)	0.65	0.85	0.03	0.53	1.18	0.03	0.50	0.00	0.19	0.19	0.00	0.35
Avail Cap(c_a), veh/h	76	1189	1111	79	1181	1054	265	0	305	314	0	320
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	65.8	12.5	4.6	66.1	18.1	4.8	62.0	0.0	54.0	56.4	0.0	55.2
Incr Delay (d2), s/veh	11.4	6.5	0.0	8.4	88.2	0.0	2.4	0.0	0.5	0.4	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	28.9	0.3	1.1	73.2	0.3	3.1	0.0	1.2	1.3	0.0	2.5
LnGrp Delay(d),s/veh	77.2	18.9	4.6	74.5	106.3	4.8	64.4	0.0	54.5	56.9	0.0	56.3
LnGrp LOS	E	B	A	E	F	A	E		D	E		E
Approach Vol, veh/h		1082			1442			115			108	
Approach Delay, s/veh		20.6			103.8			61.4			56.5	
Approach LOS		C			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.6	108.4		21.8	8.3	107.7		21.8
Change Period (Y+Rc), s	3.7	6.0		4.6	3.7	6.0		4.6
Max Green Setting (Gmax), s	6.0	101.7		28.0	6.0	101.7		28.0
Max Q Clear Time (g_c+I1), s	4.0	63.6		8.2	4.9	103.7		16.2
Green Ext Time (p_c), s	0.0	31.4		0.7	0.0	0.0		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	67.4
HCM 2010 LOS	E

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	724	205	249	1132	197	269
Future Volume (veh/h)	724	205	249	1132	197	269
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1845	1827	1600	1881	1881
Adj Flow Rate, veh/h	754	214	259	1179	205	280
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	3	4	0	1	1
Cap, veh/h	992	972	311	1192	313	427
Arrive On Green	0.62	0.62	0.09	0.75	0.17	0.17
Sat Flow, veh/h	1600	1568	3375	1600	1792	1599
Grp Volume(v), veh/h	754	214	259	1179	205	280
Grp Sat Flow(s),veh/h/ln	1600	1568	1688	1600	1792	1599
Q Serve(g_s), s	43.2	7.7	9.6	91.0	13.6	19.8
Cycle Q Clear(g_c), s	43.2	7.7	9.6	91.0	13.6	19.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	992	972	311	1192	313	427
V/C Ratio(X)	0.76	0.22	0.83	0.99	0.65	0.66
Avail Cap(c_a), veh/h	992	972	344	1202	337	448
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	10.7	56.9	15.7	49.0	41.5
Incr Delay (d2), s/veh	3.5	0.1	14.6	23.1	4.1	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.8	3.4	5.1	47.0	7.1	9.1
LnGrp Delay(d),s/veh	20.9	10.8	71.5	38.9	53.1	44.7
LnGrp LOS	C	B	E	D	D	D
Approach Vol, veh/h	968			1438	485	
Approach Delay, s/veh	18.7			44.8	48.3	
Approach LOS	B			D	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.0	85.1				101.0		26.5
Change Period (Y+Rc), s	4.2	6.0				6.0		4.2
Max Green Setting (Gmax), s	11.8	78.6				95.8		24.0
Max Q Clear Time (g_c+I1), s	11.6	45.2				93.0		21.8
Green Ext Time (p_c), s	0.1	15.1				2.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	36.6
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	939	43	154	1255	5	149	0	262	0	1	0
Future Volume (veh/h)	1	939	43	154	1255	5	149	0	262	0	1	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1845	1759	1598	1900	1900	1810	1863	1900	1900	1900
Adj Flow Rate, veh/h	1	1092	50	179	1459	6	173	0	305	0	1	0
Adj No. of Lanes	1	1	1	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	3	8	0	0	0	0	2	0	0	0
Cap, veh/h	1	1012	992	168	1164	5	305	0	450	0	356	303
Arrive On Green	0.00	0.63	0.63	0.13	0.97	0.96	0.19	0.00	0.18	0.00	0.19	0.00
Sat Flow, veh/h	1810	1600	1568	1675	1590	7	1367	0	1583	0	1900	1615
Grp Volume(v), veh/h	1	1092	50	179	0	1465	173	0	305	0	1	0
Grp Sat Flow(s),veh/h/ln	1810	1600	1568	1675	0	1597	1367	0	1583	0	1900	1615
Q Serve(g_s), s	0.1	94.9	1.8	15.0	0.0	109.8	17.6	0.0	25.6	0.0	0.1	0.0
Cycle Q Clear(g_c), s	0.1	94.9	1.8	15.0	0.0	109.8	17.7	0.0	25.6	0.0	0.1	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1	1012	992	168	0	1169	305	0	450	0	356	303
V/C Ratio(X)	0.83	1.08	0.05	1.07	0.00	1.25	0.57	0.00	0.68	0.00	0.00	0.00
Avail Cap(c_a), veh/h	109	1012	992	168	0	1169	314	0	461	0	370	314
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.64	0.09	0.00	0.09	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	75.0	27.6	10.5	65.0	0.0	2.0	56.7	0.0	47.6	0.0	49.5	0.0
Incr Delay (d2), s/veh	252.4	47.3	0.1	41.9	0.0	114.6	2.3	0.0	3.8	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	54.9	0.8	8.9	0.0	69.9	6.9	0.0	11.7	0.0	0.0	0.0
LnGrp Delay(d),s/veh	327.4	74.9	10.5	106.9	0.0	116.6	59.0	0.0	51.4	0.0	49.5	0.0
LnGrp LOS	F	F	B	F		F	E		D		D	
Approach Vol, veh/h		1143			1644			478			1	
Approach Delay, s/veh		72.3			115.5			54.2			49.5	
Approach LOS		E			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.0	98.9		32.1	4.0	113.8		32.1
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	15.3	91.8		* 29	9.3	97.8		* 29
Max Q Clear Time (g_c+I1), s	17.8	96.9		2.1	2.1	111.8		27.6
Green Ext Time (p_c), s	0.0	0.0		2.1	0.0	0.0		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	91.4
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1070	106	152	1204	1	169	0	242	1	0	1
Future Volume (veh/h)	0	1070	106	152	1204	1	169	0	242	1	0	1
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1827	1810	1600	1900	1900	1827	1810	1900	1900	1900
Adj Flow Rate, veh/h	0	1216	120	173	1368	1	192	0	275	1	0	1
Adj No. of Lanes	1	1	1	2	1	0	0	1	1	0	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	4	5	0	0	0	0	5	0	0	0
Cap, veh/h	1	1038	995	172	1181	1	220	0	190	99	0	88
Arrive On Green	0.00	1.00	1.00	0.05	0.74	0.73	0.13	0.00	0.13	0.05	0.00	0.05
Sat Flow, veh/h	1810	1600	1533	3343	1599	1	1740	0	1503	1809	0	1615
Grp Volume(v), veh/h	0	1216	120	173	0	1369	192	0	275	1	0	1
Grp Sat Flow(s),veh/h/ln	1810	1600	1533	1672	0	1600	1740	0	1503	1810	0	1615
Q Serve(g_s), s	0.0	0.0	0.0	7.7	0.0	110.8	16.2	0.0	19.0	0.1	0.0	0.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.7	0.0	110.8	16.2	0.0	19.0	0.1	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1	1038	995	172	0	1182	220	0	190	99	0	88
V/C Ratio(X)	0.00	1.17	0.12	1.01	0.00	1.16	0.87	0.00	1.44	0.01	0.00	0.01
Avail Cap(c_a), veh/h	93	1038	995	172	0	1182	220	0	190	292	0	261
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.13	0.13	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	71.2	0.0	19.6	64.3	0.0	65.5	67.1	0.0	67.1
Incr Delay (d2), s/veh	0.0	78.8	0.0	70.8	0.0	81.1	29.3	0.0	227.1	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	22.7	0.0	5.2	0.0	74.9	9.6	0.0	19.9	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	78.8	0.0	142.0	0.0	100.7	93.6	0.0	292.6	67.1	0.0	67.1
LnGrp LOS		F	A	F		F	F		F	E		E
Approach Vol, veh/h		1336			1542			467			2	
Approach Delay, s/veh		71.7			105.3			210.8			67.1	
Approach LOS		E			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.7	103.1		12.2	0.0	114.8		23.0
Change Period (Y+Rc), s	3.7	* 6		* 4.2	3.7	6.0		4.2
Max Green Setting (Gmax), s	8.0	* 83		* 24	8.0	81.1		18.8
Max Q Clear Time (g_c+I1), s	9.7	2.0		2.1	0.0	112.8		21.0
Green Ext Time (p_c), s	0.0	43.2		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	106.6
HCM 2010 LOS	F

Notes

Intersection						
Int Delay, s/veh	131.9					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	111	1207	875	2	12	445
Future Vol, veh/h	111	1207	875	2	12	445
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	230	-	-	250	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	4	3	6	67	0	1
Mvmt Flow	131	1420	1029	2	14	524

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1029	0	-	0	2710	1029
Stage 1	-	-	-	-	1029	-
Stage 2	-	-	-	-	1681	-
Critical Hdwy	4.14	-	-	-	6.4	6.21
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.236	-	-	-	3.5	3.309
Pot Cap-1 Maneuver	667	-	-	-	24	~ 285
Stage 1	-	-	-	-	348	-
Stage 2	-	-	-	-	168	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	667	-	-	-	19	~ 285
Mov Cap-2 Maneuver	-	-	-	-	19	-
Stage 1	-	-	-	-	348	-
Stage 2	-	-	-	-	135	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	$ 762.7
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	667	-	-	-	208
HCM Lane V/C Ratio	0.196	-	-	-	2.585
HCM Control Delay (s)	11.7	-	-	-	$ 762.7
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.7	-	-	-	45.6

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	673	14	51	1015	135	27	20	171	243	19	145
Future Volume (veh/h)	62	673	14	51	1015	135	27	20	171	243	19	145
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1900	1900	1584	1827	1900	1891	1900	1900	1883	1881
Adj Flow Rate, veh/h	66	716	15	54	1080	144	29	21	182	259	20	154
Adj No. of Lanes	1	1	1	1	1	1	0	1	0	0	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	1	4	0	0	0	0	0	1
Cap, veh/h	91	917	906	87	904	868	27	31	113	130	6	458
Arrive On Green	0.05	0.57	0.57	0.05	0.57	0.57	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1810	1600	1582	1810	1584	1521	0	108	394	292	23	1599
Grp Volume(v), veh/h	66	716	15	54	1080	144	232	0	0	279	0	154
Grp Sat Flow(s),veh/h/ln	1810	1600	1582	1810	1584	1521	502	0	0	315	0	1599
Q Serve(g_s), s	5.4	51.7	0.6	4.4	85.3	6.7	0.0	0.0	0.0	0.0	0.0	11.4
Cycle Q Clear(g_c), s	5.4	51.7	0.6	4.4	85.3	6.7	42.8	0.0	0.0	42.8	0.0	11.4
Prop In Lane	1.00		1.00	1.00		1.00	0.12		0.78	0.93		1.00
Lane Grp Cap(c), veh/h	91	917	906	87	904	868	171	0	0	137	0	458
V/C Ratio(X)	0.73	0.78	0.02	0.62	1.19	0.17	1.36	0.00	0.00	2.04	0.00	0.34
Avail Cap(c_a), veh/h	97	917	906	98	904	868	171	0	0	137	0	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	70.0	24.7	13.8	69.8	32.1	15.2	50.2	0.0	0.0	60.6	0.0	42.1
Incr Delay (d2), s/veh	23.6	4.5	0.0	10.9	98.5	0.1	194.2	0.0	0.0	493.8	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	23.8	0.3	2.5	61.9	2.8	15.1	0.0	0.0	24.3	0.0	5.1
LnGrp Delay(d),s/veh	93.6	29.2	13.8	80.7	130.6	15.3	244.4	0.0	0.0	554.4	0.0	42.7
LnGrp LOS	F	C	B	F	F	B	F			F		D
Approach Vol, veh/h		797			1278			232			433	
Approach Delay, s/veh		34.3			115.5			244.4			372.4	
Approach LOS		C			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.9	91.6		47.0	11.2	91.3		47.0
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	8.1	85.2		* 43	8.0	85.3		* 43
Max Q Clear Time (g_c+I1), s	6.4	53.7		44.8	7.4	87.3		44.8
Green Ext Time (p_c), s	0.0	15.6		0.0	0.0	0.0		0.0

Intersection Summary			
HCM 2010 Ctrl Delay		143.4	
HCM 2010 LOS		F	

Notes

Intersection	
Int Delay, s/veh	8.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	16	305	62	16	12	123	47	50	12	59	17
Future Vol, veh/h	17	16	305	62	16	12	123	47	50	12	59	17
Conflicting Peds, #/hr	0	0	1	0	0	0	1	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	92	93	92	92	92	93	93	92	92	93	93
Heavy Vehicles, %	5	2	1	2	2	2	2	1	2	2	2	8
Mvmt Flow	18	17	328	67	17	13	132	51	54	13	63	18

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	457	469	75	450	451	78	83	0	0	105	0	0
Stage 1	100	100	-	342	342	-	-	-	-	-	-	-
Stage 2	357	369	-	108	109	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.52	6.21	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.15	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.018	3.309	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	509	492	989	519	504	983	1514	-	-	1486	-	-
Stage 1	899	812	-	673	638	-	-	-	-	-	-	-
Stage 2	655	621	-	897	805	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	450	442	987	310	453	983	1513	-	-	1486	-	-
Mov Cap-2 Maneuver	450	442	-	310	453	-	-	-	-	-	-	-
Stage 1	815	804	-	610	579	-	-	-	-	-	-	-
Stage 2	569	563	-	580	797	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.8	18.5	4.2	1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1513	-	-	446	987	364	1486	-	-
HCM Lane V/C Ratio	0.087	-	-	0.08	0.332	0.269	0.009	-	-
HCM Control Delay (s)	7.6	0	-	13.8	10.5	18.5	7.4	0	-
HCM Lane LOS	A	A	-	B	B	C	A	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.3	1.5	1.1	0	-	-

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	52	1	12	46	15	10	0	31	0	0	0
Future Vol, veh/h	1	52	1	12	46	15	10	0	31	0	0	0
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Heavy Vehicles, %	0	0	0	0	8	0	0	0	0	0	0	0
Mvmt Flow	2	84	2	19	74	24	16	0	50	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	7.7	8	7.3
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	24%	2%	21%	0%
Vol Thru, %	0%	96%	79%	0%
Vol Right, %	76%	2%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	41	54	58	15
LT Vol	10	1	12	0
Through Vol	0	52	46	0
RT Vol	31	1	0	15
Lane Flow Rate	66	87	94	24
Geometry Grp	2	5	7	7
Degree of Util (X)	0.073	0.102	0.124	0.028
Departure Headway (Hd)	3.967	4.197	4.765	4.097
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	909	846	750	870
Service Time	1.967	2.264	2.509	1.84
HCM Lane V/C Ratio	0.073	0.103	0.125	0.028
HCM Control Delay	7.3	7.7	8.2	7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.3	0.4	0.1

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	175	30	7	28	0	40	0	44	1	4	2
Future Vol, veh/h	0	175	30	7	28	0	40	0	44	1	4	2
Conflicting Peds, #/hr	1	0	1	1	0	4	2	0	1	4	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	1	0	0	0	0	0	0	5	0	25	0
Mvmt Flow	0	192	33	8	31	0	44	0	48	1	4	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	193	0	0	247	239	197	266	239	36
Stage 1	-	-	-	-	-	-	193	193	-	46	46	-
Stage 2	-	-	-	-	-	-	54	46	-	220	193	-
Critical Hdwy	-	-	-	4.1	-	-	7.1	6.5	6.25	7.1	6.75	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.75	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.75	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.5	4	3.345	3.5	4.225	3.3
Pot Cap-1 Maneuver	0	-	-	1392	-	0	711	666	837	691	624	1042
Stage 1	0	-	-	-	-	0	813	745	-	973	813	-
Stage 2	0	-	-	-	-	0	963	861	-	787	700	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1387	-	-	699	661	834	646	620	1038
Mov Cap-2 Maneuver	-	-	-	-	-	-	699	661	-	646	620	-
Stage 1	-	-	-	-	-	-	813	744	-	973	808	-
Stage 2	-	-	-	-	-	-	946	856	-	739	699	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.5	10.4	10.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	764	-	-	1387	-	705
HCM Lane V/C Ratio	0.121	-	-	0.006	-	0.011
HCM Control Delay (s)	10.4	-	-	7.6	0	10.2
HCM Lane LOS	B	-	-	A	A	B
HCM 95th %tile Q(veh)	0.4	-	-	0	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	973	84	113	639	37	118	38	224	13	12	22
Future Volume (veh/h)	56	973	84	113	639	37	118	38	224	13	12	22
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		1.00	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1865	1900	1900	1850	1900	1900	1859	1900
Adj Flow Rate, veh/h	63	1093	94	127	718	42	133	43	0	15	13	25
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	2	0	0	2	2	8	8	0	9	9	9
Cap, veh/h	203	1423	645	282	1515	89	314	75	297	134	111	144
Arrive On Green	0.11	0.40	0.40	0.16	0.45	0.45	0.18	0.18	0.00	0.18	0.18	0.18
Sat Flow, veh/h	1810	3539	1605	1810	3401	199	1080	410	1615	274	605	785
Grp Volume(v), veh/h	63	1093	94	127	374	386	176	0	0	53	0	0
Grp Sat Flow(s),veh/h/ln	1810	1770	1605	1810	1772	1828	1491	0	1615	1664	0	0
Q Serve(g_s), s	1.8	14.7	2.0	3.5	8.2	8.2	4.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.8	14.7	2.0	3.5	8.2	8.2	5.8	0.0	0.0	1.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.11	0.76		1.00	0.28		0.47
Lane Grp Cap(c), veh/h	203	1423	645	282	789	814	389	0	297	390	0	0
V/C Ratio(X)	0.31	0.77	0.15	0.45	0.47	0.47	0.45	0.00	0.00	0.14	0.00	0.00
Avail Cap(c_a), veh/h	346	1661	753	329	815	841	910	0	881	952	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	22.4	14.2	10.4	21.1	10.7	10.7	20.6	0.0	0.0	18.9	0.0	0.0
Incr Delay (d2), s/veh	0.3	1.5	0.0	0.4	0.2	0.2	0.3	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	7.4	0.9	1.8	4.0	4.1	2.5	0.0	0.0	0.7	0.0	0.0
LnGrp Delay(d),s/veh	22.8	15.7	10.5	21.5	10.9	10.9	20.9	0.0	0.0	19.0	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	C			B		
Approach Vol, veh/h		1250			887			176			53	
Approach Delay, s/veh		15.7			12.4			20.9			19.0	
Approach LOS		B			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.6	27.3		15.1	10.2	29.7		15.1
Change Period (Y+Rc), s	4.0	5.2		5.0	4.0	5.2		5.0
Max Green Setting (Gmax), s	10.0	25.8		30.0	10.5	25.3		30.0
Max Q Clear Time (g_c+I1), s	5.5	16.7		3.4	3.8	10.2		7.8
Green Ext Time (p_c), s	0.0	5.4		0.2	0.0	7.5		0.2

Intersection Summary		
HCM 2010 Ctrl Delay		14.9
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	400	106	246	610	187	307	1052	451	154	517	321
Future Volume (veh/h)	213	400	106	246	610	187	307	1052	451	154	517	321
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1863	1845	1881	1881	1881	1845	1881	1863
Adj Flow Rate, veh/h	217	408	108	251	622	191	313	1073	460	157	528	328
Adj No. of Lanes	2	2	0	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	2	3	1	1	1	3	1	2
Cap, veh/h	336	761	199	336	966	423	265	1322	581	175	1149	502
Arrive On Green	0.10	0.27	0.27	0.10	0.27	0.27	0.15	0.37	0.37	0.10	0.32	0.32
Sat Flow, veh/h	3476	2789	730	3476	3539	1549	1792	3574	1570	1757	3574	1563
Grp Volume(v), veh/h	217	260	256	251	622	191	313	1073	460	157	528	328
Grp Sat Flow(s),veh/h/ln	1738	1787	1732	1738	1770	1549	1792	1787	1570	1757	1787	1563
Q Serve(g_s), s	6.2	12.8	13.0	7.3	16.0	10.6	15.3	27.9	27.0	9.1	12.1	18.6
Cycle Q Clear(g_c), s	6.2	12.8	13.0	7.3	16.0	10.6	15.3	27.9	27.0	9.1	12.1	18.6
Prop In Lane	1.00		0.42	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	336	488	473	336	966	423	265	1322	581	175	1149	502
V/C Ratio(X)	0.65	0.53	0.54	0.75	0.64	0.45	1.18	0.81	0.79	0.90	0.46	0.65
Avail Cap(c_a), veh/h	380	585	567	347	1124	492	265	1350	593	175	1177	514
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.9	31.9	32.0	45.4	33.1	31.1	44.0	29.3	29.0	46.0	27.9	30.1
Incr Delay (d2), s/veh	3.1	1.3	1.4	8.3	1.3	1.1	112.6	4.0	7.5	40.0	0.4	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	6.5	6.4	3.9	7.9	4.6	15.8	14.4	12.9	6.4	6.1	8.5
LnGrp Delay(d),s/veh	48.1	33.2	33.4	53.7	34.4	32.2	156.6	33.3	36.5	85.9	28.3	33.4
LnGrp LOS	D	C	C	D	C	C	F	C	D	F	C	C
Approach Vol, veh/h		733			1064			1846			1013	
Approach Delay, s/veh		37.7			38.6			55.0			38.9	
Approach LOS		D			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	32.8	19.0	37.8	13.7	32.8	14.0	42.8
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	10.3	33.8	15.3	34.0	11.3	32.8	10.3	39.0
Max Q Clear Time (g_c+I1), s	9.3	15.0	17.3	20.6	8.2	18.0	11.1	29.9
Green Ext Time (p_c), s	0.1	9.9	0.0	11.9	0.2	8.5	0.0	8.3

Intersection Summary	
HCM 2010 Ctrl Delay	45.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	907	246	187	600	56	286	359	215	153	272	172
Future Volume (veh/h)	204	907	246	187	600	56	286	359	215	153	272	172
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1881	1881	1881	1881	1881	1881	1881	1900	1881	1859	1900
Adj Flow Rate, veh/h	208	926	251	191	612	57	292	366	219	156	278	176
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	1	1	1	1	1	1	1	1	1	3	3
Cap, veh/h	177	1189	524	179	1189	530	200	559	328	190	536	328
Arrive On Green	0.10	0.33	0.33	0.10	0.33	0.33	0.11	0.26	0.26	0.11	0.26	0.26
Sat Flow, veh/h	1774	3574	1574	1792	3574	1592	1792	2137	1254	1792	2090	1280
Grp Volume(v), veh/h	208	926	251	191	612	57	292	305	280	156	233	221
Grp Sat Flow(s),veh/h/ln	1774	1787	1574	1792	1787	1592	1792	1787	1604	1792	1766	1604
Q Serve(g_s), s	8.3	19.4	10.5	8.3	11.5	2.1	9.3	12.6	13.0	7.1	9.4	9.9
Cycle Q Clear(g_c), s	8.3	19.4	10.5	8.3	11.5	2.1	9.3	12.6	13.0	7.1	9.4	9.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		0.80
Lane Grp Cap(c), veh/h	177	1189	524	179	1189	530	200	468	420	190	452	411
V/C Ratio(X)	1.18	0.78	0.48	1.07	0.51	0.11	1.46	0.65	0.67	0.82	0.52	0.54
Avail Cap(c_a), veh/h	177	1289	568	179	1289	574	200	561	503	194	548	497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	25.0	22.0	37.4	22.3	19.2	36.9	27.3	27.5	36.4	26.5	26.7
Incr Delay (d2), s/veh	122.7	2.9	0.7	86.7	0.3	0.1	231.6	2.3	2.9	23.1	1.1	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	10.0	4.7	8.4	5.7	0.9	17.4	6.5	6.1	4.7	4.7	4.5
LnGrp Delay(d),s/veh	160.1	27.9	22.7	124.2	22.7	19.3	268.5	29.6	30.4	59.5	27.6	28.0
LnGrp LOS	F	C	C	F	C	B	F	C	C	E	C	C
Approach Vol, veh/h		1385			860			877			610	
Approach Delay, s/veh		46.8			45.0			109.4			35.9	
Approach LOS		D			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	26.4	12.0	32.3	13.0	25.9	12.0	32.3
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	9.8	26.1	8.3	30.0	9.3	25.8	8.3	30.0
Max Q Clear Time (g_c+I1), s	10.1	15.0	10.3	21.4	11.3	11.9	10.3	13.5
Green Ext Time (p_c), s	0.0	4.3	0.0	5.6	0.0	4.9	0.0	8.7

Intersection Summary	
HCM 2010 Ctrl Delay	59.3
HCM 2010 LOS	E

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	109	93	903	524	164	302
Future Volume (veh/h)	109	93	903	524	164	302
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1827	1881	1900	1900
Adj Flow Rate, veh/h	115	98	951	552	173	318
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	4	1	0	0
Cap, veh/h	173	154	1070	936	214	1446
Arrive On Green	0.10	0.10	0.59	0.59	0.12	0.76
Sat Flow, veh/h	1792	1599	1827	1599	1810	1900
Grp Volume(v), veh/h	115	98	951	552	173	318
Grp Sat Flow(s),veh/h/ln	1792	1599	1827	1599	1810	1900
Q Serve(g_s), s	4.4	4.2	32.2	15.6	6.7	3.4
Cycle Q Clear(g_c), s	4.4	4.2	32.2	15.6	6.7	3.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	173	154	1070	936	214	1446
V/C Ratio(X)	0.66	0.63	0.89	0.59	0.81	0.22
Avail Cap(c_a), veh/h	425	380	1245	1090	250	1667
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.2	31.1	12.8	9.4	30.8	2.5
Incr Delay (d2), s/veh	4.3	4.3	7.4	0.6	15.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	3.9	18.0	6.9	4.2	1.8
LnGrp Delay(d),s/veh	35.6	35.4	20.2	10.0	46.4	2.5
LnGrp LOS	D	D	C	B	D	A
Approach Vol, veh/h	213		1503			491
Approach Delay, s/veh	35.5		16.5			18.0
Approach LOS	D		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		59.8		11.8	12.6	47.2		
Change Period (Y+Rc), s		5.3		4.9	4.1	5.3		
Max Green Setting (Gmax), s		62.8		17.0	9.9	48.8		
Max Q Clear Time (g_c+I1), s		5.4		6.4	8.7	34.2		
Green Ext Time (p_c), s		12.2		0.6	0.1	7.7		

Intersection Summary	
HCM 2010 Ctrl Delay	18.6
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	29	31	30	1420	362	22
Future Vol, veh/h	29	31	30	1420	362	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	40	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	15	2	5	0
Mvmt Flow	31	33	32	1495	381	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1939	381	381	0	-	0
Stage 1	381	-	-	-	-	-
Stage 2	1558	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.25	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.335	-	-	-
Pot Cap-1 Maneuver	73	671	1110	-	-	-
Stage 1	695	-	-	-	-	-
Stage 2	193	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	71	671	1110	-	-	-
Mov Cap-2 Maneuver	154	-	-	-	-	-
Stage 1	695	-	-	-	-	-
Stage 2	187	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1110	-	154	671	-	-
HCM Lane V/C Ratio	0.028	-	0.198	0.049	-	-
HCM Control Delay (s)	8.3	-	34.1	10.6	-	-
HCM Lane LOS	A	-	D	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	0.2	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	44	105	1323	8	12	389
Future Volume (veh/h)	44	105	1323	8	12	389
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1881	1387	1508	1881
Adj Flow Rate, veh/h	48	114	1438	9	13	423
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	3	1	37	26	1
Cap, veh/h	151	169	1484	930	29	1575
Arrive On Green	0.09	0.09	0.79	0.79	0.02	0.84
Sat Flow, veh/h	1723	1568	1881	1179	1436	1881
Grp Volume(v), veh/h	48	114	1438	9	13	423
Grp Sat Flow(s),veh/h/ln	1723	1568	1881	1179	1436	1881
Q Serve(g_s), s	3.5	9.2	90.4	0.2	1.2	6.2
Cycle Q Clear(g_c), s	3.5	9.2	90.4	0.2	1.2	6.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	151	169	1484	930	29	1575
V/C Ratio(X)	0.32	0.67	0.97	0.01	0.45	0.27
Avail Cap(c_a), veh/h	274	281	1543	967	76	1696
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.5	56.7	12.5	3.0	64.0	2.3
Incr Delay (d2), s/veh	1.2	4.6	15.9	0.0	10.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	8.1	52.5	0.1	0.6	3.2
LnGrp Delay(d),s/veh	57.7	61.3	28.3	3.0	74.6	2.4
LnGrp LOS	E	E	C	A	E	A
Approach Vol, veh/h	162		1447			436
Approach Delay, s/veh	60.2		28.2			4.5
Approach LOS	E		C			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		116.3		15.8	6.4	110.0		
Change Period (Y+Rc), s		5.7		* 4.2	3.7	5.7		
Max Green Setting (Gmax), s		119.1		* 21	7.0	108.4		
Max Q Clear Time (g_c+I1), s		8.2		11.2	3.2	92.4		
Green Ext Time (p_c), s		31.2		0.4	0.0	11.9		

Intersection Summary	
HCM 2010 Ctrl Delay	25.7
HCM 2010 LOS	C

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	724	81	65	1274	71	36
Future Volume (veh/h)	724	81	65	1274	71	36
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1569	1900	1900	1584	1900	1845
Adj Flow Rate, veh/h	762	85	68	1341	75	38
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	0	1	0	3
Cap, veh/h	1242	1279	87	1374	105	91
Arrive On Green	0.79	0.79	0.05	0.87	0.06	0.06
Sat Flow, veh/h	1569	1615	1810	1584	1810	1568
Grp Volume(v), veh/h	762	85	68	1341	75	38
Grp Sat Flow(s),veh/h/ln	1569	1615	1810	1584	1810	1568
Q Serve(g_s), s	26.8	1.6	5.1	99.8	5.6	3.2
Cycle Q Clear(g_c), s	26.8	1.6	5.1	99.8	5.6	3.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1242	1279	87	1374	105	91
V/C Ratio(X)	0.61	0.07	0.78	0.98	0.72	0.42
Avail Cap(c_a), veh/h	1242	1279	160	1437	212	184
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.7	3.1	64.2	7.8	63.2	62.1
Incr Delay (d2), s/veh	1.0	0.0	13.7	18.0	8.8	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	0.7	2.9	48.6	3.0	1.5
LnGrp Delay(d),s/veh	6.7	3.1	78.0	25.8	72.0	65.2
LnGrp LOS	A	A	E	C	E	E
Approach Vol, veh/h	847			1409	113	
Approach Delay, s/veh	6.4			28.3	69.7	
Approach LOS	A			C	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.3	114.1				124.4		12.1
Change Period (Y+Rc), s	3.7	6.0				6.0		4.2
Max Green Setting (Gmax), s	12.1	108.0				123.8		16.0
Max Q Clear Time (g_c+I1), s	7.1	28.8				101.8		7.6
Green Ext Time (p_c), s	0.1	36.5				16.7		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	22.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	256	704	7	3	989	729	10	32	14	289	18	119
Future Volume (veh/h)	256	704	7	3	989	729	10	32	14	289	18	119
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1569	1900	1900	1584	1845	1900	1836	1900	1863	1900	1845
Adj Flow Rate, veh/h	278	765	8	3	1075	792	11	35	15	314	20	129
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	2	2	0	1	3	0	5	5	2	0	3
Cap, veh/h	312	1722	18	15	1215	834	141	95	41	442	244	198
Arrive On Green	0.17	0.57	0.57	0.01	0.40	0.40	0.08	0.08	0.08	0.13	0.13	0.13
Sat Flow, veh/h	1792	3022	32	1810	3010	1568	1810	1220	523	3442	1900	1544
Grp Volume(v), veh/h	278	377	396	3	1075	792	11	0	50	314	20	129
Grp Sat Flow(s),veh/h/ln	1792	1490	1563	1810	1505	1568	1810	0	1743	1721	1900	1544
Q Serve(g_s), s	13.8	13.3	13.3	0.2	30.2	36.8	0.5	0.0	2.5	8.0	0.8	7.2
Cycle Q Clear(g_c), s	13.8	13.3	13.3	0.2	30.2	36.8	0.5	0.0	2.5	8.0	0.8	7.2
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	312	849	891	15	1215	834	141	0	135	442	244	198
V/C Ratio(X)	0.89	0.44	0.44	0.21	0.89	0.95	0.08	0.00	0.37	0.71	0.08	0.65
Avail Cap(c_a), veh/h	324	849	891	198	1215	834	179	0	172	1057	583	474
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	11.3	11.3	44.9	25.2	18.6	39.0	0.0	39.9	38.1	35.0	37.8
Incr Delay (d2), s/veh	24.4	0.4	0.3	6.8	8.1	19.9	0.2	0.0	1.7	2.1	0.1	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	5.5	5.8	0.1	13.9	24.4	0.3	0.0	1.3	3.9	0.5	3.3
LnGrp Delay(d),s/veh	61.2	11.7	11.6	51.8	33.3	38.5	39.3	0.0	41.6	40.2	35.1	41.3
LnGrp LOS	E	B	B	D	C	D	D		D	D	D	D
Approach Vol, veh/h		1051			1870			61			463	
Approach Delay, s/veh		24.8			35.5			41.2			40.3	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	58.0		17.0	20.1	42.8		11.3
Change Period (Y+Rc), s	* 4.2	6.0		5.3	* 4.2	6.0		4.2
Max Green Setting (Gmax), s	* 10	43.3		28.0	* 17	36.8		9.0
Max Q Clear Time (g_c+I1), s	2.2	15.3		10.0	15.8	38.8		4.5
Green Ext Time (p_c), s	0.0	15.6		1.7	0.1	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	33.0
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	898	0	0	1057	12	0	0	0	0	0	659
Future Volume (veh/h)	109	898	0	0	1057	12	0	0	0	0	0	659
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1681	1569	0	0	1569	1900				0	1863	1863
Adj Flow Rate, veh/h	121	998	0	0	1174	13				0	0	732
Adj No. of Lanes	1	2	0	0	2	0				0	1	2
Peak Hour Factor	0.90	0.90	0.92	0.92	0.90	0.90				0.90	0.92	0.90
Percent Heavy Veh, %	13	2	0	0	2	2				0	2	2
Cap, veh/h	157	2732	0	0	2305	26				0	0	0
Arrive On Green	0.10	0.92	0.00	0.00	0.76	0.76				0.00	0.00	0.00
Sat Flow, veh/h	1601	3059	0	0	3099	33					0	
Grp Volume(v), veh/h	121	998	0	0	579	608					0.0	
Grp Sat Flow(s),veh/h/ln	1601	1490	0	0	1491	1563						
Q Serve(g_s), s	5.3	3.0	0.0	0.0	10.8	10.8						
Cycle Q Clear(g_c), s	5.3	3.0	0.0	0.0	10.8	10.8						
Prop In Lane	1.00		0.00	0.00		0.02						
Lane Grp Cap(c), veh/h	157	2732	0	0	1138	1193						
V/C Ratio(X)	0.77	0.37	0.00	0.00	0.51	0.51						
Avail Cap(c_a), veh/h	1179	4429	0	0	1138	1193						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	31.7	0.4	0.0	0.0	3.3	3.3						
Incr Delay (d2), s/veh	7.8	0.1	0.0	0.0	0.4	0.4						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	2.7	1.1	0.0	0.0	4.5	4.7						
LnGrp Delay(d),s/veh	39.5	0.5	0.0	0.0	3.8	3.7						
LnGrp LOS	D	A			A	A						
Approach Vol, veh/h		1119			1187							
Approach Delay, s/veh		4.7			3.7							
Approach LOS		A			A							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		72.0			11.0	61.0		
Change Period (Y+Rc), s		* 6			4.0	6.0		
Max Green Setting (Gmax), s		* 1.1E2			53.0	47.0		
Max Q Clear Time (g_c+I1), s		5.0			7.3	12.8		
Green Ext Time (p_c), s		8.0			0.4	14.7		

Intersection Summary	
HCM 2010 Ctrl Delay	4.2
HCM 2010 LOS	A

Notes

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	80	809	962	127	349	121
Future Volume (veh/h)	80	809	962	127	349	121
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1584	1584	1845	1900	1881
Adj Flow Rate, veh/h	84	852	1013	134	367	127
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	0	1
Cap, veh/h	94	1142	1008	997	363	321
Arrive On Green	0.05	0.72	0.64	0.64	0.20	0.20
Sat Flow, veh/h	1792	1584	1584	1568	1810	1599
Grp Volume(v), veh/h	84	852	1013	134	367	127
Grp Sat Flow(s),veh/h/ln	1792	1584	1584	1568	1810	1599
Q Serve(g_s), s	6.1	42.2	82.7	4.4	26.1	9.0
Cycle Q Clear(g_c), s	6.1	42.2	82.7	4.4	26.1	9.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	94	1142	1008	997	363	321
V/C Ratio(X)	0.90	0.75	1.01	0.13	1.01	0.40
Avail Cap(c_a), veh/h	94	1142	1008	997	363	321
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.2	11.0	23.7	9.4	52.0	45.1
Incr Delay (d2), s/veh	60.5	2.9	29.6	0.1	49.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	19.2	44.1	1.9	18.0	8.3
LnGrp Delay(d),s/veh	121.8	13.9	53.3	9.5	101.8	45.9
LnGrp LOS	F	B	F	A	F	D
Approach Vol, veh/h		936	1147		494	
Approach Delay, s/veh		23.6	48.2		87.4	
Approach LOS		C	D		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		99.7		30.3	11.0	88.7		
Change Period (Y+Rc), s		6.0		* 4.2	* 4.2	6.0		
Max Green Setting (Gmax), s		93.7		* 26	* 6.8	82.7		
Max Q Clear Time (g_c+I1), s		44.2		28.1	8.1	84.7		
Green Ext Time (p_c), s		24.9		0.0	0.0	0.0		

Intersection Summary

HCM 2010 Ctrl Delay	46.8
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	1061	71	11	975	30	44	4	9	21	2	44
Future Volume (veh/h)	65	1061	71	11	975	30	44	4	9	21	2	44
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1584	1900	1900	1584	1900	1900	1900	1900	1900	1900	1845
Adj Flow Rate, veh/h	67	1094	73	11	1005	31	45	4	9	22	2	45
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	0	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	1	0	0	1	0	0	0	0	0	0	3
Cap, veh/h	87	1236	1260	28	1185	1208	138	38	85	151	11	114
Arrive On Green	0.05	0.78	0.78	0.02	0.75	0.75	0.07	0.07	0.07	0.07	0.07	0.07
Sat Flow, veh/h	1810	1584	1615	1810	1584	1615	1380	521	1172	1202	152	1568
Grp Volume(v), veh/h	67	1094	73	11	1005	31	45	0	13	24	0	45
Grp Sat Flow(s),veh/h/ln	1810	1584	1615	1810	1584	1615	1380	0	1693	1354	0	1568
Q Serve(g_s), s	4.0	53.4	1.1	0.7	47.6	0.5	3.5	0.0	0.8	1.5	0.0	3.0
Cycle Q Clear(g_c), s	4.0	53.4	1.1	0.7	47.6	0.5	5.7	0.0	0.8	2.3	0.0	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.69	0.92		1.00
Lane Grp Cap(c), veh/h	87	1236	1260	28	1185	1208	138	0	123	163	0	114
V/C Ratio(X)	0.77	0.88	0.06	0.39	0.85	0.03	0.33	0.00	0.11	0.15	0.00	0.39
Avail Cap(c_a), veh/h	110	1479	1507	100	1470	1499	392	0	435	431	0	403
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.3	8.5	2.8	53.1	9.4	3.5	50.6	0.0	47.2	48.0	0.0	48.2
Incr Delay (d2), s/veh	22.8	6.4	0.0	8.5	4.5	0.0	1.4	0.0	0.4	0.4	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	25.0	0.5	0.4	21.9	0.2	1.4	0.0	0.4	0.7	0.0	1.4
LnGrp Delay(d),s/veh	74.1	14.9	2.8	61.7	13.9	3.5	52.0	0.0	47.6	48.4	0.0	50.4
LnGrp LOS	E	B	A	E	B	A	D		D	D		D
Approach Vol, veh/h		1234			1047			58			69	
Approach Delay, s/veh		17.4			14.1			51.0			49.7	
Approach LOS		B			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.4	91.0		12.5	8.9	87.5		12.5
Change Period (Y+Rc), s	3.7	6.0		4.6	3.7	6.0		4.6
Max Green Setting (Gmax), s	6.6	101.7		28.0	6.6	101.1		28.0
Max Q Clear Time (g_c+I1), s	2.7	55.4		5.0	6.0	49.6		7.7
Green Ext Time (p_c), s	0.0	29.6		0.4	0.0	31.6		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	17.7
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	837	146	212	815	203	341
Future Volume (veh/h)	837	146	212	815	203	341
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1553	1863	1881	1584	1863	1827
Adj Flow Rate, veh/h	872	152	221	849	211	355
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	2	1	1	2	4
Cap, veh/h	830	846	318	1059	404	496
Arrive On Green	0.53	0.53	0.09	0.67	0.23	0.23
Sat Flow, veh/h	1553	1583	3476	1584	1774	1553
Grp Volume(v), veh/h	872	152	221	849	211	355
Grp Sat Flow(s),veh/h/ln	1553	1583	1738	1584	1774	1553
Q Serve(g_s), s	52.5	4.9	6.1	37.6	10.2	19.8
Cycle Q Clear(g_c), s	52.5	4.9	6.1	37.6	10.2	19.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	830	846	318	1059	404	496
V/C Ratio(X)	1.05	0.18	0.70	0.80	0.52	0.72
Avail Cap(c_a), veh/h	830	846	322	1061	433	521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	11.8	43.3	11.6	33.3	29.5
Incr Delay (d2), s/veh	45.4	0.1	6.3	4.5	1.0	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	32.8	2.1	3.2	17.6	5.2	9.1
LnGrp Delay(d),s/veh	68.3	11.9	49.6	16.1	34.3	34.0
LnGrp LOS	F	B	D	B	C	C
Approach Vol, veh/h	1024			1070	566	
Approach Delay, s/veh	59.9			23.1	34.1	
Approach LOS	E			C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	13.2	58.5				71.7		26.6
Change Period (Y+Rc), s	4.2	6.0				6.0		4.2
Max Green Setting (Gmax), s	9.1	52.5				65.8		24.0
Max Q Clear Time (g_c+I1), s	8.1	54.5				39.6		21.8
Green Ext Time (p_c), s	0.1	0.0				10.4		0.6

Intersection Summary

HCM 2010 Ctrl Delay	39.6
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1085	72	193	958	8	76	0	139	8	1	4
Future Volume (veh/h)	5	1085	72	193	958	8	76	0	139	8	1	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1584	1845	1863	1569	1900	1900	1881	1863	1900	1900	1900
Adj Flow Rate, veh/h	5	1130	75	201	998	8	79	0	145	8	1	4
Adj No. of Lanes	1	1	1	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	3	2	2	2	0	0	2	0	0	0
Cap, veh/h	18	1001	967	177	1125	9	48	0	451	48	3	301
Arrive On Green	0.01	0.63	0.62	0.20	1.00	1.00	0.18	0.00	0.18	0.19	0.19	0.19
Sat Flow, veh/h	1810	1584	1568	1774	1554	12	0	0	1583	12	19	1615
Grp Volume(v), veh/h	5	1130	75	201	0	1006	79	0	145	9	0	4
Grp Sat Flow(s),veh/h/ln	1810	1584	1568	1774	0	1567	0	0	1583	31	0	1615
Q Serve(g_s), s	0.4	94.8	2.9	15.0	0.0	0.0	0.0	0.0	10.8	0.3	0.0	0.3
Cycle Q Clear(g_c), s	0.4	94.8	2.9	15.0	0.0	0.0	27.7	0.0	10.8	28.0	0.0	0.3
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.89		1.00
Lane Grp Cap(c), veh/h	18	1001	967	177	0	1134	48	0	451	51	0	301
V/C Ratio(X)	0.28	1.13	0.08	1.13	0.00	0.89	1.65	0.00	0.32	0.18	0.00	0.01
Avail Cap(c_a), veh/h	100	1001	967	177	0	1134	48	0	451	51	0	301
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.30	0.30	0.30	0.09	0.00	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	73.7	27.6	11.6	60.0	0.0	0.0	74.9	0.0	42.2	65.1	0.0	49.7
Incr Delay (d2), s/veh	2.6	62.3	0.0	66.8	0.0	1.1	366.4	0.0	0.4	2.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	58.5	1.3	10.6	0.0	0.3	6.9	0.0	4.8	0.4	0.0	0.1
LnGrp Delay(d),s/veh	76.3	89.9	11.6	126.8	0.0	1.1	441.3	0.0	42.7	67.5	0.0	49.8
LnGrp LOS	E	F	B	F		A	F		D	E		D
Approach Vol, veh/h		1210			1207			224			13	
Approach Delay, s/veh		85.0			22.0			183.2			62.0	
Approach LOS		F			C			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.0	98.8		32.2	5.2	112.6		32.2
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	15.3	92.8		* 28	8.3	99.8		* 28
Max Q Clear Time (g_c+I1), s	17.0	96.8		30.0	2.4	2.0		29.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	21.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	64.5
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	1139	74	163	1115	2	55	0	83	1	0	1
Future Volume (veh/h)	3	1139	74	163	1115	2	55	0	83	1	0	1
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1569	1881	1863	1569	1900	1900	1900	1845	1900	1900	1900
Adj Flow Rate, veh/h	3	1186	77	170	1161	2	57	0	86	1	0	1
Adj No. of Lanes	1	1	1	2	1	0	0	1	1	0	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	1	2	2	2	0	0	3	0	0	0
Cap, veh/h	8	1149	1157	177	1221	2	93	0	78	93	0	83
Arrive On Green	0.01	1.00	1.00	0.05	0.78	0.77	0.05	0.00	0.05	0.05	0.00	0.05
Sat Flow, veh/h	1810	1569	1579	3442	1566	3	1810	0	1526	1809	0	1615
Grp Volume(v), veh/h	3	1186	77	170	0	1163	57	0	86	1	0	1
Grp Sat Flow(s),veh/h/ln	1810	1569	1579	1721	0	1568	1810	0	1526	1810	0	1615
Q Serve(g_s), s	0.2	0.0	0.0	7.4	0.0	94.8	4.6	0.0	7.7	0.1	0.0	0.1
Cycle Q Clear(g_c), s	0.2	0.0	0.0	7.4	0.0	94.8	4.6	0.0	7.7	0.1	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	8	1149	1157	177	0	1223	93	0	78	93	0	83
V/C Ratio(X)	0.39	1.03	0.07	0.96	0.00	0.95	0.61	0.00	1.10	0.01	0.00	0.01
Avail Cap(c_a), veh/h	93	1149	1157	177	0	1223	93	0	78	286	0	255
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	74.2	0.0	0.0	71.0	0.0	14.1	69.7	0.0	71.2	67.5	0.0	67.5
Incr Delay (d2), s/veh	2.9	18.0	0.0	56.5	0.0	16.4	11.4	0.0	130.9	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	5.8	0.0	4.9	0.0	46.0	2.6	0.0	6.1	0.0	0.0	0.0
LnGrp Delay(d),s/veh	77.0	18.0	0.0	127.5	0.0	30.5	81.1	0.0	202.4	67.6	0.0	67.6
LnGrp LOS	E	F	A	F		C	F		F	E		E
Approach Vol, veh/h		1266			1333			143			2	
Approach Delay, s/veh		17.1			42.9			154.0			67.6	
Approach LOS		B			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.7	113.9		12.2	4.6	121.0		12.2
Change Period (Y+Rc), s	3.7	* 6		* 4.2	3.7	6.0		4.2
Max Green Setting (Gmax), s	8.0	* 94		* 24	8.0	91.9		8.0
Max Q Clear Time (g_c+I1), s	9.4	2.0		2.1	2.2	96.8		9.7
Green Ext Time (p_c), s	0.0	31.5		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.8
HCM 2010 LOS	D

Notes

Intersection						
Int Delay, s/veh	4.2					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	78	1178	1231	55	12	51
Future Vol, veh/h	78	1178	1231	55	12	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	230	-	-	250	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	1	2	0	0	0
Mvmt Flow	81	1227	1282	57	13	53

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1282	0	-	0	2672	1282
Stage 1	-	-	-	-	1282	-
Stage 2	-	-	-	-	1390	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	548	-	-	-	25	204
Stage 1	-	-	-	-	263	-
Stage 2	-	-	-	-	233	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	548	-	-	-	21	204
Mov Cap-2 Maneuver	-	-	-	-	21	-
Stage 1	-	-	-	-	263	-
Stage 2	-	-	-	-	199	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	156.5
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	548	-	-	-	77
HCM Lane V/C Ratio	0.148	-	-	-	0.852
HCM Control Delay (s)	12.7	-	-	-	156.5
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.5	-	-	-	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	829	32	93	775	275	42	25	81	106	23	60
Future Volume (veh/h)	76	829	32	93	775	275	42	25	81	106	23	60
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1900	1863	1600	1881	1900	1870	1900	1900	1735	1652
Adj Flow Rate, veh/h	88	964	37	108	901	320	49	29	94	123	27	70
Adj No. of Lanes	1	1	1	1	1	1	0	1	0	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	2	0	1	3	3	3	12	12	15
Cap, veh/h	114	960	949	120	967	946	39	32	39	164	28	307
Arrive On Green	0.06	0.60	0.60	0.07	0.60	0.60	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1810	1600	1582	1774	1600	1566	0	146	176	502	130	1404
Grp Volume(v), veh/h	88	964	37	108	901	320	172	0	0	150	0	70
Grp Sat Flow(s),veh/h/ln	1810	1600	1582	1774	1600	1566	323	0	0	632	0	1404
Q Serve(g_s), s	5.7	72.0	1.1	7.3	61.2	12.2	0.0	0.0	0.0	0.0	0.0	4.9
Cycle Q Clear(g_c), s	5.7	72.0	1.1	7.3	61.2	12.2	26.2	0.0	0.0	26.2	0.0	4.9
Prop In Lane	1.00		1.00	1.00		1.00	0.28		0.55	0.82		1.00
Lane Grp Cap(c), veh/h	114	960	949	120	967	946	109	0	0	193	0	307
V/C Ratio(X)	0.77	1.00	0.04	0.90	0.93	0.34	1.58	0.00	0.00	0.78	0.00	0.23
Avail Cap(c_a), veh/h	121	960	949	120	967	946	109	0	0	193	0	307
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.4	24.0	9.8	55.6	21.5	11.8	44.7	0.0	0.0	47.7	0.0	38.6
Incr Delay (d2), s/veh	25.5	30.1	0.0	53.4	15.3	0.3	299.2	0.0	0.0	19.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	39.5	0.5	5.3	30.9	5.3	12.7	0.0	0.0	6.0	0.0	1.9
LnGrp Delay(d),s/veh	80.8	54.1	9.9	109.0	36.8	12.1	344.0	0.0	0.0	66.9	0.0	39.1
LnGrp LOS	F	F	A	F	D	B	F			E		D
Approach Vol, veh/h		1089			1329			172			220	
Approach Delay, s/veh		54.7			36.7			344.0			58.0	
Approach LOS		D			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.8	78.0		30.2	11.3	78.5		30.2
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	8.1	72.0		* 26	8.0	72.1		* 26
Max Q Clear Time (g_c+I1), s	9.3	74.0		28.2	7.7	63.2		28.2
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	7.1		0.0

Intersection Summary			
HCM 2010 Ctrl Delay		64.2	
HCM 2010 LOS		E	

Notes

Intersection

Int Delay, s/veh 8.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	12	136	17	2	6	364	23	32	5	12	2
Future Vol, veh/h	11	12	136	17	2	6	364	23	32	5	12	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	15	2	10	2	2	2	2	4	2	2	11	0
Mvmt Flow	12	13	148	18	2	7	396	25	35	5	13	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	863	876	14	866	860	42	15	0	0	60	0	0
Stage 1	25	25	-	834	834	-	-	-	-	-	-	-
Stage 2	838	851	-	32	26	-	-	-	-	-	-	-
Critical Hdwy	7.25	6.52	6.3	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.25	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.25	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.635	4.018	3.39	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	261	287	1043	274	294	1029	1603	-	-	1544	-	-
Stage 1	960	874	-	362	383	-	-	-	-	-	-	-
Stage 2	343	376	-	984	874	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	206	213	1043	180	218	1029	1603	-	-	1544	-	-
Mov Cap-2 Maneuver	206	213	-	180	218	-	-	-	-	-	-	-
Stage 1	713	871	-	269	285	-	-	-	-	-	-	-
Stage 2	251	279	-	829	871	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.2	22.9	6.9	1.9
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1603	-	-	210	1043	228	1544	-	-
HCM Lane V/C Ratio	0.247	-	-	0.119	0.142	0.119	0.004	-	-
HCM Control Delay (s)	8	0	-	24.4	9	22.9	7.3	0	-
HCM Lane LOS	A	A	-	C	A	C	A	A	-
HCM 95th %tile Q(veh)	1	-	-	0.4	0.5	0.4	0	-	-

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	11	2	7	29	4	20	0	7	0	0	0
Future Vol, veh/h	4	11	2	7	29	4	20	0	7	0	0	0
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Heavy Vehicles, %	0	0	0	0	8	0	0	0	0	0	0	0
Mvmt Flow	6	18	3	11	47	6	32	0	11	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	7.3	7.7	7.3
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	74%	24%	19%	0%
Vol Thru, %	0%	65%	81%	0%
Vol Right, %	26%	12%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	27	17	36	4
LT Vol	20	4	7	0
Through Vol	0	11	29	0
RT Vol	7	2	0	4
Lane Flow Rate	44	27	58	6
Geometry Grp	2	5	7	7
Degree of Util (X)	0.049	0.031	0.076	0.007
Departure Headway (Hd)	4.049	4.102	4.688	4.026
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	877	869	765	889
Service Time	2.11	2.143	2.412	1.75
HCM Lane V/C Ratio	0.05	0.031	0.076	0.007
HCM Control Delay	7.3	7.3	7.8	6.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.1	0.2	0

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	15	45	23	64	0	47	0	17	0	21	7
Future Vol, veh/h	0	15	45	23	64	0	47	0	17	0	21	7
Conflicting Peds, #/hr	4	0	1	0	0	3	1	0	0	3	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	5	0	5	0	7	0	13	0	10	0
Mvmt Flow	0	17	51	26	72	0	53	0	19	0	24	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	18	0	0	161	142	21	153	142	76
Stage 1	-	-	-	-	-	-	18	18	-	124	124	-
Stage 2	-	-	-	-	-	-	143	124	-	29	18	-
Critical Hdwy	-	-	-	4.1	-	-	7.17	6.5	6.33	7.1	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.17	5.5	-	6.1	5.6	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.17	5.5	-	6.1	5.6	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.563	4	3.417	3.5	4.09	3.3
Pot Cap-1 Maneuver	0	-	-	1612	-	0	793	753	1026	819	735	991
Stage 1	0	-	-	-	-	0	988	884	-	885	778	-
Stage 2	0	-	-	-	-	0	848	797	-	993	865	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1608	-	-	754	740	1023	791	722	988
Mov Cap-2 Maneuver	-	-	-	-	-	-	754	740	-	791	722	-
Stage 1	-	-	-	-	-	-	988	883	-	885	765	-
Stage 2	-	-	-	-	-	-	799	783	-	972	864	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.9	9.9	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	811	-	-	1608	-	774
HCM Lane V/C Ratio	0.089	-	-	0.016	-	0.041
HCM Control Delay (s)	9.9	-	-	7.3	0	9.8
HCM Lane LOS	A	-	-	A	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	490	63	128	1355	21	84	8	78	25	25	24
Future Volume (veh/h)	22	490	63	128	1355	21	84	8	78	25	25	24
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		1.00	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1845	1863	1862	1900	1900	1833	1743	1900	1876	1900
Adj Flow Rate, veh/h	24	544	70	142	1506	23	93	9	0	28	28	27
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	4	3	2	2	2	0	0	9	0	0	0
Cap, veh/h	101	1525	685	288	1946	30	354	29	264	152	135	96
Arrive On Green	0.06	0.44	0.44	0.16	0.55	0.52	0.18	0.18	0.00	0.18	0.18	0.16
Sat Flow, veh/h	1810	3471	1559	1774	3567	54	1278	160	1482	356	759	537
Grp Volume(v), veh/h	24	544	70	142	746	783	102	0	0	83	0	0
Grp Sat Flow(s),veh/h/ln	1810	1736	1559	1774	1769	1852	1439	0	1482	1652	0	0
Q Serve(g_s), s	0.7	5.7	1.4	4.0	18.1	18.1	0.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.7	5.7	1.4	4.0	18.1	18.1	2.9	0.0	0.0	2.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	0.91		1.00	0.34		0.33
Lane Grp Cap(c), veh/h	101	1525	685	288	965	1011	383	0	264	383	0	0
V/C Ratio(X)	0.24	0.36	0.10	0.49	0.77	0.77	0.27	0.00	0.00	0.22	0.00	0.00
Avail Cap(c_a), veh/h	349	2103	945	456	1185	1241	909	0	843	1006	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.6	10.1	9.0	20.8	9.7	9.8	19.5	0.0	0.0	19.4	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.1	0.0	0.5	2.0	1.9	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.7	0.6	2.0	9.2	9.7	1.3	0.0	0.0	1.1	0.0	0.0
LnGrp Delay(d),s/veh	25.0	10.2	9.0	21.3	11.7	11.7	19.7	0.0	0.0	19.6	0.0	0.0
LnGrp LOS	C	B	A	C	B	B	B			B		
Approach Vol, veh/h		638			1671			102			83	
Approach Delay, s/veh		10.6			12.5			19.7			19.6	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.8	27.9		13.7	7.0	33.7		13.7
Change Period (Y+Rc), s	4.0	5.2		5.0	4.0	5.2		5.0
Max Green Setting (Gmax), s	14.0	31.8		30.0	10.5	35.3		30.0
Max Q Clear Time (g_c+I1), s	6.0	7.7		4.2	2.7	20.1		4.9
Green Ext Time (p_c), s	0.0	10.7		0.2	0.0	8.4		0.2

Intersection Summary		
HCM 2010 Ctrl Delay		12.6
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	450	129	370	408	95	145	331	175	93	750	310
Future Volume (veh/h)	200	450	129	370	408	95	145	331	175	93	750	310
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1837	1900	1881	1827	1863	1810	1863	1845	1759	1827	1810
Adj Flow Rate, veh/h	217	489	140	402	443	103	158	360	190	101	815	337
Adj No. of Lanes	2	2	0	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	4	2	5	2	3	8	4	5
Cap, veh/h	321	775	220	439	1120	503	182	1200	526	149	1118	485
Arrive On Green	0.09	0.29	0.28	0.13	0.32	0.32	0.11	0.34	0.34	0.09	0.32	0.32
Sat Flow, veh/h	3408	2670	759	3476	3471	1558	1723	3539	1551	1675	3471	1504
Grp Volume(v), veh/h	217	318	311	402	443	103	158	360	190	101	815	337
Grp Sat Flow(s),veh/h/ln	1704	1745	1684	1738	1736	1558	1723	1770	1551	1675	1736	1504
Q Serve(g_s), s	6.3	16.3	16.5	11.8	10.2	4.9	9.3	7.7	9.5	6.0	21.4	20.1
Cycle Q Clear(g_c), s	6.3	16.3	16.5	11.8	10.2	4.9	9.3	7.7	9.5	6.0	21.4	20.1
Prop In Lane	1.00		0.45	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	321	507	489	439	1120	503	182	1200	526	149	1118	485
V/C Ratio(X)	0.68	0.63	0.63	0.92	0.40	0.20	0.87	0.30	0.36	0.68	0.73	0.70
Avail Cap(c_a), veh/h	397	600	579	439	1228	551	184	1224	537	163	1167	506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	31.7	31.9	44.4	27.1	25.3	45.3	25.0	25.6	45.5	30.9	30.5
Incr Delay (d2), s/veh	3.3	2.1	2.3	23.7	0.3	0.3	32.6	0.2	0.6	9.7	2.5	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	8.2	8.0	7.1	4.9	2.1	6.1	3.8	4.2	3.2	10.6	8.9
LnGrp Delay(d),s/veh	48.4	33.8	34.2	68.2	27.4	25.6	78.0	25.2	26.2	55.1	33.4	34.9
LnGrp LOS	D	C	C	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h		846			948			708			1253	
Approach Delay, s/veh		37.7			44.5			37.3			35.5	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	33.9	14.9	37.2	13.7	37.2	13.1	38.9
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	13.3	34.8	11.3	34.0	12.3	35.8	10.3	35.0
Max Q Clear Time (g_c+I1), s	13.8	18.5	11.3	23.4	8.3	12.2	8.0	11.5
Green Ext Time (p_c), s	0.0	8.2	0.0	8.2	0.2	10.0	0.0	15.1

Intersection Summary	
HCM 2010 Ctrl Delay	38.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	460	224	179	835	71	307	246	85	74	308	115
Future Volume (veh/h)	128	460	224	179	835	71	307	246	85	74	308	115
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1792	1845	1863	1900	1845	1836	1900	1863	1788	1900
Adj Flow Rate, veh/h	136	489	238	190	888	76	327	262	90	79	328	122
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	3	6	3	2	0	3	3	3	2	6	6
Cap, veh/h	166	1038	448	205	1118	509	344	801	268	155	497	182
Arrive On Green	0.10	0.30	0.30	0.12	0.32	0.32	0.20	0.31	0.31	0.09	0.20	0.20
Sat Flow, veh/h	1723	3505	1513	1757	3539	1612	1757	2560	858	1774	2434	889
Grp Volume(v), veh/h	136	489	238	190	888	76	327	176	176	79	227	223
Grp Sat Flow(s),veh/h/ln	1723	1752	1513	1757	1770	1612	1757	1744	1673	1774	1698	1625
Q Serve(g_s), s	6.8	10.1	11.6	9.5	20.3	3.0	16.3	6.8	7.1	3.8	10.9	11.2
Cycle Q Clear(g_c), s	6.8	10.1	11.6	9.5	20.3	3.0	16.3	6.8	7.1	3.8	10.9	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.51	1.00		0.55
Lane Grp Cap(c), veh/h	166	1038	448	205	1118	509	344	545	523	155	347	332
V/C Ratio(X)	0.82	0.47	0.53	0.93	0.79	0.15	0.95	0.32	0.34	0.51	0.65	0.67
Avail Cap(c_a), veh/h	173	1189	513	205	1256	572	344	652	626	201	495	474
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	25.5	26.0	38.7	27.6	21.7	35.2	23.2	23.3	38.6	32.3	32.5
Incr Delay (d2), s/veh	24.7	0.3	1.0	43.4	3.2	0.1	36.0	0.4	0.5	2.6	2.5	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	4.9	5.0	7.1	10.4	1.3	11.3	3.3	3.3	2.0	5.3	5.3
LnGrp Delay(d),s/veh	63.9	25.8	27.0	82.1	30.9	21.9	71.2	23.7	23.8	41.2	34.8	35.3
LnGrp LOS	E	C	C	F	C	C	E	C	C	D	C	D
Approach Vol, veh/h		863			1154			679			529	
Approach Delay, s/veh		32.1			38.7			46.6			36.0	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	32.3	14.0	30.8	21.0	22.7	12.2	32.6
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	10.0	33.1	10.3	30.0	17.3	25.8	8.9	31.4
Max Q Clear Time (g_c+I1), s	5.8	9.1	11.5	13.6	18.3	13.2	8.8	22.3
Green Ext Time (p_c), s	0.1	4.3	0.0	7.9	0.0	3.4	0.0	5.4

Intersection Summary	
HCM 2010 Ctrl Delay	38.2
HCM 2010 LOS	D

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	489	160	306	101	131	590
Future Volume (veh/h)	489	160	306	101	131	590
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1827	1881	1900	1900
Adj Flow Rate, veh/h	556	182	348	115	149	670
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	1	1	4	1	0	0
Cap, veh/h	649	580	506	443	221	888
Arrive On Green	0.36	0.36	0.28	0.28	0.12	0.47
Sat Flow, veh/h	1792	1599	1827	1599	1810	1900
Grp Volume(v), veh/h	556	182	348	115	149	670
Grp Sat Flow(s),veh/h/ln	1792	1599	1827	1599	1810	1900
Q Serve(g_s), s	17.2	4.9	10.2	3.4	4.7	17.4
Cycle Q Clear(g_c), s	17.2	4.9	10.2	3.4	4.7	17.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	649	580	506	443	221	888
V/C Ratio(X)	0.86	0.31	0.69	0.26	0.67	0.75
Avail Cap(c_a), veh/h	869	775	843	738	268	1289
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.7	13.8	19.4	16.9	25.2	13.1
Incr Delay (d2), s/veh	6.5	0.3	1.7	0.3	4.9	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	0.0	5.4	1.5	2.7	9.3
LnGrp Delay(d),s/veh	24.2	14.1	21.0	17.2	30.1	14.7
LnGrp LOS	C	B	C	B	C	B
Approach Vol, veh/h	738		463			819
Approach Delay, s/veh	21.7		20.1			17.5
Approach LOS	C		C			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		33.4		26.7	11.4	21.9		
Change Period (Y+Rc), s		5.3		4.9	4.1	5.3		
Max Green Setting (Gmax), s		40.7		29.1	8.9	27.7		
Max Q Clear Time (g_c+I1), s		19.4		19.2	6.7	12.2		
Green Ext Time (p_c), s		4.8		2.5	0.1	4.3		

Intersection Summary	
HCM 2010 Ctrl Delay	19.6
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	31	49	26	349	1078	49
Future Vol, veh/h	31	49	26	349	1078	49
Conflicting Peds, #/hr	1	0	0	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	40	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	12	20	19	3	3	5
Mvmt Flow	36	56	30	401	1239	56

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1702	1240	1240	0	-	0
Stage 1	1240	-	-	-	-	-
Stage 2	462	-	-	-	-	-
Critical Hdwy	6.52	6.4	4.29	-	-	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.48	2.371	-	-	-
Pot Cap-1 Maneuver	95	196	507	-	-	-
Stage 1	260	-	-	-	-	-
Stage 2	614	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	89	196	507	-	-	-
Mov Cap-2 Maneuver	197	-	-	-	-	-
Stage 1	260	-	-	-	-	-
Stage 2	577	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	29.3	0.9	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	507	-	197	196	-	-
HCM Lane V/C Ratio	0.059	-	0.181	0.287	-	-
HCM Control Delay (s)	12.5	-	27.3	30.6	-	-
HCM Lane LOS	B	-	D	D	-	-
HCM 95th %tile Q(veh)	0.2	-	0.6	1.1	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	13	19	367	48	103	971
Future Volume (veh/h)	13	19	367	48	103	971
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1532	1583	1845	1792	1696	1863
Adj Flow Rate, veh/h	14	21	399	52	112	1055
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	20	3	6	12	2
Cap, veh/h	93	249	906	748	196	1305
Arrive On Green	0.06	0.06	0.49	0.49	0.12	0.70
Sat Flow, veh/h	1459	1346	1845	1524	1616	1863
Grp Volume(v), veh/h	14	21	399	52	112	1055
Grp Sat Flow(s),veh/h/ln	1459	1346	1845	1524	1616	1863
Q Serve(g_s), s	0.4	0.5	5.9	0.8	2.8	16.4
Cycle Q Clear(g_c), s	0.4	0.5	5.9	0.8	2.8	16.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	93	249	906	748	196	1305
V/C Ratio(X)	0.15	0.08	0.44	0.07	0.57	0.81
Avail Cap(c_a), veh/h	729	836	1483	1225	446	2175
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.6	14.2	6.9	5.6	17.4	4.3
Incr Delay (d2), s/veh	0.7	0.1	0.4	0.0	2.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.5	3.1	0.3	1.4	8.5
LnGrp Delay(d),s/veh	19.3	14.3	7.4	5.7	20.0	5.8
LnGrp LOS	B	B	A	A	C	A
Approach Vol, veh/h	35		451			1167
Approach Delay, s/veh	16.3		7.2			7.2
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		35.2		6.9	8.8	26.4		
Change Period (Y+Rc), s		5.7		* 4.2	3.7	5.7		
Max Green Setting (Gmax), s		49.1		* 21	11.6	33.8		
Max Q Clear Time (g_c+I1), s		18.4		2.5	4.8	7.9		
Green Ext Time (p_c), s		11.0		0.1	0.2	10.4		

Intersection Summary

HCM 2010 Ctrl Delay	7.4
HCM 2010 LOS	A

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	959	112	49	875	196	57
Future Volume (veh/h)	959	112	49	875	196	57
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1900	1845	1600	1881	1900
Adj Flow Rate, veh/h	1115	130	57	1017	228	66
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	3	0	1	0
Cap, veh/h	1045	122	75	1296	218	197
Arrive On Green	0.74	0.74	0.04	0.81	0.12	0.12
Sat Flow, veh/h	1407	164	1757	1600	1792	1615
Grp Volume(v), veh/h	0	1245	57	1017	228	66
Grp Sat Flow(s),veh/h/ln	0	1571	1757	1600	1792	1615
Q Serve(g_s), s	0.0	110.9	4.8	49.5	18.2	5.6
Cycle Q Clear(g_c), s	0.0	110.9	4.8	49.5	18.2	5.6
Prop In Lane		0.10	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	1167	75	1296	218	197
V/C Ratio(X)	0.00	1.07	0.76	0.78	1.04	0.34
Avail Cap(c_a), veh/h	0	1167	82	1303	218	197
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.2	70.8	7.4	65.6	60.0
Incr Delay (d2), s/veh	0.0	46.2	31.2	3.3	73.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	62.3	3.0	22.7	13.4	2.6
LnGrp Delay(d),s/veh	0.0	65.5	102.0	10.7	138.6	61.0
LnGrp LOS		F	F	B	F	E
Approach Vol, veh/h	1245			1074	294	
Approach Delay, s/veh	65.5			15.6	121.2	
Approach LOS	E			B	F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.0	116.9				126.9		22.4
Change Period (Y+Rc), s	3.7	6.0				6.0		4.2
Max Green Setting (Gmax), s	7.0	110.9				121.6		18.2
Max Q Clear Time (g_c+I1), s	6.8	112.9				51.5		20.2
Green Ext Time (p_c), s	0.0	0.0				34.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	51.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	855	3	6	793	304	10	19	7	676	15	324
Future Volume (veh/h)	96	855	3	6	793	304	10	19	7	676	15	324
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.94	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1652	1598	1900	1900	1600	1776	1900	1900	1900	1845	1827	1863
Adj Flow Rate, veh/h	110	983	3	7	911	349	11	22	8	777	17	372
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	15	0	0	0	0	7	0	0	0	3	4	2
Cap, veh/h	164	1304	4	32	1014	923	116	84	30	948	508	434
Arrive On Green	0.10	0.42	0.42	0.02	0.33	0.33	0.06	0.06	0.06	0.28	0.28	0.28
Sat Flow, veh/h	1573	3104	9	1810	3040	1507	1810	1306	475	3408	1827	1562
Grp Volume(v), veh/h	110	481	505	7	911	349	11	0	30	777	17	372
Grp Sat Flow(s),veh/h/ln	1573	1518	1596	1810	1520	1507	1810	0	1781	1704	1827	1562
Q Serve(g_s), s	6.0	24.1	24.1	0.3	25.6	10.5	0.5	0.0	1.4	19.1	0.6	20.2
Cycle Q Clear(g_c), s	6.0	24.1	24.1	0.3	25.6	10.5	0.5	0.0	1.4	19.1	0.6	20.2
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	164	638	671	32	1014	923	116	0	114	948	508	434
V/C Ratio(X)	0.67	0.75	0.75	0.22	0.90	0.38	0.09	0.00	0.26	0.82	0.03	0.86
Avail Cap(c_a), veh/h	175	638	671	202	1129	979	182	0	179	1064	570	488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	22.1	22.1	43.4	28.4	8.8	39.5	0.0	39.9	30.3	23.6	30.7
Incr Delay (d2), s/veh	8.7	5.1	4.8	3.3	9.1	0.3	0.3	0.0	1.2	4.7	0.0	12.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	10.9	11.4	0.2	11.9	7.5	0.3	0.0	0.7	9.6	0.3	10.2
LnGrp Delay(d),s/veh	47.4	27.1	26.9	46.7	37.5	9.1	39.9	0.0	41.1	35.0	23.6	43.6
LnGrp LOS	D	C	C	D	D	A	D		D	C	C	D
Approach Vol, veh/h		1096			1267			41			1166	
Approach Delay, s/veh		29.1			29.7			40.8			37.6	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.8	43.7		30.2	13.6	35.9		10.0
Change Period (Y+Rc), s	* 4.2	6.0		5.3	* 4.2	6.0		4.2
Max Green Setting (Gmax), s	* 10	33.3		28.0	* 10	33.3		9.0
Max Q Clear Time (g_c+I1), s	2.3	26.1		22.2	8.0	27.6		3.4
Green Ext Time (p_c), s	0.0	5.1		2.7	0.0	2.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.2
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	444	1038	0	0	1071	36	0	0	0	0	0	89
Future Volume (veh/h)	444	1038	0	0	1071	36	0	0	0	0	0	89
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1600	0	0	1598	1900				0	1863	1759
Adj Flow Rate, veh/h	477	1116	0	0	1152	39				0	0	96
Adj No. of Lanes	1	2	0	0	2	0				0	1	2
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93				0.93	0.92	0.93
Percent Heavy Veh, %	1	0	0	0	0	0				0	2	8
Cap, veh/h	526	2884	0	0	1809	61				0	0	0
Arrive On Green	0.29	0.95	0.00	0.00	0.60	0.60				0.00	0.00	0.00
Sat Flow, veh/h	1792	3120	0	0	3078	101					0	
Grp Volume(v), veh/h	477	1116	0	0	583	608					0.0	
Grp Sat Flow(s),veh/h/ln	1792	1520	0	0	1519	1581						
Q Serve(g_s), s	19.9	2.3	0.0	0.0	19.2	19.3						
Cycle Q Clear(g_c), s	19.9	2.3	0.0	0.0	19.2	19.3						
Prop In Lane	1.00		0.00	0.00		0.06						
Lane Grp Cap(c), veh/h	526	2884	0	0	916	954						
V/C Ratio(X)	0.91	0.39	0.00	0.00	0.64	0.64						
Avail Cap(c_a), veh/h	622	2969	0	0	916	954						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	26.5	0.2	0.0	0.0	9.9	9.9						
Incr Delay (d2), s/veh	15.4	0.1	0.0	0.0	1.5	1.4						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	12.1	0.8	0.0	0.0	8.3	8.6						
LnGrp Delay(d),s/veh	41.9	0.2	0.0	0.0	11.4	11.3						
LnGrp LOS	D	A			B	B						
Approach Vol, veh/h		1593			1191							
Approach Delay, s/veh		12.7			11.4							
Approach LOS		B			B							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		77.8			26.9	51.0		
Change Period (Y+Rc), s		4.0			4.0	4.0		
Max Green Setting (Gmax), s		76.0			27.0	45.0		
Max Q Clear Time (g_c+I1), s		4.3			21.9	21.3		
Green Ext Time (p_c), s		13.9			0.9	11.8		

Intersection Summary	
HCM 2010 Ctrl Delay	12.1
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	217	837	929	395	85	95
Future Volume (veh/h)	217	837	929	395	85	95
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1600	1600	1881	1776	1759
Adj Flow Rate, veh/h	241	930	1032	439	94	106
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	0	0	1	7	8
Cap, veh/h	257	1345	1065	1064	147	130
Arrive On Green	0.15	0.84	0.67	0.67	0.09	0.09
Sat Flow, veh/h	1774	1600	1600	1599	1691	1495
Grp Volume(v), veh/h	241	930	1032	439	94	106
Grp Sat Flow(s),veh/h/ln	1774	1600	1600	1599	1691	1495
Q Serve(g_s), s	18.9	31.1	85.4	17.8	7.6	9.8
Cycle Q Clear(g_c), s	18.9	31.1	85.4	17.8	7.6	9.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	257	1345	1065	1064	147	130
V/C Ratio(X)	0.94	0.69	0.97	0.41	0.64	0.81
Avail Cap(c_a), veh/h	257	1352	1072	1071	253	223
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.5	4.3	22.2	10.8	62.1	63.1
Incr Delay (d2), s/veh	39.1	1.7	20.4	0.4	4.6	11.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.1	14.1	43.3	7.9	3.7	8.3
LnGrp Delay(d),s/veh	98.6	6.0	42.6	11.2	66.6	74.6
LnGrp LOS	F	A	D	B	E	E
Approach Vol, veh/h		1171	1471		200	
Approach Delay, s/veh		25.0	33.2		70.9	
Approach LOS		C	C		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		124.2		16.4	24.6	99.6		
Change Period (Y+Rc), s		6.0		* 4.2	* 4.2	6.0		
Max Green Setting (Gmax), s		118.8		* 21	* 20	94.2		
Max Q Clear Time (g_c+I1), s		33.1		11.8	20.9	87.4		
Green Ext Time (p_c), s		42.7		0.4	0.0	6.1		

Intersection Summary

HCM 2010 Ctrl Delay	32.5
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	874	24	23	1193	23	69	4	26	32	1	60
Future Volume (veh/h)	33	874	24	23	1193	23	69	4	26	32	1	60
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1600	1759	1900	1600	1681	1900	1736	1900	1900	1900	1863
Adj Flow Rate, veh/h	38	1016	28	27	1387	27	80	5	30	37	1	70
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	3	0	8	0	0	13	0	0	0	0	0	2
Cap, veh/h	59	1189	1111	51	1181	1054	160	27	161	195	5	197
Arrive On Green	0.03	0.74	0.74	0.03	0.74	0.74	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1757	1600	1495	1810	1600	1428	1346	215	1288	1145	37	1577
Grp Volume(v), veh/h	38	1016	28	27	1387	27	80	0	35	38	0	70
Grp Sat Flow(s),veh/h/ln	1757	1600	1495	1810	1600	1428	1346	0	1503	1182	0	1577
Q Serve(g_s), s	2.9	61.6	0.7	2.0	101.7	0.7	8.0	0.0	2.9	3.4	0.0	5.6
Cycle Q Clear(g_c), s	2.9	61.6	0.7	2.0	101.7	0.7	14.2	0.0	2.9	6.2	0.0	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	0.97		1.00
Lane Grp Cap(c), veh/h	59	1189	1111	51	1181	1054	160	0	188	205	0	197
V/C Ratio(X)	0.65	0.85	0.03	0.53	1.17	0.03	0.50	0.00	0.19	0.19	0.00	0.35
Avail Cap(c_a), veh/h	76	1189	1111	79	1181	1054	265	0	305	314	0	320
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	65.8	12.5	4.6	66.1	18.1	4.8	62.0	0.0	54.0	56.4	0.0	55.2
Incr Delay (d2), s/veh	11.4	6.5	0.0	8.4	87.9	0.0	2.4	0.0	0.5	0.4	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	28.9	0.3	1.1	73.1	0.3	3.1	0.0	1.2	1.3	0.0	2.5
LnGrp Delay(d),s/veh	77.2	18.9	4.6	74.5	106.0	4.8	64.4	0.0	54.5	56.9	0.0	56.3
LnGrp LOS	E	B	A	E	F	A	E		D	E		E
Approach Vol, veh/h		1082			1441			115			108	
Approach Delay, s/veh		20.6			103.5			61.4			56.5	
Approach LOS		C			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.6	108.4		21.8	8.3	107.7		21.8
Change Period (Y+Rc), s	3.7	6.0		4.6	3.7	6.0		4.6
Max Green Setting (Gmax), s	6.0	101.7		28.0	6.0	101.7		28.0
Max Q Clear Time (g_c+I1), s	4.0	63.6		8.2	4.9	103.7		16.2
Green Ext Time (p_c), s	0.0	31.4		0.7	0.0	0.0		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	67.2
HCM 2010 LOS	E

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	724	205	249	1131	197	269
Future Volume (veh/h)	724	205	249	1131	197	269
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1845	1827	1600	1881	1881
Adj Flow Rate, veh/h	754	214	259	1178	205	280
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	3	4	0	1	1
Cap, veh/h	992	972	312	1192	313	427
Arrive On Green	0.62	0.62	0.09	0.75	0.17	0.17
Sat Flow, veh/h	1600	1568	3375	1600	1792	1599
Grp Volume(v), veh/h	754	214	259	1178	205	280
Grp Sat Flow(s),veh/h/ln	1600	1568	1688	1600	1792	1599
Q Serve(g_s), s	43.2	7.7	9.6	90.7	13.6	19.8
Cycle Q Clear(g_c), s	43.2	7.7	9.6	90.7	13.6	19.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	992	972	312	1192	313	427
V/C Ratio(X)	0.76	0.22	0.83	0.99	0.65	0.66
Avail Cap(c_a), veh/h	992	972	344	1202	337	449
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	10.7	56.9	15.7	49.0	41.5
Incr Delay (d2), s/veh	3.5	0.1	14.6	23.0	4.1	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.8	3.4	5.1	46.9	7.1	9.1
LnGrp Delay(d),s/veh	20.9	10.8	71.5	38.7	53.1	44.7
LnGrp LOS	C	B	E	D	D	D
Approach Vol, veh/h	968			1437	485	
Approach Delay, s/veh	18.7			44.6	48.3	
Approach LOS	B			D	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.0	85.0				101.0		26.5
Change Period (Y+Rc), s	4.2	6.0				6.0		4.2
Max Green Setting (Gmax), s	11.8	78.6				95.8		24.0
Max Q Clear Time (g_c+I1), s	11.6	45.2				92.7		21.8
Green Ext Time (p_c), s	0.2	15.1				2.3		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	36.5
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	939	43	154	1254	5	149	0	262	0	1	0
Future Volume (veh/h)	1	939	43	154	1254	5	149	0	262	0	1	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1845	1759	1598	1900	1900	1810	1863	1900	1900	1900
Adj Flow Rate, veh/h	1	1092	50	179	1458	6	173	0	305	0	1	0
Adj No. of Lanes	1	1	1	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	3	8	0	0	0	0	2	0	0	0
Cap, veh/h	1	1012	992	168	1164	5	305	0	450	0	356	303
Arrive On Green	0.00	0.63	0.63	0.13	0.97	0.96	0.19	0.00	0.18	0.00	0.19	0.00
Sat Flow, veh/h	1810	1600	1568	1675	1590	7	1367	0	1583	0	1900	1615
Grp Volume(v), veh/h	1	1092	50	179	0	1464	173	0	305	0	1	0
Grp Sat Flow(s),veh/h/ln	1810	1600	1568	1675	0	1597	1367	0	1583	0	1900	1615
Q Serve(g_s), s	0.1	94.9	1.8	15.0	0.0	109.8	17.6	0.0	25.6	0.0	0.1	0.0
Cycle Q Clear(g_c), s	0.1	94.9	1.8	15.0	0.0	109.8	17.7	0.0	25.6	0.0	0.1	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1	1012	992	168	0	1169	305	0	450	0	356	303
V/C Ratio(X)	0.83	1.08	0.05	1.07	0.00	1.25	0.57	0.00	0.68	0.00	0.00	0.00
Avail Cap(c_a), veh/h	109	1012	992	168	0	1169	314	0	461	0	370	314
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.64	0.09	0.00	0.09	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	75.0	27.6	10.5	65.0	0.0	2.0	56.7	0.0	47.6	0.0	49.5	0.0
Incr Delay (d2), s/veh	252.4	47.3	0.1	41.9	0.0	114.2	2.3	0.0	3.8	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	54.9	0.8	8.9	0.0	69.8	6.9	0.0	11.7	0.0	0.0	0.0
LnGrp Delay(d),s/veh	327.4	74.9	10.5	106.9	0.0	116.2	59.0	0.0	51.4	0.0	49.5	0.0
LnGrp LOS	F	F	B	F		F	E		D		D	
Approach Vol, veh/h		1143			1643			478			1	
Approach Delay, s/veh		72.3			115.2			54.2			49.5	
Approach LOS		E			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.0	98.9		32.1	4.0	113.8		32.1
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	15.3	91.8		* 29	9.3	97.8		* 29
Max Q Clear Time (g_c+I1), s	17.0	96.9		2.1	2.1	111.8		27.6
Green Ext Time (p_c), s	0.0	0.0		2.1	0.0	0.0		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	91.2
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1070	106	152	1203	1	169	0	242	1	0	1
Future Volume (veh/h)	0	1070	106	152	1203	1	169	0	242	1	0	1
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1827	1810	1600	1900	1900	1827	1810	1900	1900	1900
Adj Flow Rate, veh/h	0	1216	120	173	1367	1	192	0	275	1	0	1
Adj No. of Lanes	1	1	1	2	1	0	0	1	1	0	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	4	5	0	0	0	0	5	0	0	0
Cap, veh/h	1	1038	995	172	1181	1	220	0	190	99	0	88
Arrive On Green	0.00	1.00	1.00	0.05	0.74	0.73	0.13	0.00	0.13	0.05	0.00	0.05
Sat Flow, veh/h	1810	1600	1533	3343	1599	1	1740	0	1503	1809	0	1615
Grp Volume(v), veh/h	0	1216	120	173	0	1368	192	0	275	1	0	1
Grp Sat Flow(s),veh/h/ln	1810	1600	1533	1672	0	1600	1740	0	1503	1810	0	1615
Q Serve(g_s), s	0.0	0.0	0.0	7.7	0.0	110.8	16.2	0.0	19.0	0.1	0.0	0.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.7	0.0	110.8	16.2	0.0	19.0	0.1	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1	1038	995	172	0	1182	220	0	190	99	0	88
V/C Ratio(X)	0.00	1.17	0.12	1.01	0.00	1.16	0.87	0.00	1.44	0.01	0.00	0.01
Avail Cap(c_a), veh/h	93	1038	995	172	0	1182	220	0	190	292	0	261
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.13	0.13	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	71.2	0.0	19.6	64.3	0.0	65.5	67.1	0.0	67.1
Incr Delay (d2), s/veh	0.0	78.8	0.0	70.8	0.0	80.8	29.3	0.0	227.1	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	22.7	0.0	5.2	0.0	74.8	9.6	0.0	19.9	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	78.8	0.0	142.0	0.0	100.4	93.6	0.0	292.6	67.1	0.0	67.1
LnGrp LOS		F	A	F		F	F		F	E		E
Approach Vol, veh/h		1336			1541			467			2	
Approach Delay, s/veh		71.7			105.0			210.8			67.1	
Approach LOS		E			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.7	103.1		12.2	0.0	114.8		23.0
Change Period (Y+Rc), s	3.7	* 6		* 4.2	3.7	6.0		4.2
Max Green Setting (Gmax), s	8.0	* 83		* 24	8.0	81.1		18.8
Max Q Clear Time (g_c+I1), s	9.7	2.0		2.1	0.0	112.8		21.0
Green Ext Time (p_c), s	0.0	43.1		0.0	0.0	0.0		0.0

Intersection Summary

HCM 2010 Ctrl Delay	106.5
HCM 2010 LOS	F

Notes

Intersection						
Int Delay, s/veh	131					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	111	1207	874	2	12	445
Future Vol, veh/h	111	1207	874	2	12	445
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	230	-	-	250	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	4	3	6	67	0	1
Mvmt Flow	131	1420	1028	2	14	524

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1028	0	-	0	2709	1028
Stage 1	-	-	-	-	1028	-
Stage 2	-	-	-	-	1681	-
Critical Hdwy	4.14	-	-	-	6.4	6.21
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.236	-	-	-	3.5	3.309
Pot Cap-1 Maneuver	668	-	-	-	24	~ 286
Stage 1	-	-	-	-	348	-
Stage 2	-	-	-	-	168	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	668	-	-	-	19	~ 286
Mov Cap-2 Maneuver	-	-	-	-	19	-
Stage 1	-	-	-	-	348	-
Stage 2	-	-	-	-	135	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	$ 757
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	668	-	-	-	209
HCM Lane V/C Ratio	0.195	-	-	-	2.572
HCM Control Delay (s)	11.7	-	-	-	$ 757
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.7	-	-	-	45.5

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	674	14	52	1017	136	27	19	172	242	18	145
Future Volume (veh/h)	61	674	14	52	1017	136	27	19	172	242	18	145
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1900	1900	1584	1827	1900	1891	1900	1900	1882	1881
Adj Flow Rate, veh/h	65	717	15	55	1082	145	29	20	183	257	19	154
Adj No. of Lanes	1	1	1	1	1	1	0	1	0	0	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	1	4	0	0	0	0	0	1
Cap, veh/h	90	916	906	87	904	868	27	30	113	130	6	458
Arrive On Green	0.05	0.57	0.57	0.05	0.57	0.57	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1810	1600	1582	1810	1584	1521	0	106	396	292	22	1599
Grp Volume(v), veh/h	65	717	15	55	1082	145	232	0	0	276	0	154
Grp Sat Flow(s),veh/h/ln	1810	1600	1582	1810	1584	1521	502	0	0	314	0	1599
Q Serve(g_s), s	5.3	51.9	0.6	4.5	85.3	6.8	0.0	0.0	0.0	0.0	0.0	11.4
Cycle Q Clear(g_c), s	5.3	51.9	0.6	4.5	85.3	6.8	42.8	0.0	0.0	42.8	0.0	11.4
Prop In Lane	1.00		1.00	1.00		1.00	0.12		0.79	0.93		1.00
Lane Grp Cap(c), veh/h	90	916	906	87	904	868	171	0	0	136	0	458
V/C Ratio(X)	0.72	0.78	0.02	0.63	1.20	0.17	1.36	0.00	0.00	2.02	0.00	0.34
Avail Cap(c_a), veh/h	97	916	906	98	904	868	171	0	0	136	0	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	70.0	24.7	13.8	69.8	32.1	15.2	50.2	0.0	0.0	60.6	0.0	42.1
Incr Delay (d2), s/veh	22.3	4.6	0.0	11.7	99.3	0.1	194.5	0.0	0.0	485.1	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	23.9	0.3	2.5	62.1	2.8	15.2	0.0	0.0	24.0	0.0	5.1
LnGrp Delay(d),s/veh	92.3	29.3	13.8	81.5	131.4	15.3	244.7	0.0	0.0	545.7	0.0	42.7
LnGrp LOS	F	C	B	F	F	B	F			F		D
Approach Vol, veh/h		797			1282			232			430	
Approach Delay, s/veh		34.2			116.1			244.7			365.6	
Approach LOS		C			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.9	91.6		47.0	11.2	91.3		47.0
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	8.1	85.2		* 43	8.0	85.3		* 43
Max Q Clear Time (g_c+I1), s	6.5	53.9		44.8	7.3	87.3		44.8
Green Ext Time (p_c), s	0.0	15.6		0.0	0.0	0.0		0.0

Intersection Summary			
HCM 2010 Ctrl Delay		142.3	
HCM 2010 LOS		F	

Notes

Intersection												
Int Delay, s/veh	8.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	16	304	62	16	12	123	46	50	12	57	16
Future Vol, veh/h	16	16	304	62	16	12	123	46	50	12	57	16
Conflicting Peds, #/hr	0	0	1	0	0	0	1	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	92	93	92	92	92	93	93	92	92	93	93
Heavy Vehicles, %	5	2	1	2	2	2	2	1	2	2	2	8
Mvmt Flow	17	17	327	67	17	13	132	49	54	13	61	17

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	453	465	72	447	447	77	79	0	0	104	0	0
Stage 1	97	97	-	341	341	-	-	-	-	-	-	-
Stage 2	356	368	-	106	106	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.52	6.21	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.15	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.018	3.309	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	512	495	993	522	506	984	1519	-	-	1488	-	-
Stage 1	902	815	-	674	639	-	-	-	-	-	-	-
Stage 2	655	621	-	900	807	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	452	445	991	313	454	984	1518	-	-	1488	-	-
Mov Cap-2 Maneuver	452	445	-	313	454	-	-	-	-	-	-	-
Stage 1	817	807	-	611	580	-	-	-	-	-	-	-
Stage 2	569	563	-	584	799	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.7	18.3	4.3	1.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1518	-	-	448	991	367	1488	-	-
HCM Lane V/C Ratio	0.087	-	-	0.077	0.33	0.267	0.009	-	-
HCM Control Delay (s)	7.6	0	-	13.7	10.4	18.3	7.4	0	-
HCM Lane LOS	A	A	-	B	B	C	A	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.2	1.5	1.1	0	-	-

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	50	1	12	44	15	10	0	31	0	0	0
Future Vol, veh/h	1	50	1	12	44	15	10	0	31	0	0	0
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Heavy Vehicles, %	0	0	0	0	8	0	0	0	0	0	0	0
Mvmt Flow	2	81	2	19	71	24	16	0	50	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	7.7	7.9	7.3
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	24%	2%	21%	0%
Vol Thru, %	0%	96%	79%	0%
Vol Right, %	76%	2%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	41	52	56	15
LT Vol	10	1	12	0
Through Vol	0	50	44	0
RT Vol	31	1	0	15
Lane Flow Rate	66	84	90	24
Geometry Grp	2	5	7	7
Degree of Util (X)	0.073	0.098	0.12	0.028
Departure Headway (Hd)	3.953	4.194	4.768	4.096
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	912	846	750	870
Service Time	1.953	2.261	2.51	1.837
HCM Lane V/C Ratio	0.072	0.099	0.12	0.028
HCM Control Delay	7.3	7.7	8.2	7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.3	0.4	0.1

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	175	22	7	28	0	30	0	44	1	4	2
Future Vol, veh/h	0	175	22	7	28	0	30	0	44	1	4	2
Conflicting Peds, #/hr	1	0	1	1	0	4	2	0	1	4	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	1	0	0	0	0	0	0	5	0	25	0
Mvmt Flow	0	192	24	8	31	0	33	0	48	1	4	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	193	0	0	247	239	197	266	239	36
Stage 1	-	-	-	-	-	-	193	193	-	46	46	-
Stage 2	-	-	-	-	-	-	54	46	-	220	193	-
Critical Hdwy	-	-	-	4.1	-	-	7.1	6.5	6.25	7.1	6.75	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.75	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.75	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.5	4	3.345	3.5	4.225	3.3
Pot Cap-1 Maneuver	0	-	-	1392	-	0	711	666	837	691	624	1042
Stage 1	0	-	-	-	-	0	813	745	-	973	813	-
Stage 2	0	-	-	-	-	0	963	861	-	787	700	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1387	-	-	699	661	834	646	620	1038
Mov Cap-2 Maneuver	-	-	-	-	-	-	699	661	-	646	620	-
Stage 1	-	-	-	-	-	-	813	744	-	973	808	-
Stage 2	-	-	-	-	-	-	946	856	-	739	699	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.5	10.2	10.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	773	-	-	1387	-	705
HCM Lane V/C Ratio	0.105	-	-	0.006	-	0.011
HCM Control Delay (s)	10.2	-	-	7.6	0	10.2
HCM Lane LOS	B	-	-	A	A	B
HCM 95th %tile Q(veh)	0.4	-	-	0	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	972	81	108	638	37	115	38	218	13	12	22
Future Volume (veh/h)	56	972	81	108	638	37	115	38	218	13	12	22
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		1.00	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1865	1900	1900	1849	1900	1900	1859	1900
Adj Flow Rate, veh/h	63	1092	91	121	717	42	129	43	0	15	13	25
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	2	0	0	2	2	8	8	0	9	9	9
Cap, veh/h	204	1426	647	278	1510	88	311	79	297	134	111	144
Arrive On Green	0.11	0.40	0.40	0.15	0.44	0.44	0.18	0.18	0.00	0.18	0.18	0.18
Sat Flow, veh/h	1810	3539	1605	1810	3400	199	1063	430	1615	272	605	783
Grp Volume(v), veh/h	63	1092	91	121	373	386	172	0	0	53	0	0
Grp Sat Flow(s),veh/h/ln	1810	1770	1605	1810	1772	1828	1493	0	1615	1659	0	0
Q Serve(g_s), s	1.8	14.6	2.0	3.3	8.1	8.1	4.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.8	14.6	2.0	3.3	8.1	8.1	5.6	0.0	0.0	1.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.11	0.75		1.00	0.28		0.47
Lane Grp Cap(c), veh/h	204	1426	647	278	786	811	390	0	297	389	0	0
V/C Ratio(X)	0.31	0.77	0.14	0.43	0.47	0.48	0.44	0.00	0.00	0.14	0.00	0.00
Avail Cap(c_a), veh/h	347	1669	757	331	819	845	916	0	886	956	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	22.3	14.1	10.3	21.0	10.7	10.7	20.4	0.0	0.0	18.8	0.0	0.0
Incr Delay (d2), s/veh	0.3	1.5	0.0	0.4	0.2	0.2	0.3	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	7.3	0.9	1.7	4.0	4.1	2.4	0.0	0.0	0.7	0.0	0.0
LnGrp Delay(d),s/veh	22.6	15.6	10.4	21.4	10.9	10.9	20.7	0.0	0.0	18.9	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	C			B		
Approach Vol, veh/h		1246			880			172			53	
Approach Delay, s/veh		15.6			12.3			20.7			18.9	
Approach LOS		B			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.4	27.2		15.1	10.2	29.5		15.1
Change Period (Y+Rc), s	4.0	5.2		5.0	4.0	5.2		5.0
Max Green Setting (Gmax), s	10.0	25.8		30.0	10.5	25.3		30.0
Max Q Clear Time (g_c+I1), s	5.3	16.6		3.4	3.8	10.1		7.6
Green Ext Time (p_c), s	0.0	5.5		0.2	0.0	7.5		0.2

Intersection Summary			
HCM 2010 Ctrl Delay		14.8	
HCM 2010 LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	400	106	247	610	187	307	1052	452	154	517	321
Future Volume (veh/h)	213	400	106	247	610	187	307	1052	452	154	517	321
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1863	1845	1881	1881	1881	1845	1881	1863
Adj Flow Rate, veh/h	217	408	108	252	622	191	313	1073	461	157	528	328
Adj No. of Lanes	2	2	0	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	2	3	1	1	1	3	1	2
Cap, veh/h	336	761	199	336	966	423	265	1322	581	175	1149	502
Arrive On Green	0.10	0.27	0.27	0.10	0.27	0.27	0.15	0.37	0.37	0.10	0.32	0.32
Sat Flow, veh/h	3476	2789	730	3476	3539	1549	1792	3574	1570	1757	3574	1563
Grp Volume(v), veh/h	217	260	256	252	622	191	313	1073	461	157	528	328
Grp Sat Flow(s),veh/h/ln	1738	1787	1732	1738	1770	1549	1792	1787	1570	1757	1787	1563
Q Serve(g_s), s	6.2	12.8	13.0	7.3	16.0	10.6	15.3	27.9	27.0	9.1	12.1	18.6
Cycle Q Clear(g_c), s	6.2	12.8	13.0	7.3	16.0	10.6	15.3	27.9	27.0	9.1	12.1	18.6
Prop In Lane	1.00		0.42	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	336	488	473	336	966	423	265	1322	581	175	1149	502
V/C Ratio(X)	0.65	0.53	0.54	0.75	0.64	0.45	1.18	0.81	0.79	0.90	0.46	0.65
Avail Cap(c_a), veh/h	380	585	567	347	1124	492	265	1350	593	175	1177	514
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.9	31.9	32.0	45.4	33.1	31.1	44.0	29.3	29.0	46.0	27.9	30.1
Incr Delay (d2), s/veh	3.1	1.3	1.4	8.5	1.3	1.1	112.7	4.0	7.6	40.0	0.4	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	6.5	6.4	3.9	7.9	4.6	15.8	14.4	12.9	6.4	6.1	8.5
LnGrp Delay(d),s/veh	48.1	33.2	33.4	53.9	34.4	32.2	156.6	33.3	36.6	85.9	28.3	33.4
LnGrp LOS	D	C	C	D	C	C	F	C	D	F	C	C
Approach Vol, veh/h		733			1065			1847			1013	
Approach Delay, s/veh		37.7			38.6			55.0			38.9	
Approach LOS		D			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	32.8	19.0	37.8	13.7	32.8	14.0	42.8
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	10.3	33.8	15.3	34.0	11.3	32.8	10.3	39.0
Max Q Clear Time (g_c+I1), s	9.3	15.0	17.3	20.6	8.2	18.0	11.1	29.9
Green Ext Time (p_c), s	0.1	9.9	0.0	11.9	0.2	8.5	0.0	8.3

Intersection Summary	
HCM 2010 Ctrl Delay	45.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	905	242	189	598	56	283	361	217	153	274	171
Future Volume (veh/h)	203	905	242	189	598	56	283	361	217	153	274	171
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1881	1881	1881	1881	1881	1881	1881	1900	1881	1858	1900
Adj Flow Rate, veh/h	207	923	247	193	610	57	289	368	221	156	280	174
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	1	1	1	1	1	1	1	1	1	3	3
Cap, veh/h	177	1187	523	179	1187	529	200	560	330	190	541	325
Arrive On Green	0.10	0.33	0.33	0.10	0.33	0.33	0.11	0.26	0.26	0.11	0.26	0.26
Sat Flow, veh/h	1774	3574	1574	1792	3574	1592	1792	2134	1257	1792	2106	1266
Grp Volume(v), veh/h	207	923	247	193	610	57	289	307	282	156	233	221
Grp Sat Flow(s),veh/h/ln	1774	1787	1574	1792	1787	1592	1792	1787	1603	1792	1766	1607
Q Serve(g_s), s	8.3	19.3	10.3	8.3	11.4	2.1	9.3	12.7	13.1	7.1	9.4	9.9
Cycle Q Clear(g_c), s	8.3	19.3	10.3	8.3	11.4	2.1	9.3	12.7	13.1	7.1	9.4	9.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		0.79
Lane Grp Cap(c), veh/h	177	1187	523	179	1187	529	200	469	421	190	453	413
V/C Ratio(X)	1.17	0.78	0.47	1.08	0.51	0.11	1.44	0.66	0.67	0.82	0.51	0.53
Avail Cap(c_a), veh/h	177	1289	568	179	1289	574	200	561	503	194	547	498
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.5	25.0	22.0	37.5	22.4	19.2	37.0	27.3	27.5	36.4	26.5	26.6
Incr Delay (d2), s/veh	120.7	2.9	0.7	90.2	0.3	0.1	225.4	2.4	3.0	23.1	1.1	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	10.0	4.6	8.5	5.6	0.9	17.1	6.5	6.1	4.7	4.7	4.5
LnGrp Delay(d),s/veh	158.2	27.9	22.7	127.7	22.7	19.3	262.3	29.7	30.5	59.5	27.6	27.9
LnGrp LOS	F	C	C	F	C	B	F	C	C	E	C	C
Approach Vol, veh/h		1377			860			878			610	
Approach Delay, s/veh		46.5			46.1			106.5			35.9	
Approach LOS		D			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	26.4	12.0	32.2	13.0	26.0	12.0	32.2
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	9.0	26.1	8.3	30.0	9.3	25.8	8.3	30.0
Max Q Clear Time (g_c+I1), s	11.1	15.1	10.3	21.3	11.3	11.9	10.3	13.4
Green Ext Time (p_c), s	0.0	4.3	0.0	5.6	0.0	4.9	0.0	8.7

Intersection Summary	
HCM 2010 Ctrl Delay	58.8
HCM 2010 LOS	E

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	110	92	905	525	163	303
Future Volume (veh/h)	110	92	905	525	163	303
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1827	1881	1900	1900
Adj Flow Rate, veh/h	116	97	953	553	172	319
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	4	1	0	0
Cap, veh/h	174	155	1071	937	213	1446
Arrive On Green	0.10	0.10	0.59	0.59	0.12	0.76
Sat Flow, veh/h	1792	1599	1827	1599	1810	1900
Grp Volume(v), veh/h	116	97	953	553	172	319
Grp Sat Flow(s),veh/h/ln	1792	1599	1827	1599	1810	1900
Q Serve(g_s), s	4.5	4.2	32.4	15.7	6.6	3.5
Cycle Q Clear(g_c), s	4.5	4.2	32.4	15.7	6.6	3.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	174	155	1071	937	213	1446
V/C Ratio(X)	0.67	0.63	0.89	0.59	0.81	0.22
Avail Cap(c_a), veh/h	425	379	1243	1088	250	1663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	31.1	12.8	9.4	30.9	2.5
Incr Delay (d2), s/veh	4.4	4.1	7.5	0.6	15.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	3.8	18.1	6.9	4.2	1.8
LnGrp Delay(d),s/veh	35.6	35.2	20.3	10.0	46.4	2.5
LnGrp LOS	D	D	C	B	D	A
Approach Vol, veh/h	213		1506			491
Approach Delay, s/veh	35.4		16.6			17.9
Approach LOS	D		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		59.9		11.9	12.5	47.3		
Change Period (Y+Rc), s		5.3		4.9	4.1	5.3		
Max Green Setting (Gmax), s		62.8		17.0	9.9	48.8		
Max Q Clear Time (g_c+I1), s		5.5		6.5	8.6	34.4		
Green Ext Time (p_c), s		12.2		0.6	0.1	7.7		

Intersection Summary	
HCM 2010 Ctrl Delay	18.7
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	33	39	36	1419	360	22
Future Vol, veh/h	33	39	36	1419	360	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	40	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	15	2	5	0
Mvmt Flow	35	41	38	1494	379	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1948	379	379	0	-	0
Stage 1	379	-	-	-	-	-
Stage 2	1569	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.25	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.335	-	-	-
Pot Cap-1 Maneuver	72	672	1112	-	-	-
Stage 1	696	-	-	-	-	-
Stage 2	191	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	70	672	1112	-	-	-
Mov Cap-2 Maneuver	152	-	-	-	-	-
Stage 1	696	-	-	-	-	-
Stage 2	184	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.1	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1112	-	152	672	-	-
HCM Lane V/C Ratio	0.034	-	0.229	0.061	-	-
HCM Control Delay (s)	8.4	-	35.6	10.7	-	-
HCM Lane LOS	A	-	E	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	0.2	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	44	105	1328	8	12	395
Future Volume (veh/h)	44	105	1328	8	12	395
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1881	1387	1508	1881
Adj Flow Rate, veh/h	48	114	1443	9	13	429
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	3	1	37	26	1
Cap, veh/h	151	169	1486	931	29	1576
Arrive On Green	0.09	0.09	0.79	0.79	0.02	0.84
Sat Flow, veh/h	1723	1568	1881	1179	1436	1881
Grp Volume(v), veh/h	48	114	1443	9	13	429
Grp Sat Flow(s),veh/h/ln	1723	1568	1881	1179	1436	1881
Q Serve(g_s), s	3.5	9.3	92.0	0.2	1.2	6.4
Cycle Q Clear(g_c), s	3.5	9.3	92.0	0.2	1.2	6.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	151	169	1486	931	29	1576
V/C Ratio(X)	0.32	0.67	0.97	0.01	0.45	0.27
Avail Cap(c_a), veh/h	272	279	1535	962	76	1686
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.9	57.0	12.6	3.0	64.4	2.3
Incr Delay (d2), s/veh	1.2	4.6	16.4	0.0	10.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	8.2	53.3	0.1	0.6	3.3
LnGrp Delay(d),s/veh	58.1	61.6	29.0	3.0	75.0	2.4
LnGrp LOS	E	E	C	A	E	A
Approach Vol, veh/h	162		1452			442
Approach Delay, s/veh	60.6		28.9			4.5
Approach LOS	E		C			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		117.0		15.9	6.4	110.7		
Change Period (Y+Rc), s		5.7		* 4.2	3.7	5.7		
Max Green Setting (Gmax), s		119.1		* 21	7.0	108.4		
Max Q Clear Time (g_c+I1), s		8.4		11.3	3.2	94.0		
Green Ext Time (p_c), s		31.8		0.4	0.0	11.0		

Intersection Summary	
HCM 2010 Ctrl Delay	26.1
HCM 2010 LOS	C

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	724	81	65	1276	71	36
Future Volume (veh/h)	724	81	65	1276	71	36
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1569	1900	1900	1584	1900	1845
Adj Flow Rate, veh/h	762	85	68	1343	75	38
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	0	1	0	3
Cap, veh/h	1243	1280	87	1375	104	90
Arrive On Green	0.79	0.79	0.05	0.87	0.06	0.06
Sat Flow, veh/h	1569	1615	1810	1584	1810	1568
Grp Volume(v), veh/h	762	85	68	1343	75	38
Grp Sat Flow(s),veh/h/ln	1569	1615	1810	1584	1810	1568
Q Serve(g_s), s	26.8	1.6	5.1	100.7	5.6	3.2
Cycle Q Clear(g_c), s	26.8	1.6	5.1	100.7	5.6	3.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1243	1280	87	1375	104	90
V/C Ratio(X)	0.61	0.07	0.78	0.98	0.72	0.42
Avail Cap(c_a), veh/h	1243	1280	160	1434	212	183
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.7	3.1	64.4	7.9	63.4	62.2
Incr Delay (d2), s/veh	1.0	0.0	13.7	18.2	8.9	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	0.7	2.9	49.1	3.0	1.5
LnGrp Delay(d),s/veh	6.7	3.1	78.1	26.1	72.3	65.3
LnGrp LOS	A	A	E	C	E	E
Approach Vol, veh/h	847			1411	113	
Approach Delay, s/veh	6.3			28.6	69.9	
Approach LOS	A			C	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.3	114.4				124.7		12.1
Change Period (Y+Rc), s	3.7	6.0				6.0		4.2
Max Green Setting (Gmax), s	12.1	108.0				123.8		16.0
Max Q Clear Time (g_c+I1), s	7.1	28.8				102.7		7.6
Green Ext Time (p_c), s	0.1	36.6				16.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	22.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	701	7	6	988	727	10	32	14	290	18	124
Future Volume (veh/h)	260	701	7	6	988	727	10	32	14	290	18	124
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1569	1900	1900	1584	1845	1900	1836	1900	1863	1900	1845
Adj Flow Rate, veh/h	283	762	8	7	1074	790	11	35	15	315	20	135
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	2	2	0	1	3	0	5	5	2	0	3
Cap, veh/h	316	1694	18	32	1210	832	140	95	41	444	245	199
Arrive On Green	0.18	0.56	0.56	0.02	0.40	0.40	0.08	0.08	0.08	0.13	0.13	0.13
Sat Flow, veh/h	1792	3022	32	1810	3010	1568	1810	1220	523	3442	1900	1544
Grp Volume(v), veh/h	283	376	394	7	1074	790	11	0	50	315	20	135
Grp Sat Flow(s),veh/h/ln	1792	1490	1563	1810	1505	1568	1810	0	1743	1721	1900	1544
Q Serve(g_s), s	14.1	13.6	13.6	0.3	30.4	36.8	0.5	0.0	2.5	8.0	0.8	7.6
Cycle Q Clear(g_c), s	14.1	13.6	13.6	0.3	30.4	36.8	0.5	0.0	2.5	8.0	0.8	7.6
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	316	836	877	32	1210	832	140	0	135	444	245	199
V/C Ratio(X)	0.89	0.45	0.45	0.22	0.89	0.95	0.08	0.00	0.37	0.71	0.08	0.68
Avail Cap(c_a), veh/h	323	836	877	198	1210	832	178	0	171	1052	581	472
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	11.8	11.8	44.3	25.5	18.7	39.2	0.0	40.1	38.2	35.1	38.1
Incr Delay (d2), s/veh	25.3	0.4	0.4	3.3	8.3	19.9	0.2	0.0	1.7	2.1	0.1	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	5.6	5.9	0.2	13.9	24.3	0.3	0.0	1.3	3.9	0.5	3.5
LnGrp Delay(d),s/veh	62.2	12.2	12.2	47.7	33.8	38.6	39.4	0.0	41.8	40.3	35.3	42.1
LnGrp LOS	E	B	B	D	C	D	D		D	D	D	D
Approach Vol, veh/h		1053			1871			61			470	
Approach Delay, s/veh		25.6			35.9			41.4			40.6	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.8	57.3		17.1	20.4	42.8		11.3
Change Period (Y+Rc), s	* 4.2	6.0		5.3	* 4.2	6.0		4.2
Max Green Setting (Gmax), s	* 10	43.3		28.0	* 17	36.8		9.0
Max Q Clear Time (g_c+I1), s	2.3	15.6		10.0	16.1	38.8		4.5
Green Ext Time (p_c), s	0.0	15.5		1.8	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	33.5
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	896	0	0	1057	12	0	0	0	0	0	659
Future Volume (veh/h)	109	896	0	0	1057	12	0	0	0	0	0	659
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1681	1569	0	0	1569	1900				0	1863	1863
Adj Flow Rate, veh/h	121	996	0	0	1174	13				0	0	732
Adj No. of Lanes	1	2	0	0	2	0				0	1	2
Peak Hour Factor	0.90	0.90	0.92	0.92	0.90	0.90				0.90	0.92	0.90
Percent Heavy Veh, %	13	2	0	0	2	2				0	2	2
Cap, veh/h	157	2732	0	0	2305	26				0	0	0
Arrive On Green	0.10	0.92	0.00	0.00	0.76	0.76				0.00	0.00	0.00
Sat Flow, veh/h	1601	3059	0	0	3099	33					0	
Grp Volume(v), veh/h	121	996	0	0	579	608					0.0	
Grp Sat Flow(s),veh/h/ln	1601	1490	0	0	1491	1563						
Q Serve(g_s), s	5.3	3.0	0.0	0.0	10.8	10.8						
Cycle Q Clear(g_c), s	5.3	3.0	0.0	0.0	10.8	10.8						
Prop In Lane	1.00		0.00	0.00		0.02						
Lane Grp Cap(c), veh/h	157	2732	0	0	1138	1193						
V/C Ratio(X)	0.77	0.36	0.00	0.00	0.51	0.51						
Avail Cap(c_a), veh/h	1179	4430	0	0	1138	1193						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	31.7	0.4	0.0	0.0	3.3	3.3						
Incr Delay (d2), s/veh	7.8	0.1	0.0	0.0	0.4	0.4						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	2.7	1.1	0.0	0.0	4.5	4.7						
LnGrp Delay(d),s/veh	39.5	0.5	0.0	0.0	3.8	3.7						
LnGrp LOS	D	A			A	A						
Approach Vol, veh/h		1117			1187							
Approach Delay, s/veh		4.7			3.7							
Approach LOS		A			A							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		72.0			11.0	60.9		
Change Period (Y+Rc), s		* 6			4.0	6.0		
Max Green Setting (Gmax), s		* 1.1E2			53.0	47.0		
Max Q Clear Time (g_c+I1), s		5.0			7.3	12.8		
Green Ext Time (p_c), s		8.0			0.4	14.7		

Intersection Summary	
HCM 2010 Ctrl Delay	4.2
HCM 2010 LOS	A

Notes

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	80	807	962	127	349	121
Future Volume (veh/h)	80	807	962	127	349	121
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1584	1584	1845	1900	1881
Adj Flow Rate, veh/h	84	849	1013	134	367	127
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	0	1
Cap, veh/h	94	1142	1008	997	363	321
Arrive On Green	0.05	0.72	0.64	0.64	0.20	0.20
Sat Flow, veh/h	1792	1584	1584	1568	1810	1599
Grp Volume(v), veh/h	84	849	1013	134	367	127
Grp Sat Flow(s),veh/h/ln	1792	1584	1584	1568	1810	1599
Q Serve(g_s), s	6.1	41.9	82.7	4.4	26.1	9.0
Cycle Q Clear(g_c), s	6.1	41.9	82.7	4.4	26.1	9.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	94	1142	1008	997	363	321
V/C Ratio(X)	0.90	0.74	1.01	0.13	1.01	0.40
Avail Cap(c_a), veh/h	94	1142	1008	997	363	321
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.2	10.9	23.7	9.4	52.0	45.1
Incr Delay (d2), s/veh	60.5	2.9	29.6	0.1	49.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	19.1	44.1	1.9	18.0	8.3
LnGrp Delay(d),s/veh	121.8	13.8	53.3	9.5	101.8	45.9
LnGrp LOS	F	B	F	A	F	D
Approach Vol, veh/h		933	1147		494	
Approach Delay, s/veh		23.5	48.2		87.4	
Approach LOS		C	D		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		99.7		30.3	11.0	88.7		
Change Period (Y+Rc), s		6.0		* 4.2	* 4.2	6.0		
Max Green Setting (Gmax), s		93.7		* 26	* 6.8	82.7		
Max Q Clear Time (g_c+I1), s		43.9		28.1	8.1	84.7		
Green Ext Time (p_c), s		24.9		0.0	0.0	0.0		

Intersection Summary

HCM 2010 Ctrl Delay	46.8
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	1059	71	11	975	30	44	4	9	21	2	44
Future Volume (veh/h)	65	1059	71	11	975	30	44	4	9	21	2	44
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1584	1900	1900	1584	1900	1900	1900	1900	1900	1900	1845
Adj Flow Rate, veh/h	67	1092	73	11	1005	31	45	4	9	22	2	45
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	0	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	1	0	0	1	0	0	0	0	0	0	3
Cap, veh/h	87	1236	1260	28	1185	1208	138	38	85	151	11	114
Arrive On Green	0.05	0.78	0.78	0.02	0.75	0.75	0.07	0.07	0.07	0.07	0.07	0.07
Sat Flow, veh/h	1810	1584	1615	1810	1584	1615	1380	521	1172	1202	152	1568
Grp Volume(v), veh/h	67	1092	73	11	1005	31	45	0	13	24	0	45
Grp Sat Flow(s),veh/h/ln	1810	1584	1615	1810	1584	1615	1380	0	1693	1355	0	1568
Q Serve(g_s), s	4.0	53.0	1.1	0.7	47.6	0.5	3.5	0.0	0.8	1.5	0.0	3.0
Cycle Q Clear(g_c), s	4.0	53.0	1.1	0.7	47.6	0.5	5.7	0.0	0.8	2.2	0.0	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.69	0.92		1.00
Lane Grp Cap(c), veh/h	87	1236	1260	28	1185	1208	138	0	123	163	0	114
V/C Ratio(X)	0.77	0.88	0.06	0.39	0.85	0.03	0.33	0.00	0.11	0.15	0.00	0.39
Avail Cap(c_a), veh/h	110	1483	1511	100	1474	1503	393	0	436	432	0	404
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.1	8.5	2.8	53.0	9.5	3.5	50.5	0.0	47.1	47.9	0.0	48.1
Incr Delay (d2), s/veh	22.5	6.3	0.0	8.5	4.5	0.0	1.4	0.0	0.4	0.4	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	24.9	0.5	0.4	21.8	0.2	1.4	0.0	0.4	0.7	0.0	1.4
LnGrp Delay(d),s/veh	73.6	14.7	2.8	61.5	13.9	3.5	51.8	0.0	47.4	48.3	0.0	50.3
LnGrp LOS	E	B	A	E	B	A	D		D	D		D
Approach Vol, veh/h		1232			1047			58			69	
Approach Delay, s/veh		17.2			14.1			50.8			49.6	
Approach LOS		B			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.4	90.8		12.5	8.9	87.3		12.5
Change Period (Y+Rc), s	3.7	6.0		4.6	3.7	6.0		4.6
Max Green Setting (Gmax), s	6.0	101.7		28.0	6.6	101.1		28.0
Max Q Clear Time (g_c+I1), s	2.7	55.0		5.0	6.0	49.6		7.7
Green Ext Time (p_c), s	0.0	29.7		0.4	0.0	31.6		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	17.6
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	835	146	212	815	203	341
Future Volume (veh/h)	835	146	212	815	203	341
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1553	1863	1881	1584	1863	1827
Adj Flow Rate, veh/h	870	152	221	849	211	355
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	2	1	1	2	4
Cap, veh/h	830	846	318	1059	404	496
Arrive On Green	0.53	0.53	0.09	0.67	0.23	0.23
Sat Flow, veh/h	1553	1583	3476	1584	1774	1553
Grp Volume(v), veh/h	870	152	221	849	211	355
Grp Sat Flow(s),veh/h/ln	1553	1583	1738	1584	1774	1553
Q Serve(g_s), s	52.5	4.9	6.1	37.6	10.2	19.8
Cycle Q Clear(g_c), s	52.5	4.9	6.1	37.6	10.2	19.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	830	846	318	1059	404	496
V/C Ratio(X)	1.05	0.18	0.70	0.80	0.52	0.72
Avail Cap(c_a), veh/h	830	846	322	1061	433	521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	11.8	43.3	11.6	33.3	29.5
Incr Delay (d2), s/veh	44.6	0.1	6.3	4.5	1.0	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	32.7	2.1	3.2	17.6	5.2	9.1
LnGrp Delay(d),s/veh	67.5	11.9	49.6	16.1	34.3	34.0
LnGrp LOS	F	B	D	B	C	C
Approach Vol, veh/h	1022			1070	566	
Approach Delay, s/veh	59.3			23.1	34.1	
Approach LOS	E			C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	13.2	58.5				71.7		26.6
Change Period (Y+Rc), s	4.2	6.0				6.0		4.2
Max Green Setting (Gmax), s	9.1	52.5				65.8		24.0
Max Q Clear Time (g_c+I1), s	8.1	54.5				39.6		21.8
Green Ext Time (p_c), s	0.1	0.0				10.3		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	39.3
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1083	72	193	958	8	76	0	139	8	1	4
Future Volume (veh/h)	5	1083	72	193	958	8	76	0	139	8	1	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1584	1845	1863	1569	1900	1900	1881	1863	1900	1900	1900
Adj Flow Rate, veh/h	5	1128	75	201	998	8	79	0	145	8	1	4
Adj No. of Lanes	1	1	1	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	3	2	2	2	0	0	2	0	0	0
Cap, veh/h	18	1001	967	177	1125	9	48	0	451	48	3	301
Arrive On Green	0.01	0.63	0.62	0.20	1.00	1.00	0.18	0.00	0.18	0.19	0.19	0.19
Sat Flow, veh/h	1810	1584	1568	1774	1554	12	0	0	1583	12	19	1615
Grp Volume(v), veh/h	5	1128	75	201	0	1006	79	0	145	9	0	4
Grp Sat Flow(s),veh/h/ln	1810	1584	1568	1774	0	1567	0	0	1583	31	0	1615
Q Serve(g_s), s	0.4	94.8	2.9	15.0	0.0	0.0	0.0	0.0	10.8	0.3	0.0	0.3
Cycle Q Clear(g_c), s	0.4	94.8	2.9	15.0	0.0	0.0	27.7	0.0	10.8	28.0	0.0	0.3
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.89		1.00
Lane Grp Cap(c), veh/h	18	1001	967	177	0	1134	48	0	451	51	0	301
V/C Ratio(X)	0.28	1.13	0.08	1.13	0.00	0.89	1.65	0.00	0.32	0.18	0.00	0.01
Avail Cap(c_a), veh/h	100	1001	967	177	0	1134	48	0	451	51	0	301
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.30	0.30	0.30	0.09	0.00	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	73.7	27.6	11.6	60.0	0.0	0.0	74.9	0.0	42.2	65.1	0.0	49.7
Incr Delay (d2), s/veh	2.6	61.5	0.0	66.8	0.0	1.1	366.4	0.0	0.4	2.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	58.3	1.3	10.6	0.0	0.3	6.9	0.0	4.8	0.4	0.0	0.1
LnGrp Delay(d),s/veh	76.4	89.1	11.6	126.8	0.0	1.1	441.3	0.0	42.7	67.5	0.0	49.8
LnGrp LOS	E	F	B	F		A	F		D	E		D
Approach Vol, veh/h		1208			1207			224			13	
Approach Delay, s/veh		84.2			22.0			183.2			62.0	
Approach LOS		F			C			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	98.8		32.2	5.2	112.6		32.2
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	5.3	92.8		* 28	8.3	99.8		* 28
Max Q Clear Time (g_c+I1), s	17.0	96.8		30.0	2.4	2.0		29.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	21.0		0.0

Intersection Summary

HCM 2010 Ctrl Delay	64.2	
HCM 2010 LOS	E	

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	1137	74	163	1115	2	55	0	83	1	0	1
Future Volume (veh/h)	3	1137	74	163	1115	2	55	0	83	1	0	1
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1569	1881	1863	1569	1900	1900	1900	1845	1900	1900	1900
Adj Flow Rate, veh/h	3	1184	77	170	1161	2	57	0	86	1	0	1
Adj No. of Lanes	1	1	1	2	1	0	0	1	1	0	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	1	2	2	2	0	0	3	0	0	0
Cap, veh/h	8	1149	1157	177	1221	2	93	0	78	93	0	83
Arrive On Green	0.01	1.00	1.00	0.05	0.78	0.77	0.05	0.00	0.05	0.05	0.00	0.05
Sat Flow, veh/h	1810	1569	1579	3442	1566	3	1810	0	1526	1809	0	1615
Grp Volume(v), veh/h	3	1184	77	170	0	1163	57	0	86	1	0	1
Grp Sat Flow(s),veh/h/ln	1810	1569	1579	1721	0	1568	1810	0	1526	1810	0	1615
Q Serve(g_s), s	0.2	0.0	0.0	7.4	0.0	94.8	4.6	0.0	7.7	0.1	0.0	0.1
Cycle Q Clear(g_c), s	0.2	0.0	0.0	7.4	0.0	94.8	4.6	0.0	7.7	0.1	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	8	1149	1157	177	0	1223	93	0	78	93	0	83
V/C Ratio(X)	0.39	1.03	0.07	0.96	0.00	0.95	0.61	0.00	1.10	0.01	0.00	0.01
Avail Cap(c_a), veh/h	93	1149	1157	177	0	1223	93	0	78	286	0	255
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	74.2	0.0	0.0	71.0	0.0	14.1	69.7	0.0	71.2	67.5	0.0	67.5
Incr Delay (d2), s/veh	2.9	17.4	0.0	56.5	0.0	16.4	11.4	0.0	130.9	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	5.5	0.0	4.9	0.0	46.0	2.6	0.0	6.1	0.0	0.0	0.0
LnGrp Delay(d),s/veh	77.0	17.4	0.0	127.5	0.0	30.5	81.1	0.0	202.4	67.6	0.0	67.6
LnGrp LOS	E	F	A	F		C	F		F	E		E
Approach Vol, veh/h		1264			1333			143			2	
Approach Delay, s/veh		16.4			42.9			154.0			67.6	
Approach LOS		B			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.7	113.9		12.2	4.6	121.0		12.2
Change Period (Y+Rc), s	3.7	* 6		* 4.2	3.7	6.0		4.2
Max Green Setting (Gmax), s	8.0	* 94		* 24	8.0	91.9		8.0
Max Q Clear Time (g_c+I1), s	9.4	2.0		2.1	2.2	96.8		9.7
Green Ext Time (p_c), s	0.0	31.4		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.5
HCM 2010 LOS	D

Notes

Intersection						
Int Delay, s/veh	4.2					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	78	1176	1231	55	12	51
Future Vol, veh/h	78	1176	1231	55	12	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	230	-	-	250	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	1	2	0	0	0
Mvmt Flow	81	1225	1282	57	13	53

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1282	0	-	0	2670	1282
Stage 1	-	-	-	-	1282	-
Stage 2	-	-	-	-	1388	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	548	-	-	-	25	204
Stage 1	-	-	-	-	263	-
Stage 2	-	-	-	-	234	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	548	-	-	-	21	204
Mov Cap-2 Maneuver	-	-	-	-	21	-
Stage 1	-	-	-	-	263	-
Stage 2	-	-	-	-	199	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	156.5
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	548	-	-	-	77
HCM Lane V/C Ratio	0.148	-	-	-	0.852
HCM Control Delay (s)	12.7	-	-	-	156.5
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.5	-	-	-	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	852	33	93	811	301	43	27	86	118	24	68
Future Volume (veh/h)	91	852	33	93	811	301	43	27	86	118	24	68
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1900	1863	1600	1881	1900	1870	1900	1900	1735	1652
Adj Flow Rate, veh/h	106	991	38	108	943	350	50	31	100	137	28	79
Adj No. of Lanes	1	1	1	1	1	1	0	1	0	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	2	0	1	3	3	3	12	12	15
Cap, veh/h	121	961	950	118	961	941	38	33	41	164	22	307
Arrive On Green	0.07	0.60	0.60	0.07	0.60	0.60	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1810	1600	1582	1774	1600	1566	0	150	186	499	102	1404
Grp Volume(v), veh/h	106	991	38	108	943	350	181	0	0	165	0	79
Grp Sat Flow(s),veh/h/ln	1810	1600	1582	1774	1600	1566	336	0	0	600	0	1404
Q Serve(g_s), s	7.0	72.1	1.2	7.3	68.8	13.8	0.0	0.0	0.0	0.0	0.0	5.6
Cycle Q Clear(g_c), s	7.0	72.1	1.2	7.3	68.8	13.8	26.2	0.0	0.0	26.2	0.0	5.6
Prop In Lane	1.00		1.00	1.00		1.00	0.28		0.55	0.83		1.00
Lane Grp Cap(c), veh/h	121	961	950	118	961	941	112	0	0	186	0	307
V/C Ratio(X)	0.88	1.03	0.04	0.91	0.98	0.37	1.62	0.00	0.00	0.89	0.00	0.26
Avail Cap(c_a), veh/h	121	961	950	118	961	941	112	0	0	186	0	307
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.5	24.0	9.8	55.7	23.3	12.3	44.5	0.0	0.0	49.6	0.0	38.8
Incr Delay (d2), s/veh	47.4	37.2	0.0	56.8	24.4	0.3	317.0	0.0	0.0	37.1	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	41.4	0.5	5.4	36.6	6.0	13.5	0.0	0.0	7.4	0.0	2.2
LnGrp Delay(d),s/veh	103.0	61.2	9.8	112.5	47.7	12.6	361.5	0.0	0.0	86.7	0.0	39.5
LnGrp LOS	F	F	A	F	D	B	F			F		D
Approach Vol, veh/h		1135			1401			181			244	
Approach Delay, s/veh		63.4			43.9			361.5			71.4	
Approach LOS		E			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.7	78.1		30.2	11.7	78.1		30.2
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	8.0	72.1		* 26	8.0	72.1		* 26
Max Q Clear Time (g_c+I1), s	9.3	74.1		28.2	9.0	70.8		28.2
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	1.2		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		73.0
HCM 2010 LOS		E

Notes

Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	31	144	382	79	41	2
Future Vol, veh/h	31	144	382	79	41	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	15	10	2	4	11	0
Mvmt Flow	34	157	415	86	45	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	962	46	47	0	-	0
Stage 1	46	-	-	-	-	-
Stage 2	916	-	-	-	-	-
Critical Hdwy	6.55	6.3	4.12	-	-	-
Critical Hdwy Stg 1	5.55	-	-	-	-	-
Critical Hdwy Stg 2	5.55	-	-	-	-	-
Follow-up Hdwy	3.635	3.39	2.218	-	-	-
Pot Cap-1 Maneuver	269	1001	1560	-	-	-
Stage 1	944	-	-	-	-	-
Stage 2	370	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	194	1001	1560	-	-	-
Mov Cap-2 Maneuver	194	-	-	-	-	-
Stage 1	944	-	-	-	-	-
Stage 2	267	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.5	6.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1560	-	194	1001	-	-
HCM Lane V/C Ratio	0.266	-	0.174	0.156	-	-
HCM Control Delay (s)	8.1	0	27.4	9.3	-	-
HCM Lane LOS	A	A	D	A	-	-
HCM 95th %tile Q(veh)	1.1	-	0.6	0.6	-	-

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	37	1	8	72	13	0	0	0	0	0	0
Future Vol, veh/h	5	37	1	8	72	13	0	0	0	0	0	0
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Heavy Vehicles, %	0	0	0	0	8	0	0	0	0	0	0	0
Mvmt Flow	8	60	2	13	116	21	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	7.5	8	0
HCM LOS	A	A	-

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	0%	12%	10%	0%
Vol Thru, %	100%	86%	90%	0%
Vol Right, %	0%	2%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	43	80	13
LT Vol	0	5	8	0
Through Vol	0	37	72	0
RT Vol	0	1	0	13
Lane Flow Rate	0	69	129	21
Geometry Grp	2	5	7	7
Degree of Util (X)	0	0.079	0.164	0.023
Departure Headway (Hd)	4.397	4.117	4.583	3.969
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	867	786	905
Service Time	2.397	2.159	2.293	1.678
HCM Lane V/C Ratio	0	0.08	0.164	0.023
HCM Control Delay	7.4	7.5	8.2	6.8
HCM Lane LOS	N	A	A	A
HCM 95th-tile Q	0	0.3	0.6	0.1

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	15	48	24	68	0	50	0	18	0	22	8
Future Vol, veh/h	0	15	48	24	68	0	50	0	18	0	22	8
Conflicting Peds, #/hr	4	0	1	0	0	3	1	0	0	3	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	5	0	5	0	7	0	13	0	10	0
Mvmt Flow	0	17	54	27	76	0	56	0	20	0	25	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	18	0	0	169	148	21	160	148	80
Stage 1	-	-	-	-	-	-	18	18	-	130	130	-
Stage 2	-	-	-	-	-	-	151	130	-	30	18	-
Critical Hdwy	-	-	-	4.1	-	-	7.17	6.5	6.33	7.1	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.17	5.5	-	6.1	5.6	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.17	5.5	-	6.1	5.6	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.563	4	3.417	3.5	4.09	3.3
Pot Cap-1 Maneuver	0	-	-	1612	-	0	784	747	1026	810	729	986
Stage 1	0	-	-	-	-	0	988	884	-	878	773	-
Stage 2	0	-	-	-	-	0	840	792	-	992	865	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1608	-	-	743	733	1023	781	715	983
Mov Cap-2 Maneuver	-	-	-	-	-	-	743	733	-	781	715	-
Stage 1	-	-	-	-	-	-	988	883	-	878	759	-
Stage 2	-	-	-	-	-	-	788	778	-	970	864	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.9	10	9.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	801	-	-	1608	-	771
HCM Lane V/C Ratio	0.095	-	-	0.017	-	0.044
HCM Control Delay (s)	10	-	-	7.3	0	9.9
HCM Lane LOS	B	-	-	A	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	515	67	137	1420	22	88	9	81	26	26	25
Future Volume (veh/h)	23	515	67	137	1420	22	88	9	81	26	26	25
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		1.00	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1845	1863	1862	1900	1900	1833	1743	1900	1876	1900
Adj Flow Rate, veh/h	26	572	74	152	1578	24	98	10	0	29	29	28
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	4	3	2	2	2	0	0	9	0	0	0
Cap, veh/h	106	1670	750	270	2049	31	330	28	251	141	128	91
Arrive On Green	0.06	0.48	0.48	0.15	0.57	0.55	0.17	0.17	0.00	0.17	0.17	0.15
Sat Flow, veh/h	1810	3471	1560	1774	3567	54	1281	167	1482	363	753	538
Grp Volume(v), veh/h	26	572	74	152	782	820	108	0	0	86	0	0
Grp Sat Flow(s),veh/h/ln	1810	1736	1560	1774	1769	1852	1448	0	1482	1654	0	0
Q Serve(g_s), s	0.8	6.2	1.6	4.8	20.5	20.6	1.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	6.2	1.6	4.8	20.5	20.6	3.6	0.0	0.0	2.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	0.91		1.00	0.34		0.33
Lane Grp Cap(c), veh/h	106	1670	750	270	1016	1064	358	0	251	360	0	0
V/C Ratio(X)	0.25	0.34	0.10	0.56	0.77	0.77	0.30	0.00	0.00	0.24	0.00	0.00
Avail Cap(c_a), veh/h	313	2343	1053	467	1354	1418	817	0	756	902	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	27.3	9.8	8.6	23.9	9.9	9.9	22.3	0.0	0.0	22.2	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.7	1.3	1.3	0.2	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.9	0.7	2.4	10.1	10.6	1.6	0.0	0.0	1.3	0.0	0.0
LnGrp Delay(d),s/veh	27.8	9.8	8.6	24.6	11.1	11.1	22.5	0.0	0.0	22.3	0.0	0.0
LnGrp LOS	C	A	A	C	B	B	C			C		
Approach Vol, veh/h		672			1754			108			86	
Approach Delay, s/veh		10.4			12.3			22.5			22.3	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.2	33.2		14.3	7.6	38.9		14.3
Change Period (Y+Rc), s	4.0	5.2		5.0	4.0	5.2		5.0
Max Green Setting (Gmax), s	16.0	39.8		30.0	10.5	45.3		30.0
Max Q Clear Time (g_c+I1), s	6.8	8.2		4.6	2.8	22.6		5.6
Green Ext Time (p_c), s	0.0	12.8		0.2	0.0	11.1		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	12.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	218	492	140	402	446	103	158	360	191	101	816	338
Future Volume (veh/h)	218	492	140	402	446	103	158	360	191	101	816	338
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1837	1900	1881	1827	1863	1810	1863	1845	1759	1827	1810
Adj Flow Rate, veh/h	237	535	152	437	485	112	172	391	208	110	887	367
Adj No. of Lanes	2	2	0	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	4	2	5	2	3	8	4	5
Cap, veh/h	312	782	221	459	1157	520	179	1190	522	147	1112	482
Arrive On Green	0.09	0.29	0.29	0.13	0.33	0.33	0.10	0.34	0.34	0.09	0.32	0.32
Sat Flow, veh/h	3408	2674	756	3476	3471	1559	1723	3539	1551	1675	3471	1504
Grp Volume(v), veh/h	237	348	339	437	485	112	172	391	208	110	887	367
Grp Sat Flow(s),veh/h/ln	1704	1745	1685	1738	1736	1559	1723	1770	1551	1675	1736	1504
Q Serve(g_s), s	7.2	18.7	18.9	13.2	11.5	5.5	10.5	8.7	10.9	6.8	24.7	23.2
Cycle Q Clear(g_c), s	7.2	18.7	18.9	13.2	11.5	5.5	10.5	8.7	10.9	6.8	24.7	23.2
Prop In Lane	1.00		0.45	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	312	510	493	459	1157	520	179	1190	522	147	1112	482
V/C Ratio(X)	0.76	0.68	0.69	0.95	0.42	0.22	0.96	0.33	0.40	0.75	0.80	0.76
Avail Cap(c_a), veh/h	418	567	547	459	1160	521	179	1190	522	158	1134	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.0	33.1	33.3	45.6	27.4	25.4	47.2	26.2	26.9	47.2	32.9	32.4
Incr Delay (d2), s/veh	5.6	3.4	3.7	29.9	0.3	0.3	55.7	0.2	0.7	16.5	4.3	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	9.5	9.3	8.3	5.6	2.4	7.8	4.3	4.7	3.8	12.5	10.6
LnGrp Delay(d),s/veh	52.5	36.6	37.0	75.5	27.7	25.7	103.0	26.5	27.6	63.6	37.1	39.6
LnGrp LOS	D	D	D	E	C	C	F	C	C	E	D	D
Approach Vol, veh/h		924			1034			771			1364	
Approach Delay, s/veh		40.8			47.7			43.8			39.9	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	35.0	15.0	37.9	13.7	39.3	13.3	39.6
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	14.3	33.8	11.3	34.0	13.3	34.8	10.3	35.0
Max Q Clear Time (g_c+I1), s	15.2	20.9	12.5	26.7	9.2	13.5	8.8	12.9
Green Ext Time (p_c), s	0.0	7.6	0.0	6.1	0.3	10.5	0.0	15.6

Intersection Summary	
HCM 2010 Ctrl Delay	42.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	139	503	244	194	914	77	335	268	91	80	333	126
Future Volume (veh/h)	139	503	244	194	914	77	335	268	91	80	333	126
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1792	1845	1863	1900	1845	1836	1900	1863	1788	1900
Adj Flow Rate, veh/h	148	535	260	206	972	82	356	285	97	85	354	134
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	3	6	3	2	0	3	3	3	2	6	6
Cap, veh/h	178	1089	470	196	1128	514	329	799	266	153	510	190
Arrive On Green	0.10	0.31	0.31	0.11	0.32	0.32	0.19	0.31	0.31	0.09	0.21	0.21
Sat Flow, veh/h	1723	3505	1513	1757	3539	1612	1757	2564	854	1774	2420	901
Grp Volume(v), veh/h	148	535	260	206	972	82	356	192	190	85	247	241
Grp Sat Flow(s),veh/h/ln	1723	1752	1513	1757	1770	1612	1757	1744	1674	1774	1698	1623
Q Serve(g_s), s	7.8	11.5	13.2	10.3	23.8	3.4	17.3	7.9	8.1	4.2	12.4	12.7
Cycle Q Clear(g_c), s	7.8	11.5	13.2	10.3	23.8	3.4	17.3	7.9	8.1	4.2	12.4	12.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.51	1.00		0.56
Lane Grp Cap(c), veh/h	178	1089	470	196	1128	514	329	543	522	153	358	342
V/C Ratio(X)	0.83	0.49	0.55	1.05	0.86	0.16	1.08	0.35	0.36	0.55	0.69	0.71
Avail Cap(c_a), veh/h	179	1139	492	196	1177	536	329	618	593	200	475	453
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.6	25.9	26.5	41.0	29.5	22.6	37.5	24.6	24.7	40.5	33.7	33.8
Incr Delay (d2), s/veh	26.6	0.3	1.2	78.4	6.5	0.1	73.1	0.5	0.5	3.1	3.2	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	5.6	5.6	9.2	12.6	1.5	15.0	3.9	3.8	2.2	6.1	6.1
LnGrp Delay(d),s/veh	67.1	26.2	27.7	119.4	36.1	22.7	110.6	25.1	25.2	43.6	36.8	37.6
LnGrp LOS	E	C	C	F	D	C	F	C	C	D	D	D
Approach Vol, veh/h		943			1260			738			573	
Approach Delay, s/veh		33.1			48.8			66.4			38.1	
Approach LOS		C			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	33.4	14.0	33.3	21.0	24.1	13.3	34.0
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	10.4	32.7	10.3	30.0	17.3	25.8	9.6	30.7
Max Q Clear Time (g_c+I1), s	10.2	10.1	12.3	15.2	19.3	14.7	9.8	25.8
Green Ext Time (p_c), s	0.1	4.7	0.0	8.2	0.0	3.5	0.0	3.5

Intersection Summary	
HCM 2010 Ctrl Delay	46.5
HCM 2010 LOS	D

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	535	174	332	110	143	640
Future Volume (veh/h)	535	174	332	110	143	640
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1827	1881	1900	1900
Adj Flow Rate, veh/h	608	198	377	125	162	727
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	1	1	4	1	0	0
Cap, veh/h	682	609	523	458	209	882
Arrive On Green	0.38	0.38	0.29	0.29	0.12	0.46
Sat Flow, veh/h	1792	1599	1827	1599	1810	1900
Grp Volume(v), veh/h	608	198	377	125	162	727
Grp Sat Flow(s),veh/h/ln	1792	1599	1827	1599	1810	1900
Q Serve(g_s), s	20.9	5.8	12.2	4.0	5.7	21.8
Cycle Q Clear(g_c), s	20.9	5.8	12.2	4.0	5.7	21.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	682	609	523	458	209	882
V/C Ratio(X)	0.89	0.33	0.72	0.27	0.78	0.82
Avail Cap(c_a), veh/h	794	708	770	674	245	1177
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.1	14.4	21.1	18.2	28.2	15.3
Incr Delay (d2), s/veh	11.2	0.3	1.9	0.3	12.4	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.4	5.9	6.3	1.8	3.6	12.2
LnGrp Delay(d),s/veh	30.3	14.7	23.0	18.5	40.6	19.0
LnGrp LOS	C	B	C	B	D	B
Approach Vol, veh/h	806		502			889
Approach Delay, s/veh	26.4		21.9			22.9
Approach LOS	C		C			C

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		35.8		29.9	11.7	24.1		
Change Period (Y+Rc), s		5.3		4.9	4.1	5.3		
Max Green Setting (Gmax), s		40.7		29.1	8.9	27.7		
Max Q Clear Time (g_c+I1), s		23.8		22.9	7.7	14.2		
Green Ext Time (p_c), s		5.0		2.1	0.1	4.5		

Intersection Summary	
HCM 2010 Ctrl Delay	24.0
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	49	19	382	1179	48
Future Vol, veh/h	30	49	19	382	1179	48
Conflicting Peds, #/hr	1	0	0	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	40	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	12	20	19	3	3	5
Mvmt Flow	34	56	22	439	1355	55

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1840	1356	1356	0	-	0
Stage 1	1356	-	-	-	-	-
Stage 2	484	-	-	-	-	-
Critical Hdwy	6.52	6.4	4.29	-	-	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.48	2.371	-	-	-
Pot Cap-1 Maneuver	78	167	456	-	-	-
Stage 1	228	-	-	-	-	-
Stage 2	600	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	74	167	456	-	-	-
Mov Cap-2 Maneuver	175	-	-	-	-	-
Stage 1	228	-	-	-	-	-
Stage 2	571	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	34.7	0.6	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	456	-	175	167	-	-
HCM Lane V/C Ratio	0.048	-	0.197	0.337	-	-
HCM Control Delay (s)	13.3	-	30.6	37.2	-	-
HCM Lane LOS	B	-	D	E	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	1.4	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	14	20	393	53	113	1058		
Future Volume (veh/h)	14	20	393	53	113	1058		
Number	7	14	6	16	5	2		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1532	1583	1845	1792	1696	1863		
Adj Flow Rate, veh/h	15	22	427	58	123	1150		
Adj No. of Lanes	1	1	1	1	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	24	20	3	6	12	2		
Cap, veh/h	94	241	1013	837	185	1374		
Arrive On Green	0.06	0.06	0.55	0.55	0.11	0.74		
Sat Flow, veh/h	1459	1346	1845	1524	1616	1863		
Grp Volume(v), veh/h	15	22	427	58	123	1150		
Grp Sat Flow(s),veh/h/ln	1459	1346	1845	1524	1616	1863		
Q Serve(g_s), s	0.5	0.7	6.8	0.9	3.6	21.2		
Cycle Q Clear(g_c), s	0.5	0.7	6.8	0.9	3.6	21.2		
Prop In Lane	1.00	1.00		1.00	1.00			
Lane Grp Cap(c), veh/h	94	241	1013	837	185	1374		
V/C Ratio(X)	0.16	0.09	0.42	0.07	0.66	0.84		
Avail Cap(c_a), veh/h	613	719	1527	1261	452	2201		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	22.1	17.1	6.6	5.3	21.2	4.5		
Incr Delay (d2), s/veh	0.8	0.2	0.3	0.0	4.0	1.9		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.2	0.0	3.5	0.4	1.8	11.0		
LnGrp Delay(d),s/veh	22.9	17.3	7.0	5.3	25.3	6.4		
LnGrp LOS	C	B	A	A	C	A		
Approach Vol, veh/h	37		485			1273		
Approach Delay, s/veh	19.6		6.8			8.2		
Approach LOS	B		A			A		

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		42.6		7.4	9.4	33.2		
Change Period (Y+Rc), s		5.7		* 4.2	3.7	5.7		
Max Green Setting (Gmax), s		59.1		* 21	14.0	41.4		
Max Q Clear Time (g_c+I1), s		23.2		2.7	5.6	8.8		
Green Ext Time (p_c), s		13.7		0.1	0.2	13.3		

Intersection Summary	
HCM 2010 Ctrl Delay	8.1
HCM 2010 LOS	A

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1000	112	55	919	197	58
Future Volume (veh/h)	1000	112	55	919	197	58
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1900	1845	1600	1881	1900
Adj Flow Rate, veh/h	1163	130	64	1069	229	67
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	3	0	1	0
Cap, veh/h	1050	117	81	1301	213	192
Arrive On Green	0.74	0.74	0.05	0.81	0.12	0.12
Sat Flow, veh/h	1414	158	1757	1600	1792	1615
Grp Volume(v), veh/h	0	1293	64	1069	229	67
Grp Sat Flow(s),veh/h/ln	0	1572	1757	1600	1792	1615
Q Serve(g_s), s	0.0	111.3	5.4	56.4	17.8	5.7
Cycle Q Clear(g_c), s	0.0	111.3	5.4	56.4	17.8	5.7
Prop In Lane		0.10	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	1167	81	1301	213	192
V/C Ratio(X)	0.00	1.11	0.79	0.82	1.08	0.35
Avail Cap(c_a), veh/h	0	1167	82	1302	213	192
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.3	70.8	7.9	66.0	60.7
Incr Delay (d2), s/veh	0.0	61.0	39.3	4.4	83.5	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	67.5	3.5	26.0	13.7	2.6
LnGrp Delay(d),s/veh	0.0	80.3	110.0	12.3	149.5	61.8
LnGrp LOS		F	F	B	F	E
Approach Vol, veh/h	1293			1133	296	
Approach Delay, s/veh	80.3			17.8	129.6	
Approach LOS	F			B	F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.6	117.3				127.9		22.0
Change Period (Y+Rc), s	3.7	6.0				6.0		4.2
Max Green Setting (Gmax), s	7.0	111.3				122.0		17.8
Max Q Clear Time (g_c+I1), s	7.4	113.3				58.4		19.8
Green Ext Time (p_c), s	0.0	0.0				36.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	59.7
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	888	3	12	844	316	12	35	9	752	22	333
Future Volume (veh/h)	104	888	3	12	844	316	12	35	9	752	22	333
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.94	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1652	1598	1900	1900	1600	1776	1900	1900	1900	1845	1827	1863
Adj Flow Rate, veh/h	120	1021	3	14	970	363	14	40	10	864	25	383
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	15	0	0	0	0	7	0	0	0	3	4	2
Cap, veh/h	157	1259	4	59	1028	933	139	111	28	956	512	438
Arrive On Green	0.10	0.41	0.41	0.03	0.34	0.34	0.08	0.08	0.08	0.28	0.28	0.28
Sat Flow, veh/h	1573	3105	9	1810	3040	1507	1810	1446	361	3408	1827	1562
Grp Volume(v), veh/h	120	499	525	14	970	363	14	0	50	864	25	383
Grp Sat Flow(s),veh/h/ln	1573	1518	1596	1810	1520	1507	1810	0	1807	1704	1827	1562
Q Serve(g_s), s	7.1	28.0	28.0	0.7	29.8	11.6	0.7	0.0	2.5	23.5	1.0	22.5
Cycle Q Clear(g_c), s	7.1	28.0	28.0	0.7	29.8	11.6	0.7	0.0	2.5	23.5	1.0	22.5
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	157	616	647	59	1028	933	139	0	139	956	512	438
V/C Ratio(X)	0.76	0.81	0.81	0.24	0.94	0.39	0.10	0.00	0.36	0.90	0.05	0.87
Avail Cap(c_a), veh/h	164	616	647	188	1053	945	169	0	169	993	532	455
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.2	25.3	25.3	45.4	30.9	9.2	41.3	0.0	42.2	33.3	25.2	33.0
Incr Delay (d2), s/veh	18.4	8.1	7.7	2.1	15.8	0.3	0.3	0.0	1.6	11.2	0.0	16.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	13.0	13.6	0.4	14.8	8.4	0.4	0.0	1.3	12.5	0.5	11.7
LnGrp Delay(d),s/veh	60.6	33.4	33.0	47.4	46.7	9.5	41.6	0.0	43.7	44.6	25.3	49.6
LnGrp LOS	E	C	C	D	D	A	D		D	D	C	D
Approach Vol, veh/h		1144			1347			64			1272	
Approach Delay, s/veh		36.1			36.7			43.3			45.7	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.3	45.0		32.3	13.8	38.5		11.6
Change Period (Y+Rc), s	* 4.2	6.0		5.3	* 4.2	6.0		4.2
Max Green Setting (Gmax), s	* 10	33.3		28.0	* 10	33.3		9.0
Max Q Clear Time (g_c+I1), s	12.7	30.0		25.5	9.1	31.8		4.5
Green Ext Time (p_c), s	0.0	2.7		1.5	0.0	0.7		0.0

Intersection Summary

HCM 2010 Ctrl Delay	39.6
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	444	1142	0	0	1146	40	0	0	0	0	0	89
Future Volume (veh/h)	444	1142	0	0	1146	40	0	0	0	0	0	89
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1600	0	0	1598	1900				0	1863	1759
Adj Flow Rate, veh/h	477	1228	0	0	1232	43				0	0	96
Adj No. of Lanes	1	2	0	0	2	0				0	1	2
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93				0.93	0.92	0.93
Percent Heavy Veh, %	1	0	0	0	0	0				0	2	8
Cap, veh/h	526	2884	0	0	1807	63				0	0	0
Arrive On Green	0.29	0.95	0.00	0.00	0.60	0.60				0.00	0.00	0.00
Sat Flow, veh/h	1792	3120	0	0	3074	104					0	
Grp Volume(v), veh/h	477	1228	0	0	624	651					0.0	
Grp Sat Flow(s),veh/h/ln	1792	1520	0	0	1518	1580						
Q Serve(g_s), s	20.0	2.7	0.0	0.0	21.6	21.6						
Cycle Q Clear(g_c), s	20.0	2.7	0.0	0.0	21.6	21.6						
Prop In Lane	1.00		0.00	0.00		0.07						
Lane Grp Cap(c), veh/h	526	2884	0	0	917	954						
V/C Ratio(X)	0.91	0.43	0.00	0.00	0.68	0.68						
Avail Cap(c_a), veh/h	621	2968	0	0	917	954						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	26.5	0.2	0.0	0.0	10.4	10.4						
Incr Delay (d2), s/veh	15.4	0.1	0.0	0.0	2.1	2.0						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	12.1	1.1	0.0	0.0	9.4	9.7						
LnGrp Delay(d),s/veh	41.9	0.3	0.0	0.0	12.5	12.4						
LnGrp LOS	D	A			B	B						
Approach Vol, veh/h		1705			1275							
Approach Delay, s/veh		11.9			12.4							
Approach LOS		B			B							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		77.8			26.9	51.0		
Change Period (Y+Rc), s		4.0			4.0	4.0		
Max Green Setting (Gmax), s		76.0			27.0	45.0		
Max Q Clear Time (g_c+I1), s		4.7			22.0	23.6		
Green Ext Time (p_c), s		17.1			0.9	12.4		

Intersection Summary	
HCM 2010 Ctrl Delay	12.1
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	233	917	998	395	86	98
Future Volume (veh/h)	233	917	998	395	86	98
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1600	1600	1881	1776	1759
Adj Flow Rate, veh/h	259	1019	1109	439	96	109
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	0	0	1	7	8
Cap, veh/h	254	1343	1066	1065	150	133
Arrive On Green	0.14	0.84	0.67	0.67	0.09	0.09
Sat Flow, veh/h	1774	1600	1600	1599	1691	1495
Grp Volume(v), veh/h	259	1019	1109	439	96	109
Grp Sat Flow(s),veh/h/ln	1774	1600	1600	1599	1691	1495
Q Serve(g_s), s	20.3	40.0	94.3	17.9	7.8	10.1
Cycle Q Clear(g_c), s	20.3	40.0	94.3	17.9	7.8	10.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	254	1343	1066	1065	150	133
V/C Ratio(X)	1.02	0.76	1.04	0.41	0.64	0.82
Avail Cap(c_a), veh/h	254	1343	1066	1065	251	222
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.6	5.0	23.6	10.9	62.3	63.4
Incr Delay (d2), s/veh	61.2	2.7	38.7	0.4	4.5	11.7
Initial Q Delay(d3),s/veh	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.2	18.3	52.6	7.9	3.8	8.6
LnGrp Delay(d),s/veh	122.0	7.8	62.4	11.2	66.8	75.1
LnGrp LOS	F	A	F	B	E	E
Approach Vol, veh/h		1278	1548		205	
Approach Delay, s/veh		30.9	47.9		71.2	
Approach LOS		C	D		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		124.8		16.8	24.5	100.3		
Change Period (Y+Rc), s		6.0		* 4.2	* 4.2	6.0		
Max Green Setting (Gmax), s		118.8		* 21	* 20	94.3		
Max Q Clear Time (g_c+I1), s		42.0		12.1	22.3	96.3		
Green Ext Time (p_c), s		47.4		0.4	0.0	0.0		

Intersection Summary

HCM 2010 Ctrl Delay	42.3
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	958	24	27	1278	25	71	5	28	32	1	60
Future Volume (veh/h)	33	958	24	27	1278	25	71	5	28	32	1	60
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1600	1759	1900	1600	1681	1900	1738	1900	1900	1900	1863
Adj Flow Rate, veh/h	38	1114	28	31	1486	29	83	6	33	37	1	70
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	3	0	8	0	0	13	0	0	0	0	0	2
Cap, veh/h	58	1180	1103	55	1175	1049	162	30	165	197	5	204
Arrive On Green	0.03	0.74	0.74	0.03	0.73	0.73	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1757	1600	1495	1810	1600	1428	1347	232	1275	1125	36	1577
Grp Volume(v), veh/h	38	1114	28	31	1486	29	83	0	39	38	0	70
Grp Sat Flow(s),veh/h/ln	1757	1600	1495	1810	1600	1428	1347	0	1507	1161	0	1577
Q Serve(g_s), s	3.0	83.4	0.7	2.3	101.7	0.8	8.4	0.0	3.2	3.4	0.0	5.6
Cycle Q Clear(g_c), s	3.0	83.4	0.7	2.3	101.7	0.8	14.9	0.0	3.2	6.6	0.0	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.85	0.97		1.00
Lane Grp Cap(c), veh/h	58	1180	1103	55	1175	1049	162	0	195	206	0	204
V/C Ratio(X)	0.65	0.94	0.03	0.57	1.26	0.03	0.51	0.00	0.20	0.18	0.00	0.34
Avail Cap(c_a), veh/h	76	1180	1103	78	1175	1049	261	0	305	308	0	319
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	66.2	15.7	4.9	66.3	18.4	5.0	62.2	0.0	53.9	56.5	0.0	54.9
Incr Delay (d2), s/veh	11.5	15.0	0.0	8.9	126.2	0.0	2.5	0.0	0.5	0.4	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	41.1	0.3	1.3	85.5	0.3	3.2	0.0	1.4	1.3	0.0	2.5
LnGrp Delay(d),s/veh	77.7	30.7	4.9	75.2	144.6	5.0	64.7	0.0	54.4	56.9	0.0	55.9
LnGrp LOS	E	C	A	E	F	A	E		D	E		E
Approach Vol, veh/h		1180			1546			122			108	
Approach Delay, s/veh		31.6			140.6			61.4			56.3	
Approach LOS		C			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.9	108.1		22.5	8.3	107.7		22.5
Change Period (Y+Rc), s	3.7	6.0		4.6	3.7	6.0		4.6
Max Green Setting (Gmax), s	6.6	101.7		28.0	6.0	101.7		28.0
Max Q Clear Time (g_c+I1), s	4.3	85.4		8.6	5.0	103.7		16.9
Green Ext Time (p_c), s	0.0	15.4		0.7	0.0	0.0		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	90.7
HCM 2010 LOS	F

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	761	254	268	1210	210	286
Future Volume (veh/h)	761	254	268	1210	210	286
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1845	1827	1600	1881	1881
Adj Flow Rate, veh/h	793	265	279	1260	219	298
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	3	4	0	1	1
Cap, veh/h	1037	1016	324	1235	287	409
Arrive On Green	0.65	0.65	0.10	0.77	0.16	0.16
Sat Flow, veh/h	1600	1568	3375	1600	1792	1599
Grp Volume(v), veh/h	793	265	279	1260	219	298
Grp Sat Flow(s),veh/h/ln	1600	1568	1688	1600	1792	1599
Q Serve(g_s), s	51.9	10.7	12.2	115.8	17.5	24.0
Cycle Q Clear(g_c), s	51.9	10.7	12.2	115.8	17.5	24.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1037	1016	324	1235	287	409
V/C Ratio(X)	0.76	0.26	0.86	1.02	0.76	0.73
Avail Cap(c_a), veh/h	1037	1016	356	1235	287	409
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.4	11.2	66.8	17.1	60.3	51.0
Incr Delay (d2), s/veh	3.5	0.1	17.7	30.8	11.5	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.7	4.7	6.5	61.0	9.6	12.0
LnGrp Delay(d),s/veh	21.9	11.3	84.5	47.9	71.8	57.4
LnGrp LOS	C	B	F	F	E	E
Approach Vol, veh/h	1058			1539	517	
Approach Delay, s/veh	19.2			54.5	63.5	
Approach LOS	B			D	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	18.6	103.2				121.8		28.2
Change Period (Y+Rc), s	4.2	6.0				6.0		4.2
Max Green Setting (Gmax), s	14.6	95.8				115.8		24.0
Max Q Clear Time (g_c+I1), s	14.2	53.9				117.8		26.0
Green Ext Time (p_c), s	0.2	19.4				0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	44.0
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1013	43	154	1465	5	149	0	262	0	1	0
Future Volume (veh/h)	1	1013	43	154	1465	5	149	0	262	0	1	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1845	1759	1598	1900	1900	1810	1863	1900	1900	1900
Adj Flow Rate, veh/h	1	1178	50	179	1703	6	173	0	305	0	1	0
Adj No. of Lanes	1	1	1	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	3	8	0	0	0	0	2	0	0	0
Cap, veh/h	1	1009	988	168	1162	4	307	0	453	0	360	306
Arrive On Green	0.00	0.63	0.63	0.07	0.49	0.48	0.19	0.00	0.19	0.00	0.19	0.00
Sat Flow, veh/h	1810	1600	1568	1675	1592	6	1367	0	1583	0	1900	1615
Grp Volume(v), veh/h	1	1178	50	179	0	1709	173	0	305	0	1	0
Grp Sat Flow(s),veh/h/ln	1810	1600	1568	1675	0	1597	1367	0	1583	0	1900	1615
Q Serve(g_s), s	0.1	94.6	1.8	15.0	0.0	109.5	17.6	0.0	25.5	0.0	0.1	0.0
Cycle Q Clear(g_c), s	0.1	94.6	1.8	15.0	0.0	109.5	17.6	0.0	25.5	0.0	0.1	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1	1009	988	168	0	1166	307	0	453	0	360	306
V/C Ratio(X)	0.83	1.17	0.05	1.07	0.00	1.47	0.56	0.00	0.67	0.00	0.00	0.00
Avail Cap(c_a), veh/h	121	1009	988	168	0	1166	331	0	480	0	393	334
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.60	0.60	0.60	0.09	0.00	0.09	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	75.0	27.7	10.6	70.0	0.0	38.3	56.4	0.0	47.3	0.0	49.3	0.0
Incr Delay (d2), s/veh	244.1	82.4	0.1	41.9	0.0	209.9	1.9	0.0	3.4	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	64.6	0.8	8.9	0.0	116.4	6.8	0.0	11.6	0.0	0.0	0.0
LnGrp Delay(d),s/veh	319.1	110.1	10.6	111.8	0.0	248.2	58.3	0.0	50.7	0.0	49.3	0.0
LnGrp LOS	F	F	B	F		F	E		D		D	
Approach Vol, veh/h		1229			1888			478			1	
Approach Delay, s/veh		106.3			235.2			53.5			49.3	
Approach LOS		F			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.0	98.6		32.4	4.0	113.5		32.4
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	15.3	90.0		* 31	10.3	95.0		* 31
Max Q Clear Time (g_c+I1), s	17.0	96.6		2.1	2.1	111.5		27.5
Green Ext Time (p_c), s	0.0	0.0		2.1	0.0	0.0		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	166.9
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1147	106	153	1390	1	185	0	245	1	0	1
Future Volume (veh/h)	0	1147	106	153	1390	1	185	0	245	1	0	1
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1827	1810	1600	1900	1900	1827	1810	1900	1900	1900
Adj Flow Rate, veh/h	0	1303	120	174	1580	1	210	0	278	1	0	1
Adj No. of Lanes	1	1	1	2	1	0	0	1	1	0	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	4	5	0	0	0	0	5	0	0	0
Cap, veh/h	1	1049	1005	172	1192	1	209	0	180	99	0	88
Arrive On Green	0.00	1.00	1.00	0.05	0.75	0.73	0.12	0.00	0.12	0.05	0.00	0.05
Sat Flow, veh/h	1810	1600	1533	3343	1599	1	1740	0	1503	1809	0	1615
Grp Volume(v), veh/h	0	1303	120	174	0	1581	210	0	278	1	0	1
Grp Sat Flow(s),veh/h/ln	1810	1600	1533	1672	0	1600	1740	0	1503	1810	0	1615
Q Serve(g_s), s	0.0	0.0	0.0	7.7	0.0	111.8	18.0	0.0	18.0	0.1	0.0	0.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.7	0.0	111.8	18.0	0.0	18.0	0.1	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1	1049	1005	172	0	1192	209	0	180	99	0	88
V/C Ratio(X)	0.00	1.24	0.12	1.01	0.00	1.33	1.01	0.00	1.54	0.01	0.00	0.01
Avail Cap(c_a), veh/h	93	1049	1005	172	0	1192	209	0	180	292	0	261
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	71.2	0.0	19.1	66.0	0.0	66.0	67.1	0.0	67.1
Incr Delay (d2), s/veh	0.0	110.0	0.0	72.4	0.0	152.6	63.8	0.0	269.5	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	32.0	0.0	5.3	0.0	99.2	12.3	0.0	21.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	110.0	0.0	143.6	0.0	171.7	129.8	0.0	335.5	67.1	0.0	67.1
LnGrp LOS		F	A	F		F	F		F	E		E
Approach Vol, veh/h		1423			1755			488			2	
Approach Delay, s/veh		100.7			168.9			247.0			67.1	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.7	104.1		12.2	0.0	115.8		22.0
Change Period (Y+Rc), s	3.7	* 6		* 4.2	3.7	6.0		4.2
Max Green Setting (Gmax), s	8.0	* 84		* 24	8.0	82.1		17.8
Max Q Clear Time (g_c+I1), s	9.7	2.0		2.1	0.0	113.8		20.0
Green Ext Time (p_c), s	0.0	60.9		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	152.8
HCM 2010 LOS	F

Notes

Intersection						
Int Delay, s/veh	216.9					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	111	1290	959	2	12	526
Future Vol, veh/h	111	1290	959	2	12	526
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	230	-	-	250	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	4	3	6	67	0	1
Mvmt Flow	131	1518	1128	2	14	619

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1128	0	-	0	2907	1128
Stage 1	-	-	-	-	1128	-
Stage 2	-	-	-	-	1779	-
Critical Hdwy	4.14	-	-	-	6.4	6.21
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.236	-	-	-	3.5	3.309
Pot Cap-1 Maneuver	612	-	-	-	18	~ 250
Stage 1	-	-	-	-	312	-
Stage 2	-	-	-	-	150	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	612	-	-	-	~ 14	~ 250
Mov Cap-2 Maneuver	-	-	-	-	~ 14	-
Stage 1	-	-	-	-	312	-
Stage 2	-	-	-	-	118	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	$ 1166.8
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	612	-	-	-	182
HCM Lane V/C Ratio	0.213	-	-	-	3.478
HCM Control Delay (s)	12.5	-	-	-	$ 1166.8
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.8	-	-	-	60.3

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	691	14	51	1040	153	27	22	176	265	22	157
Future Volume (veh/h)	71	691	14	51	1040	153	27	22	176	265	22	157
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1900	1900	1584	1827	1900	1891	1900	1900	1883	1881
Adj Flow Rate, veh/h	76	735	15	54	1106	163	29	23	187	282	23	167
Adj No. of Lanes	1	1	1	1	1	1	0	1	0	0	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	1	4	0	0	0	0	0	1
Cap, veh/h	95	897	887	86	880	845	27	32	116	131	7	478
Arrive On Green	0.05	0.56	0.56	0.05	0.56	0.56	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1810	1600	1582	1810	1584	1521	0	108	389	282	23	1599
Grp Volume(v), veh/h	76	735	15	54	1106	163	239	0	0	305	0	167
Grp Sat Flow(s),veh/h/ln	1810	1600	1582	1810	1584	1521	498	0	0	305	0	1599
Q Serve(g_s), s	6.2	56.0	0.6	4.4	83.3	8.0	0.0	0.0	0.0	0.0	0.0	12.3
Cycle Q Clear(g_c), s	6.2	56.0	0.6	4.4	83.3	8.0	44.8	0.0	0.0	44.8	0.0	12.3
Prop In Lane	1.00		1.00	1.00		1.00	0.12		0.78	0.92		1.00
Lane Grp Cap(c), veh/h	95	897	887	86	880	845	176	0	0	137	0	478
V/C Ratio(X)	0.80	0.82	0.02	0.63	1.26	0.19	1.36	0.00	0.00	2.22	0.00	0.35
Avail Cap(c_a), veh/h	97	897	887	98	880	845	176	0	0	137	0	478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	70.2	26.8	14.6	70.0	33.3	16.6	50.9	0.0	0.0	60.1	0.0	41.1
Incr Delay (d2), s/veh	36.7	6.2	0.0	11.0	124.6	0.1	194.4	0.0	0.0	571.8	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	26.2	0.3	2.5	66.7	3.4	15.6	0.0	0.0	27.5	0.0	5.5
LnGrp Delay(d),s/veh	106.9	33.0	14.6	81.1	157.8	16.7	245.3	0.0	0.0	631.8	0.0	41.8
LnGrp LOS	F	C	B	F	F	B	F			F		D
Approach Vol, veh/h		826			1323			239			472	
Approach Delay, s/veh		39.4			137.3			245.3			423.1	
Approach LOS		D			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.9	90.0		49.0	11.6	89.3		49.0
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	8.1	83.2		* 45	8.0	83.3		* 45
Max Q Clear Time (g_c+I1), s	6.4	58.0		46.8	8.2	85.3		46.8
Green Ext Time (p_c), s	0.0	14.5		0.0	0.0	0.0		0.0

Intersection Summary			
HCM 2010 Ctrl Delay		165.2	
HCM 2010 LOS		F	

Notes

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	320	129	124	156	20
Future Vol, veh/h	40	320	129	124	156	20
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	5	1	2	1	2	8
Mvmt Flow	43	344	139	133	168	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	590	180	190	0	-	0
Stage 1	179	-	-	-	-	-
Stage 2	411	-	-	-	-	-
Critical Hdwy	6.45	6.21	4.12	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.309	2.218	-	-	-
Pot Cap-1 Maneuver	465	865	1384	-	-	-
Stage 1	845	-	-	-	-	-
Stage 2	663	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	414	864	1383	-	-	-
Mov Cap-2 Maneuver	414	-	-	-	-	-
Stage 1	844	-	-	-	-	-
Stage 2	590	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.2	4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1383	-	414	864	-	-
HCM Lane V/C Ratio	0.1	-	0.104	0.398	-	-
HCM Control Delay (s)	7.9	0	14.7	11.9	-	-
HCM Lane LOS	A	A	B	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.3	1.9	-	-

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	129	0	0	134	8	0	0	0	0	0	0
Future Vol, veh/h	1	129	0	0	134	8	0	0	0	0	0	0
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Heavy Vehicles, %	0	0	0	0	8	0	0	0	0	0	0	0
Mvmt Flow	2	208	0	0	216	13	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	8.6	9.2	0
HCM LOS	A	A	-

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	0%	1%	0%	0%
Vol Thru, %	100%	99%	100%	0%
Vol Right, %	0%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	130	134	8
LT Vol	0	1	0	0
Through Vol	0	129	134	0
RT Vol	0	0	0	8
Lane Flow Rate	0	210	216	13
Geometry Grp	2	5	7	7
Degree of Util (X)	0	0.243	0.284	0.014
Departure Headway (Hd)	4.89	4.166	4.736	3.899
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	851	759	917
Service Time	2.89	2.242	2.467	1.629
HCM Lane V/C Ratio	0	0.247	0.285	0.014
HCM Control Delay	7.9	8.6	9.3	6.7
HCM Lane LOS	N	A	A	A
HCM 95th-tile Q	0	1	1.2	0

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	185	24	8	31	0	34	0	46	1	4	2
Future Vol, veh/h	0	185	24	8	31	0	34	0	46	1	4	2
Conflicting Peds, #/hr	1	0	1	1	0	4	2	0	1	4	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	1	0	0	0	0	0	0	5	0	25	0
Mvmt Flow	0	203	26	9	34	0	37	0	51	1	4	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	204	0	0	264	256	208	285	256	39
Stage 1	-	-	-	-	-	-	204	204	-	52	52	-
Stage 2	-	-	-	-	-	-	60	52	-	233	204	-
Critical Hdwy	-	-	-	4.1	-	-	7.1	6.5	6.25	7.1	6.75	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.75	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.75	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.5	4	3.345	3.5	4.225	3.3
Pot Cap-1 Maneuver	0	-	-	1380	-	0	693	651	825	671	610	1038
Stage 1	0	-	-	-	-	0	803	737	-	966	808	-
Stage 2	0	-	-	-	-	0	957	856	-	775	692	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1375	-	-	681	646	822	624	605	1034
Mov Cap-2 Maneuver	-	-	-	-	-	-	681	646	-	624	605	-
Stage 1	-	-	-	-	-	-	803	736	-	966	802	-
Stage 2	-	-	-	-	-	-	939	850	-	725	691	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.6	10.4	10.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	756	-	-	1375	-	690
HCM Lane V/C Ratio	0.116	-	-	0.006	-	0.011
HCM Control Delay (s)	10.4	-	-	7.6	0	10.3
HCM Lane LOS	B	-	-	A	A	B
HCM 95th %tile Q(veh)	0.4	-	-	0	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	1020	86	117	670	39	121	40	231	13	12	23
Future Volume (veh/h)	58	1020	86	117	670	39	121	40	231	13	12	23
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		1.00	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1865	1900	1900	1849	1900	1900	1860	1900
Adj Flow Rate, veh/h	65	1146	97	131	753	44	136	45	0	15	13	26
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	2	0	0	2	2	8	8	0	9	9	9
Cap, veh/h	205	1450	657	281	1534	90	310	74	294	131	109	146
Arrive On Green	0.11	0.41	0.41	0.16	0.45	0.45	0.18	0.18	0.00	0.18	0.18	0.18
Sat Flow, veh/h	1810	3539	1605	1810	3401	199	1087	405	1615	268	598	804
Grp Volume(v), veh/h	65	1146	97	131	392	405	181	0	0	54	0	0
Grp Sat Flow(s),veh/h/ln	1810	1770	1605	1810	1772	1828	1492	0	1615	1670	0	0
Q Serve(g_s), s	1.9	15.9	2.1	3.7	8.7	8.8	4.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.9	15.9	2.1	3.7	8.7	8.8	6.2	0.0	0.0	1.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.11	0.75		1.00	0.28		0.48
Lane Grp Cap(c), veh/h	205	1450	657	281	799	825	384	0	294	386	0	0
V/C Ratio(X)	0.32	0.79	0.15	0.47	0.49	0.49	0.47	0.00	0.00	0.14	0.00	0.00
Avail Cap(c_a), veh/h	339	1628	739	323	799	825	893	0	864	934	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	22.9	14.5	10.4	21.6	10.8	10.8	21.2	0.0	0.0	19.4	0.0	0.0
Incr Delay (d2), s/veh	0.3	2.1	0.0	0.4	0.2	0.2	0.3	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	8.1	0.9	1.9	4.3	4.4	2.6	0.0	0.0	0.7	0.0	0.0
LnGrp Delay(d),s/veh	23.2	16.5	10.4	22.0	11.0	11.0	21.5	0.0	0.0	19.4	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	C			B		
Approach Vol, veh/h		1308			928			181			54	
Approach Delay, s/veh		16.4			12.6			21.5			19.4	
Approach LOS		B			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.7	28.2		15.2	10.4	30.5		15.2
Change Period (Y+Rc), s	4.0	5.2		5.0	4.0	5.2		5.0
Max Green Setting (Gmax), s	10.0	25.8		30.0	10.5	25.3		30.0
Max Q Clear Time (g_c+I1), s	5.7	17.9		3.5	3.9	10.8		8.2
Green Ext Time (p_c), s	0.0	5.1		0.3	0.0	7.7		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	15.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	438	115	268	666	204	335	1146	492	168	563	350
Future Volume (veh/h)	232	438	115	268	666	204	335	1146	492	168	563	350
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1863	1845	1881	1881	1881	1845	1881	1863
Adj Flow Rate, veh/h	237	447	117	273	680	208	342	1169	502	171	574	357
Adj No. of Lanes	2	2	0	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	2	3	1	1	1	3	1	2
Cap, veh/h	330	777	201	334	987	432	261	1288	566	189	1152	504
Arrive On Green	0.10	0.28	0.28	0.10	0.28	0.28	0.15	0.36	0.36	0.11	0.32	0.32
Sat Flow, veh/h	3476	2795	725	3476	3539	1549	1792	3574	1570	1757	3574	1563
Grp Volume(v), veh/h	237	284	280	273	680	208	342	1169	502	171	574	357
Grp Sat Flow(s),veh/h/ln	1738	1787	1733	1738	1770	1549	1792	1787	1570	1757	1787	1563
Q Serve(g_s), s	7.0	14.4	14.6	8.1	18.0	11.7	15.3	32.7	31.6	10.1	13.6	21.1
Cycle Q Clear(g_c), s	7.0	14.4	14.6	8.1	18.0	11.7	15.3	32.7	31.6	10.1	13.6	21.1
Prop In Lane	1.00		0.42	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	330	497	482	334	987	432	261	1288	566	189	1152	504
V/C Ratio(X)	0.72	0.57	0.58	0.82	0.69	0.48	1.31	0.91	0.89	0.91	0.50	0.71
Avail Cap(c_a), veh/h	374	575	558	341	1105	484	261	1292	568	189	1156	506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.2	32.6	32.7	46.6	33.8	31.5	44.9	31.9	31.6	46.4	28.7	31.3
Incr Delay (d2), s/veh	5.6	1.5	1.6	14.1	1.9	1.2	164.7	9.6	16.0	40.0	0.5	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	7.3	7.2	4.6	9.0	5.2	19.5	17.8	16.2	7.0	6.8	9.7
LnGrp Delay(d),s/veh	51.8	34.1	34.3	60.6	35.7	32.7	209.6	41.6	47.6	86.3	29.2	36.2
LnGrp LOS	D	C	C	E	D	C	F	D	D	F	C	D
Approach Vol, veh/h		801			1161			2013			1102	
Approach Delay, s/veh		39.4			41.0			71.6			40.4	
Approach LOS		D			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	33.8	19.0	38.5	13.7	33.9	15.0	42.5
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	10.3	33.8	15.3	34.0	11.3	32.8	11.3	38.0
Max Q Clear Time (g_c+I1), s	10.1	16.6	17.3	23.1	9.0	20.0	12.1	34.7
Green Ext Time (p_c), s	0.0	10.2	0.0	10.1	0.2	8.3	0.0	3.2

Intersection Summary	
HCM 2010 Ctrl Delay	52.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	221	990	264	206	656	61	308	392	236	167	297	187
Future Volume (veh/h)	221	990	264	206	656	61	308	392	236	167	297	187
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1881	1881	1881	1881	1881	1881	1881	1900	1881	1859	1900
Adj Flow Rate, veh/h	226	1010	269	210	669	62	314	400	241	170	303	191
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	1	1	1	1	1	1	1	1	1	3	3
Cap, veh/h	172	1207	532	174	1207	538	195	566	336	188	549	336
Arrive On Green	0.10	0.34	0.34	0.10	0.34	0.34	0.11	0.27	0.27	0.11	0.26	0.26
Sat Flow, veh/h	1774	3574	1575	1792	3574	1592	1792	2127	1263	1792	2090	1280
Grp Volume(v), veh/h	226	1010	269	210	669	62	314	335	306	170	255	239
Grp Sat Flow(s),veh/h/ln	1774	1787	1575	1792	1787	1592	1792	1787	1603	1792	1766	1605
Q Serve(g_s), s	8.3	22.3	11.7	8.3	13.1	2.3	9.3	14.5	14.8	8.0	10.6	11.1
Cycle Q Clear(g_c), s	8.3	22.3	11.7	8.3	13.1	2.3	9.3	14.5	14.8	8.0	10.6	11.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.79	1.00		0.80
Lane Grp Cap(c), veh/h	172	1207	532	174	1207	538	195	476	427	188	464	422
V/C Ratio(X)	1.31	0.84	0.51	1.21	0.55	0.12	1.61	0.70	0.72	0.90	0.55	0.57
Avail Cap(c_a), veh/h	172	1253	552	174	1253	558	195	545	489	188	532	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.6	26.2	22.6	38.6	23.1	19.5	38.1	28.4	28.5	37.9	27.2	27.3
Incr Delay (d2), s/veh	176.2	5.0	0.7	135.5	0.5	0.1	298.3	3.8	4.6	39.4	1.2	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.4	11.8	5.2	10.6	6.5	1.0	20.7	7.7	7.1	6.0	5.3	5.0
LnGrp Delay(d),s/veh	214.9	31.2	23.4	174.1	23.6	19.6	336.4	32.1	33.1	77.3	28.4	28.8
LnGrp LOS	F	C	C	F	C	B	F	C	C	E	C	C
Approach Vol, veh/h		1505			941			955			664	
Approach Delay, s/veh		57.4			56.9			132.5			41.1	
Approach LOS		E			E			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	27.4	12.0	33.5	13.0	27.1	12.0	33.5
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	9.0	26.1	8.3	30.0	9.3	25.8	8.3	30.0
Max Q Clear Time (g_c+I1), s	10.0	16.8	10.3	24.3	11.3	13.1	10.3	15.1
Green Ext Time (p_c), s	0.0	4.2	0.0	4.2	0.0	5.1	0.0	8.9

Intersection Summary	
HCM 2010 Ctrl Delay	72.2
HCM 2010 LOS	E

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	121	100	986	573	178	329
Future Volume (veh/h)	121	100	986	573	178	329
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1827	1881	1900	1900
Adj Flow Rate, veh/h	127	105	1038	603	187	346
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	4	1	0	0
Cap, veh/h	176	157	1123	983	222	1491
Arrive On Green	0.10	0.10	0.61	0.61	0.12	0.78
Sat Flow, veh/h	1792	1599	1827	1599	1810	1900
Grp Volume(v), veh/h	127	105	1038	603	187	346
Grp Sat Flow(s),veh/h/ln	1792	1599	1827	1599	1810	1900
Q Serve(g_s), s	6.0	5.5	44.1	20.3	8.8	4.2
Cycle Q Clear(g_c), s	6.0	5.5	44.1	20.3	8.8	4.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	176	157	1123	983	222	1491
V/C Ratio(X)	0.72	0.67	0.92	0.61	0.84	0.23
Avail Cap(c_a), veh/h	350	312	1213	1062	227	1589
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.1	37.9	15.0	10.4	37.3	2.5
Incr Delay (d2), s/veh	5.5	4.9	11.3	0.9	23.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.2	25.5	9.1	5.9	2.1
LnGrp Delay(d),s/veh	43.6	42.7	26.3	11.3	60.8	2.5
LnGrp LOS	D	D	C	B	E	A
Approach Vol, veh/h	232		1641			533
Approach Delay, s/veh	43.2		20.8			23.0
Approach LOS	D		C			C

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		73.6		13.4	14.8	58.8		
Change Period (Y+Rc), s		5.3		4.9	4.1	5.3		
Max Green Setting (Gmax), s		72.8		17.0	10.9	57.8		
Max Q Clear Time (g_c+I1), s		6.2		8.0	10.8	46.1		
Green Ext Time (p_c), s		15.1		0.6	0.0	7.4		

Intersection Summary	
HCM 2010 Ctrl Delay	23.4
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	31	34	32	1552	396	24
Future Vol, veh/h	31	34	32	1552	396	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	40	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	15	2	5	0
Mvmt Flow	33	36	34	1634	417	25

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2118	417	417	0	-	0
Stage 1	417	-	-	-	-	-
Stage 2	1701	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.25	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.335	-	-	-
Pot Cap-1 Maneuver	56	640	1076	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	164	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	54	640	1076	-	-	-
Mov Cap-2 Maneuver	131	-	-	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	159	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.5	0.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1076	-	131	640	-	-
HCM Lane V/C Ratio	0.031	-	0.249	0.056	-	-
HCM Control Delay (s)	8.5	-	41.4	11	-	-
HCM Lane LOS	A	-	E	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.9	0.2	-	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	48	114	1446	8	13	426
Future Volume (veh/h)	48	114	1446	8	13	426
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1881	1387	1508	1881
Adj Flow Rate, veh/h	52	124	1572	9	14	463
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	3	1	37	26	1
Cap, veh/h	161	179	1480	928	30	1570
Arrive On Green	0.09	0.09	0.79	0.79	0.02	0.83
Sat Flow, veh/h	1723	1568	1881	1179	1436	1881
Grp Volume(v), veh/h	52	124	1572	9	14	463
Grp Sat Flow(s),veh/h/ln	1723	1568	1881	1179	1436	1881
Q Serve(g_s), s	3.9	10.5	108.4	0.2	1.3	7.4
Cycle Q Clear(g_c), s	3.9	10.5	108.4	0.2	1.3	7.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	161	179	1480	928	30	1570
V/C Ratio(X)	0.32	0.69	1.06	0.01	0.46	0.29
Avail Cap(c_a), veh/h	263	272	1480	928	73	1626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.4	58.7	14.7	3.2	66.7	2.5
Incr Delay (d2), s/veh	1.1	4.7	41.8	0.0	10.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	9.2	72.3	0.1	0.6	3.8
LnGrp Delay(d),s/veh	59.5	63.3	56.5	3.2	77.3	2.6
LnGrp LOS	E	E	F	A	E	A
Approach Vol, veh/h	176		1581			477
Approach Delay, s/veh	62.2		56.2			4.8
Approach LOS	E		E			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		120.7		17.1	6.6	114.1		
Change Period (Y+Rc), s		5.7		* 4.2	3.7	5.7		
Max Green Setting (Gmax), s		119.1		* 21	7.0	108.4		
Max Q Clear Time (g_c+I1), s		9.4		12.5	3.3	110.4		
Green Ext Time (p_c), s		46.7		0.4	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	45.7
HCM 2010 LOS	D

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	745	81	72	1303	71	43
Future Volume (veh/h)	745	81	72	1303	71	43
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1569	1900	1900	1584	1900	1845
Adj Flow Rate, veh/h	784	85	76	1372	75	45
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	0	1	0	3
Cap, veh/h	1241	1277	97	1379	102	89
Arrive On Green	0.79	0.79	0.05	0.87	0.06	0.06
Sat Flow, veh/h	1569	1615	1810	1584	1810	1568
Grp Volume(v), veh/h	784	85	76	1372	75	45
Grp Sat Flow(s),veh/h/ln	1569	1615	1810	1584	1810	1568
Q Serve(g_s), s	29.3	1.6	5.8	117.2	5.7	3.9
Cycle Q Clear(g_c), s	29.3	1.6	5.8	117.2	5.7	3.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1241	1277	97	1379	102	89
V/C Ratio(X)	0.63	0.07	0.79	0.99	0.73	0.51
Avail Cap(c_a), veh/h	1241	1277	164	1399	206	179
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.1	3.2	65.6	8.7	65.1	64.3
Incr Delay (d2), s/veh	1.1	0.0	13.1	22.7	9.7	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	0.7	3.3	57.8	3.1	1.8
LnGrp Delay(d),s/veh	7.3	3.3	78.7	31.4	74.8	68.7
LnGrp LOS	A	A	E	C	E	E
Approach Vol, veh/h	869			1448	120	
Approach Delay, s/veh	6.9			33.9	72.5	
Approach LOS	A			C	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	11.2	116.9				128.1		12.1
Change Period (Y+Rc), s	3.7	6.0				6.0		4.2
Max Green Setting (Gmax), s	12.7	107.4				123.8		16.0
Max Q Clear Time (g_c+I1), s	7.8	31.3				119.2		7.7
Green Ext Time (p_c), s	0.1	38.5				2.9		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	26.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	263	737	11	3	1013	738	16	41	14	301	31	133
Future Volume (veh/h)	263	737	11	3	1013	738	16	41	14	301	31	133
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1569	1900	1900	1584	1845	1900	1831	1900	1863	1900	1845
Adj Flow Rate, veh/h	286	801	12	3	1101	802	17	45	15	327	34	145
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	2	2	0	1	3	0	5	5	2	0	3
Cap, veh/h	317	1788	27	14	1282	870	140	102	34	444	245	199
Arrive On Green	0.18	0.59	0.59	0.01	0.43	0.43	0.08	0.08	0.08	0.13	0.13	0.13
Sat Flow, veh/h	1792	3007	45	1810	3010	1568	1810	1315	438	3442	1900	1544
Grp Volume(v), veh/h	286	397	416	3	1101	802	17	0	60	327	34	145
Grp Sat Flow(s),veh/h/ln	1792	1491	1561	1810	1505	1568	1810	0	1754	1721	1900	1544
Q Serve(g_s), s	16.2	15.2	15.2	0.2	34.2	44.0	0.9	0.0	3.4	9.4	1.6	9.3
Cycle Q Clear(g_c), s	16.2	15.2	15.2	0.2	34.2	44.0	0.9	0.0	3.4	9.4	1.6	9.3
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	317	887	929	14	1282	870	140	0	136	444	245	199
V/C Ratio(X)	0.90	0.45	0.45	0.21	0.86	0.92	0.12	0.00	0.44	0.74	0.14	0.73
Avail Cap(c_a), veh/h	333	887	929	175	1282	870	158	0	153	936	517	420
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.6	11.6	11.6	50.9	26.8	20.0	44.4	0.0	45.5	43.3	39.9	43.2
Incr Delay (d2), s/veh	25.9	0.4	0.3	6.9	6.1	15.0	0.4	0.0	2.2	2.4	0.3	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.3	6.3	6.6	0.1	15.1	26.3	0.5	0.0	1.7	4.6	0.9	4.3
LnGrp Delay(d),s/veh	67.5	11.9	11.9	57.8	32.9	35.0	44.7	0.0	47.7	45.7	40.2	48.3
LnGrp LOS	E	B	B	E	C	D	D		D	D	D	D
Approach Vol, veh/h		1099			1906			77			506	
Approach Delay, s/veh		26.4			33.8			47.1			46.1	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.0	67.4		18.6	22.5	50.0		12.2
Change Period (Y+Rc), s	* 4.2	6.0		5.3	* 4.2	6.0		4.2
Max Green Setting (Gmax), s	* 16	53.2		28.1	* 19	44.0		9.0
Max Q Clear Time (g_c+I1), s	12.2	17.2		11.4	18.2	46.0		5.4
Green Ext Time (p_c), s	0.0	18.4		1.9	0.1	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	33.6
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	942	0	0	1096	12	0	0	0	0	0	659
Future Volume (veh/h)	109	942	0	0	1096	12	0	0	0	0	0	659
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1681	1569	0	0	1569	1900				0	1863	1863
Adj Flow Rate, veh/h	121	1047	0	0	1218	13				0	0	732
Adj No. of Lanes	1	2	0	0	2	0				0	1	2
Peak Hour Factor	0.90	0.90	0.92	0.92	0.90	0.90				0.90	0.92	0.90
Percent Heavy Veh, %	13	2	0	0	2	2				0	2	2
Cap, veh/h	157	2734	0	0	2310	25				0	0	0
Arrive On Green	0.10	0.92	0.00	0.00	0.76	0.76				0.00	0.00	0.00
Sat Flow, veh/h	1601	3059	0	0	3100	32					0	
Grp Volume(v), veh/h	121	1047	0	0	601	630					0.0	
Grp Sat Flow(s),veh/h/ln	1601	1490	0	0	1491	1563						
Q Serve(g_s), s	5.4	3.2	0.0	0.0	11.5	11.6						
Cycle Q Clear(g_c), s	5.4	3.2	0.0	0.0	11.5	11.6						
Prop In Lane	1.00		0.00	0.00		0.02						
Lane Grp Cap(c), veh/h	157	2734	0	0	1139	1195						
V/C Ratio(X)	0.77	0.38	0.00	0.00	0.53	0.53						
Avail Cap(c_a), veh/h	1147	4391	0	0	1139	1195						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	32.0	0.4	0.0	0.0	3.4	3.4						
Incr Delay (d2), s/veh	7.8	0.1	0.0	0.0	0.5	0.5						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	2.7	1.2	0.0	0.0	4.8	5.1						
LnGrp Delay(d),s/veh	39.8	0.5	0.0	0.0	3.9	3.9						
LnGrp LOS	D	A			A	A						
Approach Vol, veh/h		1168			1231							
Approach Delay, s/veh		4.5			3.9							
Approach LOS		A			A							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		72.6			11.1	61.5		
Change Period (Y+Rc), s		* 6			4.0	6.0		
Max Green Setting (Gmax), s		* 1.1E2			52.0	48.0		
Max Q Clear Time (g_c+I1), s		5.2			7.4	13.6		
Green Ext Time (p_c), s		10.5			0.4	15.8		

Intersection Summary	
HCM 2010 Ctrl Delay	4.2
HCM 2010 LOS	A

Notes

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	82	843	992	127	353	125
Future Volume (veh/h)	82	843	992	127	353	125
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1584	1584	1845	1900	1881
Adj Flow Rate, veh/h	86	887	1044	134	372	132
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	0	1
Cap, veh/h	95	1147	1016	1006	367	324
Arrive On Green	0.05	0.72	0.64	0.64	0.20	0.20
Sat Flow, veh/h	1792	1584	1584	1568	1810	1599
Grp Volume(v), veh/h	86	887	1044	134	372	132
Grp Sat Flow(s),veh/h/ln	1792	1584	1584	1568	1810	1599
Q Serve(g_s), s	6.7	49.1	89.8	4.7	28.4	10.0
Cycle Q Clear(g_c), s	6.7	49.1	89.8	4.7	28.4	10.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	95	1147	1016	1006	367	324
V/C Ratio(X)	0.91	0.77	1.03	0.13	1.01	0.41
Avail Cap(c_a), veh/h	95	1147	1016	1006	367	324
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.0	12.1	25.1	9.8	55.8	48.5
Incr Delay (d2), s/veh	63.5	3.5	35.4	0.1	50.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.1	0.0
%ile BackOfQ(50%),veh/ln	5.0	22.3	49.0	2.0	19.3	9.3
LnGrp Delay(d),s/veh	129.4	15.6	60.5	9.9	106.3	49.3
LnGrp LOS	F	B	F	A	F	D
Approach Vol, veh/h		973	1178		504	
Approach Delay, s/veh		25.7	54.8		91.3	
Approach LOS		C	D		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		107.4		32.6	11.6	95.8		
Change Period (Y+Rc), s		6.0		* 4.2	* 4.2	6.0		
Max Green Setting (Gmax), s		101.4		* 28	* 7.4	89.8		
Max Q Clear Time (g_c+I1), s		51.1		30.4	8.7	91.8		
Green Ext Time (p_c), s		26.8		0.0	0.0	0.0		

Intersection Summary

HCM 2010 Ctrl Delay	51.1
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	1115	71	14	1007	36	47	4	9	22	2	47
Future Volume (veh/h)	78	1115	71	14	1007	36	47	4	9	22	2	47
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1584	1900	1900	1584	1900	1900	1900	1900	1900	1900	1845
Adj Flow Rate, veh/h	80	1149	73	14	1038	37	48	4	9	23	2	48
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	0	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	1	0	0	1	0	0	0	0	0	0	3
Cap, veh/h	102	1246	1270	34	1187	1210	134	39	88	149	11	117
Arrive On Green	0.06	0.79	0.79	0.02	0.75	0.75	0.07	0.07	0.07	0.08	0.07	0.07
Sat Flow, veh/h	1810	1584	1615	1810	1584	1615	1376	521	1172	1210	142	1568
Grp Volume(v), veh/h	80	1149	73	14	1038	37	48	0	13	25	0	48
Grp Sat Flow(s),veh/h/ln	1810	1584	1615	1810	1584	1615	1376	0	1693	1352	0	1568
Q Serve(g_s), s	5.2	67.2	1.2	0.9	56.9	0.7	4.1	0.0	0.9	1.7	0.0	3.5
Cycle Q Clear(g_c), s	5.2	67.2	1.2	0.9	56.9	0.7	6.7	0.0	0.9	2.6	0.0	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.69	0.92		1.00
Lane Grp Cap(c), veh/h	102	1246	1270	34	1187	1210	134	0	127	160	0	117
V/C Ratio(X)	0.79	0.92	0.06	0.41	0.87	0.03	0.36	0.00	0.10	0.16	0.00	0.41
Avail Cap(c_a), veh/h	115	1351	1377	91	1330	1355	354	0	397	393	0	368
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.6	9.9	2.8	57.9	10.9	3.8	55.4	0.0	51.4	52.4	0.0	52.6
Incr Delay (d2), s/veh	26.6	10.5	0.0	7.9	6.6	0.0	1.6	0.0	0.3	0.4	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	32.3	0.5	0.5	26.7	0.3	1.6	0.0	0.4	0.8	0.0	1.6
LnGrp Delay(d),s/veh	82.2	20.3	2.9	65.8	17.5	3.9	57.0	0.0	51.8	52.9	0.0	54.9
LnGrp LOS	F	C	A	E	B	A	E		D	D		D
Approach Vol, veh/h		1302			1089			61			73	
Approach Delay, s/veh		23.2			17.7			55.9			54.2	
Approach LOS		C			B			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.9	99.8		13.5	10.4	95.3		13.5
Change Period (Y+Rc), s	3.7	6.0		4.6	3.7	6.0		4.6
Max Green Setting (Gmax), s	6.6	101.7		28.0	7.6	100.1		28.0
Max Q Clear Time (g_c+I1), s	2.9	69.2		5.5	7.2	58.9		8.7
Green Ext Time (p_c), s	0.0	24.6		0.4	0.0	29.3		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	22.5
HCM 2010 LOS	C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	884	154	230	847	212	355
Future Volume (veh/h)	884	154	230	847	212	355
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1553	1863	1881	1584	1863	1827
Adj Flow Rate, veh/h	921	160	240	882	221	370
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	2	1	1	2	4
Cap, veh/h	881	898	291	1092	387	469
Arrive On Green	0.57	0.57	0.08	0.69	0.22	0.22
Sat Flow, veh/h	1553	1583	3476	1584	1774	1553
Grp Volume(v), veh/h	921	160	240	882	221	370
Grp Sat Flow(s),veh/h/ln	1553	1583	1738	1584	1774	1553
Q Serve(g_s), s	62.4	5.4	7.5	43.0	12.2	24.0
Cycle Q Clear(g_c), s	62.4	5.4	7.5	43.0	12.2	24.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	881	898	291	1092	387	469
V/C Ratio(X)	1.05	0.18	0.83	0.81	0.57	0.79
Avail Cap(c_a), veh/h	881	898	291	1092	387	469
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.8	11.5	49.6	12.0	38.4	35.2
Incr Delay (d2), s/veh	42.8	0.1	17.4	4.6	2.0	8.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	36.9	2.3	4.3	19.8	6.2	11.4
LnGrp Delay(d),s/veh	66.6	11.6	67.0	16.6	40.4	44.0
LnGrp LOS	F	B	E	B	D	D
Approach Vol, veh/h	1081			1122	591	
Approach Delay, s/veh	58.4			27.4	42.7	
Approach LOS	E			C	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	13.4	68.4				81.8		28.2
Change Period (Y+Rc), s	4.2	6.0				6.0		4.2
Max Green Setting (Gmax), s	9.2	62.4				75.8		24.0
Max Q Clear Time (g_c+I1), s	9.5	64.4				45.0		26.0
Green Ext Time (p_c), s	0.0	0.0				11.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	42.6
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1131	72	195	1006	8	76	0	139	8	1	4
Future Volume (veh/h)	5	1131	72	195	1006	8	76	0	139	8	1	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1584	1845	1863	1569	1900	1900	1881	1863	1900	1900	1900
Adj Flow Rate, veh/h	5	1178	75	203	1048	8	79	0	145	8	1	4
Adj No. of Lanes	1	1	1	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	3	2	2	2	0	0	2	0	0	0
Cap, veh/h	18	1001	967	177	1126	9	48	0	451	48	3	301
Arrive On Green	0.01	0.63	0.62	0.20	1.00	1.00	0.18	0.00	0.18	0.19	0.19	0.19
Sat Flow, veh/h	1810	1584	1568	1774	1555	12	0	0	1583	12	19	1615
Grp Volume(v), veh/h	5	1178	75	203	0	1056	79	0	145	9	0	4
Grp Sat Flow(s),veh/h/ln	1810	1584	1568	1774	0	1567	0	0	1583	31	0	1615
Q Serve(g_s), s	0.4	94.8	2.9	15.0	0.0	0.0	0.0	0.0	10.8	0.3	0.0	0.3
Cycle Q Clear(g_c), s	0.4	94.8	2.9	15.0	0.0	0.0	27.7	0.0	10.8	28.0	0.0	0.3
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.89		1.00
Lane Grp Cap(c), veh/h	18	1001	967	177	0	1134	48	0	451	51	0	301
V/C Ratio(X)	0.28	1.18	0.08	1.14	0.00	0.93	1.65	0.00	0.32	0.18	0.00	0.01
Avail Cap(c_a), veh/h	100	1001	967	177	0	1134	48	0	451	51	0	301
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.25	0.25	0.25	0.09	0.00	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	73.7	27.6	11.6	60.0	0.0	0.0	74.9	0.0	42.2	65.1	0.0	49.7
Incr Delay (d2), s/veh	2.2	82.3	0.0	71.5	0.0	1.8	366.4	0.0	0.4	2.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	64.1	1.3	10.8	0.0	0.6	6.9	0.0	4.8	0.4	0.0	0.1
LnGrp Delay(d),s/veh	75.9	109.9	11.6	131.5	0.0	1.8	441.3	0.0	42.7	67.5	0.0	49.8
LnGrp LOS	E	F	B	F		A	F		D	E		D
Approach Vol, veh/h		1258			1259			224			13	
Approach Delay, s/veh		103.9			22.7			183.2			62.0	
Approach LOS		F			C			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.0	98.8		32.2	5.2	112.6		32.2
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	15.3	92.8		* 28	8.3	99.8		* 28
Max Q Clear Time (g_c+I1), s	17.0	96.8		30.0	2.4	2.0		29.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	24.4		0.0

Intersection Summary

HCM 2010 Ctrl Delay	73.1
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	1200	75	177	1164	2	55	0	89	1	0	2
Future Volume (veh/h)	3	1200	75	177	1164	2	55	0	89	1	0	2
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1569	1881	1863	1569	1900	1900	1900	1845	1900	1900	1900
Adj Flow Rate, veh/h	3	1250	78	184	1212	2	57	0	93	1	0	2
Adj No. of Lanes	1	1	1	2	1	0	0	1	1	0	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	1	2	2	2	0	0	3	0	0	0
Cap, veh/h	8	1138	1145	184	1212	2	103	0	86	93	0	83
Arrive On Green	0.01	1.00	1.00	0.05	0.77	0.76	0.06	0.00	0.06	0.05	0.00	0.05
Sat Flow, veh/h	1810	1569	1579	3442	1566	3	1810	0	1526	1809	0	1615
Grp Volume(v), veh/h	3	1250	78	184	0	1214	57	0	93	1	0	2
Grp Sat Flow(s),veh/h/ln	1810	1569	1579	1721	0	1568	1810	0	1526	1810	0	1615
Q Serve(g_s), s	0.2	108.8	0.0	8.0	0.0	116.0	4.6	0.0	8.5	0.1	0.0	0.2
Cycle Q Clear(g_c), s	0.2	108.8	0.0	8.0	0.0	116.0	4.6	0.0	8.5	0.1	0.0	0.2
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	8	1138	1145	184	0	1214	103	0	86	93	0	83
V/C Ratio(X)	0.39	1.10	0.07	1.00	0.00	1.00	0.56	0.00	1.08	0.01	0.00	0.02
Avail Cap(c_a), veh/h	93	1138	1145	184	0	1214	103	0	86	286	0	255
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	74.2	0.0	0.0	71.0	0.0	16.9	68.9	0.0	70.8	67.5	0.0	67.6
Incr Delay (d2), s/veh	2.9	45.9	0.0	67.1	0.0	25.7	6.5	0.0	118.7	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	14.5	0.0	5.5	0.0	57.9	2.5	0.0	6.4	0.0	0.0	0.1
LnGrp Delay(d),s/veh	77.0	45.9	0.0	138.1	0.0	42.6	75.4	0.0	190.1	67.6	0.0	67.7
LnGrp LOS	E	F	A	F		D	E		F	E		E
Approach Vol, veh/h		1331			1398			150			3	
Approach Delay, s/veh		43.3			55.2			146.5			67.7	
Approach LOS		D			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	112.8		12.2	4.6	120.2		13.0
Change Period (Y+Rc), s	3.7	* 6		* 4.2	3.7	6.0		4.2
Max Green Setting (Gmax), s	8.3	* 93		* 24	8.0	91.1		8.8
Max Q Clear Time (g_c+I1), s	10.0	110.8		2.2	2.2	118.0		10.5
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary

HCM 2010 Ctrl Delay	54.5
HCM 2010 LOS	D

Notes

Intersection						
Int Delay, s/veh	5.2					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	78	1245	1279	55	12	51
Future Vol, veh/h	78	1245	1279	55	12	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	230	-	-	250	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	1	2	0	0	0
Mvmt Flow	81	1297	1332	57	13	53

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1332	0	-	0	2791	1332
Stage 1	-	-	-	-	1332	-
Stage 2	-	-	-	-	1459	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	525	-	-	-	21	191
Stage 1	-	-	-	-	249	-
Stage 2	-	-	-	-	216	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	525	-	-	-	18	191
Mov Cap-2 Maneuver	-	-	-	-	18	-
Stage 1	-	-	-	-	249	-
Stage 2	-	-	-	-	183	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	208.1
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	525	-	-	-	67
HCM Lane V/C Ratio	0.155	-	-	-	0.979
HCM Control Delay (s)	13.1	-	-	-	208.1
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.5	-	-	-	4.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	189	948	33	100	823	462	43	45	138	167	30	99
Future Volume (veh/h)	189	948	33	100	823	462	43	45	138	167	30	99
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1900	1863	1600	1881	1900	1870	1900	1900	1736	1652
Adj Flow Rate, veh/h	220	1102	38	116	957	537	50	52	160	194	35	115
Adj No. of Lanes	1	1	1	1	1	1	0	1	0	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	2	0	1	3	3	3	12	12	15
Cap, veh/h	198	926	915	105	846	828	31	37	59	143	17	371
Arrive On Green	0.11	0.58	0.58	0.06	0.53	0.53	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1810	1600	1582	1774	1600	1566	0	141	222	360	65	1404
Grp Volume(v), veh/h	220	1102	38	116	957	537	262	0	0	229	0	115
Grp Sat Flow(s),veh/h/ln	1810	1600	1582	1774	1600	1566	363	0	0	425	0	1404
Q Serve(g_s), s	15.3	81.0	1.5	8.3	74.0	34.4	0.0	0.0	0.0	0.0	0.0	9.2
Cycle Q Clear(g_c), s	15.3	81.0	1.5	8.3	74.0	34.4	37.0	0.0	0.0	37.0	0.0	9.2
Prop In Lane	1.00		1.00	1.00		1.00	0.19		0.61	0.85		1.00
Lane Grp Cap(c), veh/h	198	926	915	105	846	828	127	0	0	160	0	371
V/C Ratio(X)	1.11	1.19	0.04	1.10	1.13	0.65	2.07	0.00	0.00	1.43	0.00	0.31
Avail Cap(c_a), veh/h	198	926	915	105	846	828	127	0	0	160	0	371
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.3	29.5	12.7	65.8	33.0	23.7	45.0	0.0	0.0	57.0	0.0	41.3
Incr Delay (d2), s/veh	97.4	96.5	0.0	118.2	73.9	1.9	507.0	0.0	0.0	227.2	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.0	60.3	0.6	7.5	49.8	15.2	22.7	0.0	0.0	16.2	0.0	3.6
LnGrp Delay(d),s/veh	159.8	126.0	12.8	184.0	106.9	25.6	552.0	0.0	0.0	284.2	0.0	41.9
LnGrp LOS	F	F	B	F	F	C	F			F		D
Approach Vol, veh/h		1360			1610			262			344	
Approach Delay, s/veh		128.3			85.3			552.0			203.2	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	87.0		41.0	19.0	80.0		41.0
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	8.3	81.0		* 37	15.3	74.0		* 37
Max Q Clear Time (g_c+I1), s	10.3	83.0		39.0	17.3	76.0		39.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	147.2
HCM 2010 LOS	F

Notes

Intersection	
Int Delay, s/veh	9.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	14	165	28	3	7	389	38	45	6	24	4
Future Vol, veh/h	15	14	165	28	3	7	389	38	45	6	24	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	15	2	10	2	2	2	2	4	2	2	11	0
Mvmt Flow	16	15	179	30	3	8	423	41	49	7	26	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	958	977	28	960	954	66	30	0	0	90	0	0
Stage 1	41	41	-	911	911	-	-	-	-	-	-	-
Stage 2	917	936	-	49	43	-	-	-	-	-	-	-
Critical Hdwy	7.25	6.52	6.3	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.25	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.25	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.635	4.018	3.39	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	224	251	1025	236	259	998	1583	-	-	1505	-	-
Stage 1	942	861	-	328	353	-	-	-	-	-	-	-
Stage 2	309	344	-	964	859	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	171	179	1025	142	185	998	1583	-	-	1505	-	-
Mov Cap-2 Maneuver	171	179	-	142	185	-	-	-	-	-	-	-
Stage 1	675	857	-	235	253	-	-	-	-	-	-	-
Stage 2	217	247	-	777	855	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.4	32.4	6.7	1.3
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1583	-	-	175	1025	172	1505	-	-
HCM Lane V/C Ratio	0.267	-	-	0.18	0.175	0.24	0.004	-	-
HCM Control Delay (s)	8.1	0	-	30	9.3	32.4	7.4	0	-
HCM Lane LOS	A	A	-	D	A	D	A	A	-
HCM 95th %tile Q(veh)	1.1	-	-	0.6	0.6	0.9	0	-	-

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	18	2	8	43	5	24	0	8	0	0	0
Future Vol, veh/h	5	18	2	8	43	5	24	0	8	0	0	0
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Heavy Vehicles, %	0	0	0	0	8	0	0	0	0	0	0	0
Mvmt Flow	8	29	3	13	69	8	39	0	13	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	7.4	7.9	7.5
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	75%	20%	16%	0%
Vol Thru, %	0%	72%	84%	0%
Vol Right, %	25%	8%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	25	51	5
LT Vol	24	5	8	0
Through Vol	0	18	43	0
RT Vol	8	2	0	5
Lane Flow Rate	52	40	82	8
Geometry Grp	2	5	7	7
Degree of Util (X)	0.059	0.046	0.107	0.009
Departure Headway (Hd)	4.121	4.15	4.69	4.047
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	856	856	763	883
Service Time	2.207	2.207	2.422	1.779
HCM Lane V/C Ratio	0.061	0.047	0.107	0.009
HCM Control Delay	7.5	7.4	8	6.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.1	0.4	0

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	15	47	24	68	0	50	0	18	0	22	8
Future Vol, veh/h	0	15	47	24	68	0	50	0	18	0	22	8
Conflicting Peds, #/hr	4	0	1	0	0	3	1	0	0	3	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	5	0	5	0	7	0	13	0	10	0
Mvmt Flow	0	17	53	27	76	0	56	0	20	0	25	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	18	0	0	169	148	21	160	148	80
Stage 1	-	-	-	-	-	-	18	18	-	130	130	-
Stage 2	-	-	-	-	-	-	151	130	-	30	18	-
Critical Hdwy	-	-	-	4.1	-	-	7.17	6.5	6.33	7.1	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.17	5.5	-	6.1	5.6	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.17	5.5	-	6.1	5.6	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.563	4	3.417	3.5	4.09	3.3
Pot Cap-1 Maneuver	0	-	-	1612	-	0	784	747	1026	810	729	986
Stage 1	0	-	-	-	-	0	988	884	-	878	773	-
Stage 2	0	-	-	-	-	0	840	792	-	992	865	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1608	-	-	743	733	1023	781	715	983
Mov Cap-2 Maneuver	-	-	-	-	-	-	743	733	-	781	715	-
Stage 1	-	-	-	-	-	-	988	883	-	878	759	-
Stage 2	-	-	-	-	-	-	788	778	-	970	864	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.9	10	9.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	801	-	-	1608	-	771
HCM Lane V/C Ratio	0.095	-	-	0.017	-	0.044
HCM Control Delay (s)	10	-	-	7.3	0	9.9
HCM Lane LOS	B	-	-	A	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	617	66	137	1453	22	88	9	81	26	26	25
Future Volume (veh/h)	23	617	66	137	1453	22	88	9	81	26	26	25
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		1.00	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1845	1863	1862	1900	1900	1833	1743	1900	1876	1900
Adj Flow Rate, veh/h	26	686	73	152	1614	24	98	10	0	29	29	28
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	4	3	2	2	2	0	0	9	0	0	0
Cap, veh/h	105	1714	770	263	2084	31	323	28	246	138	125	90
Arrive On Green	0.06	0.49	0.49	0.15	0.58	0.56	0.17	0.17	0.00	0.17	0.17	0.15
Sat Flow, veh/h	1810	3471	1560	1774	3568	53	1283	167	1482	365	752	539
Grp Volume(v), veh/h	26	686	73	152	799	839	108	0	0	86	0	0
Grp Sat Flow(s),veh/h/ln	1810	1736	1560	1774	1769	1852	1450	0	1482	1656	0	0
Q Serve(g_s), s	0.9	7.8	1.6	5.0	21.5	21.6	1.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.9	7.8	1.6	5.0	21.5	21.6	3.7	0.0	0.0	2.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	0.91		1.00	0.34		0.33
Lane Grp Cap(c), veh/h	105	1714	770	263	1033	1082	351	0	246	352	0	0
V/C Ratio(X)	0.25	0.40	0.09	0.58	0.77	0.78	0.31	0.00	0.00	0.24	0.00	0.00
Avail Cap(c_a), veh/h	303	2272	1021	453	1313	1375	793	0	733	875	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	28.2	10.0	8.4	24.8	9.9	9.9	23.2	0.0	0.0	23.0	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.1	0.0	0.7	1.6	1.6	0.2	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.7	0.7	2.5	10.7	11.2	1.7	0.0	0.0	1.3	0.0	0.0
LnGrp Delay(d),s/veh	28.6	10.1	8.4	25.6	11.5	11.5	23.4	0.0	0.0	23.2	0.0	0.0
LnGrp LOS	C	B	A	C	B	B	C			C		
Approach Vol, veh/h		785			1790			108			86	
Approach Delay, s/veh		10.5			12.7			23.4			23.2	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.3	34.9		14.4	7.6	40.6		14.4
Change Period (Y+Rc), s	4.0	5.2		5.0	4.0	5.2		5.0
Max Green Setting (Gmax), s	16.0	39.8		30.0	10.5	45.3		30.0
Max Q Clear Time (g_c+I1), s	7.0	9.8		4.7	2.9	23.6		5.7
Green Ext Time (p_c), s	0.0	13.8		0.2	0.0	11.8		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	12.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	218	587	140	411	459	107	158	360	194	127	816	338
Future Volume (veh/h)	218	587	140	411	459	107	158	360	194	127	816	338
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1838	1900	1881	1827	1863	1810	1863	1845	1759	1827	1810
Adj Flow Rate, veh/h	237	638	152	447	499	116	172	391	211	138	887	367
Adj No. of Lanes	2	2	0	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	4	2	5	2	3	8	4	5
Cap, veh/h	309	830	198	456	1174	527	178	1159	508	157	1105	478
Arrive On Green	0.09	0.30	0.29	0.13	0.34	0.34	0.10	0.33	0.33	0.09	0.32	0.32
Sat Flow, veh/h	3408	2788	663	3476	3471	1559	1723	3539	1551	1675	3471	1503
Grp Volume(v), veh/h	237	399	391	447	499	116	172	391	211	138	887	367
Grp Sat Flow(s),veh/h/ln	1704	1746	1705	1738	1736	1559	1723	1770	1551	1675	1736	1503
Q Serve(g_s), s	7.3	22.2	22.3	13.7	11.9	5.7	10.6	8.9	11.3	8.7	25.0	23.5
Cycle Q Clear(g_c), s	7.3	22.2	22.3	13.7	11.9	5.7	10.6	8.9	11.3	8.7	25.0	23.5
Prop In Lane	1.00		0.39	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	309	520	508	456	1174	527	178	1159	508	157	1105	478
V/C Ratio(X)	0.77	0.77	0.77	0.98	0.43	0.22	0.97	0.34	0.42	0.88	0.80	0.77
Avail Cap(c_a), veh/h	415	562	549	456	1174	527	178	1180	517	157	1125	487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.4	34.1	34.3	46.3	27.3	25.3	47.7	27.1	27.9	47.8	33.3	32.8
Incr Delay (d2), s/veh	5.9	6.4	6.7	37.1	0.3	0.3	58.2	0.2	0.8	39.3	4.5	7.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	11.6	11.5	8.9	5.7	2.5	7.9	4.4	5.0	5.7	12.6	10.8
LnGrp Delay(d),s/veh	53.4	40.6	40.9	83.3	27.7	25.6	105.9	27.4	28.7	87.1	37.8	40.4
LnGrp LOS	D	D	D	F	C	C	F	C	C	F	D	D
Approach Vol, veh/h		1027			1062			774			1392	
Approach Delay, s/veh		43.7			50.9			45.2			43.4	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	35.8	15.0	38.0	13.7	40.1	14.0	39.0
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	14.3	33.8	11.3	34.0	13.3	34.8	10.3	35.0
Max Q Clear Time (g_c+I1), s	15.7	24.3	12.6	27.0	9.3	13.9	10.7	13.3
Green Ext Time (p_c), s	0.0	6.0	0.0	5.9	0.3	11.4	0.0	15.3

Intersection Summary	
HCM 2010 Ctrl Delay	45.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	507	339	274	926	77	347	285	103	80	454	135
Future Volume (veh/h)	142	507	339	274	926	77	347	285	103	80	454	135
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1792	1845	1863	1900	1845	1835	1900	1863	1789	1900
Adj Flow Rate, veh/h	151	539	361	291	985	82	369	303	110	85	483	144
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	3	6	3	2	0	3	3	3	2	6	6
Cap, veh/h	173	961	415	268	1157	527	351	855	304	138	563	167
Arrive On Green	0.10	0.27	0.27	0.15	0.33	0.33	0.20	0.34	0.34	0.08	0.22	0.22
Sat Flow, veh/h	1723	3505	1512	1757	3539	1612	1757	2516	894	1774	2583	765
Grp Volume(v), veh/h	151	539	361	291	985	82	369	208	205	85	317	310
Grp Sat Flow(s),veh/h/ln	1723	1752	1512	1757	1770	1612	1757	1743	1667	1774	1699	1649
Q Serve(g_s), s	9.2	14.1	24.3	16.3	27.7	3.9	21.3	9.5	9.9	5.0	19.1	19.4
Cycle Q Clear(g_c), s	9.2	14.1	24.3	16.3	27.7	3.9	21.3	9.5	9.9	5.0	19.1	19.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.54	1.00		0.46
Lane Grp Cap(c), veh/h	173	961	415	268	1157	527	351	593	567	138	370	359
V/C Ratio(X)	0.87	0.56	0.87	1.08	0.85	0.16	1.05	0.35	0.36	0.62	0.86	0.86
Avail Cap(c_a), veh/h	173	985	425	268	1181	538	351	593	567	196	411	399
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	33.2	36.9	45.2	33.5	25.5	42.7	26.4	26.5	47.7	40.1	40.2
Incr Delay (d2), s/veh	35.6	0.7	17.2	79.3	6.1	0.1	62.5	0.4	0.5	4.5	15.4	16.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	6.9	12.1	13.7	14.5	1.7	16.3	4.6	4.6	2.6	10.6	10.5
LnGrp Delay(d),s/veh	83.0	33.9	54.1	124.5	39.6	25.6	105.2	26.8	27.0	52.2	55.5	57.0
LnGrp LOS	F	C	D	F	D	C	F	C	C	D	E	E
Approach Vol, veh/h		1051			1358			782			712	
Approach Delay, s/veh		47.9			56.9			63.9			55.8	
Approach LOS		D			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	40.9	20.0	33.9	25.0	27.9	14.4	39.5
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	11.3	35.3	16.3	30.0	21.3	25.8	10.7	35.6
Max Q Clear Time (g_c+I1), s	7.0	11.9	18.3	26.3	23.3	21.4	11.2	29.7
Green Ext Time (p_c), s	0.1	5.9	0.0	2.9	0.0	1.6	0.0	4.3

Intersection Summary	
HCM 2010 Ctrl Delay	55.7
HCM 2010 LOS	E

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	662	174	373	133	143	936
Future Volume (veh/h)	662	174	373	133	143	936
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1827	1881	1900	1900
Adj Flow Rate, veh/h	752	198	424	151	162	1064
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	1	1	4	1	0	0
Cap, veh/h	695	621	686	601	192	986
Arrive On Green	0.39	0.39	0.38	0.38	0.11	0.52
Sat Flow, veh/h	1792	1599	1827	1599	1810	1900
Grp Volume(v), veh/h	752	198	424	151	162	1064
Grp Sat Flow(s),veh/h/ln	1792	1599	1827	1599	1810	1900
Q Serve(g_s), s	42.7	9.5	20.8	7.2	9.7	57.1
Cycle Q Clear(g_c), s	42.7	9.5	20.8	7.2	9.7	57.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	695	621	686	601	192	986
V/C Ratio(X)	1.08	0.32	0.62	0.25	0.84	1.08
Avail Cap(c_a), veh/h	695	621	686	601	224	986
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.6	23.5	27.9	23.7	48.3	26.5
Incr Delay (d2), s/veh	58.2	0.3	1.7	0.2	21.9	52.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	32.3	9.7	10.8	3.2	6.0	43.9
LnGrp Delay(d),s/veh	91.9	23.8	29.6	23.9	70.1	78.8
LnGrp LOS	F	C	C	C	E	F
Approach Vol, veh/h	950		575			1226
Approach Delay, s/veh	77.7		28.1			77.7
Approach LOS	E		C			E

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		62.4		47.6	15.8	46.6		
Change Period (Y+Rc), s		5.3		4.9	4.1	5.3		
Max Green Setting (Gmax), s		57.1		42.7	13.6	39.4		
Max Q Clear Time (g_c+I1), s		59.1		44.7	11.7	22.8		
Green Ext Time (p_c), s		0.0		0.0	0.1	7.6		

Intersection Summary	
HCM 2010 Ctrl Delay	67.3
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	35.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	81	112	506	395	1222	428
Future Vol, veh/h	81	112	506	395	1222	428
Conflicting Peds, #/hr	1	0	0	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	40	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	12	20	19	3	3	5
Mvmt Flow	93	129	582	454	1405	492

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3024	1406	1406	0	-	0
Stage 1	1406	-	-	-	-	-
Stage 2	1618	-	-	-	-	-
Critical Hdwy	6.52	6.4	4.29	-	-	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.48	2.371	-	-	-
Pot Cap-1 Maneuver	~ 13	155	~ 436	-	-	-
Stage 1	215	-	-	-	-	-
Stage 2	169	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	0	155	~ 436	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	215	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s		107.5	0
HCM LOS	-		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	~ 436	-	-	155	-	-
HCM Lane V/C Ratio	1.334	-	-	0.831	-	-
HCM Control Delay (s)	191.4	-	-	90.8	-	-
HCM Lane LOS	F	-	-	F	-	-
HCM 95th %tile Q(veh)	26.4	-	-	5.5	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	14	20	893	53	113	1164
Future Volume (veh/h)	14	20	893	53	113	1164
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1532	1583	1845	1792	1696	1863
Adj Flow Rate, veh/h	15	22	971	58	123	1265
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	20	3	6	12	2
Cap, veh/h	87	207	1188	981	152	1478
Arrive On Green	0.06	0.06	0.64	0.64	0.09	0.79
Sat Flow, veh/h	1459	1346	1845	1524	1616	1863
Grp Volume(v), veh/h	15	22	971	58	123	1265
Grp Sat Flow(s),veh/h/ln	1459	1346	1845	1524	1616	1863
Q Serve(g_s), s	0.7	0.9	26.6	0.9	5.0	29.4
Cycle Q Clear(g_c), s	0.7	0.9	26.6	0.9	5.0	29.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	87	207	1188	981	152	1478
V/C Ratio(X)	0.17	0.11	0.82	0.06	0.81	0.86
Avail Cap(c_a), veh/h	456	548	1316	1087	180	1639
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	24.5	9.0	4.4	29.8	4.5
Incr Delay (d2), s/veh	0.9	0.2	4.0	0.0	20.3	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.8	14.5	0.4	3.1	16.3
LnGrp Delay(d),s/veh	31.0	24.7	12.9	4.5	50.1	9.0
LnGrp LOS	C	C	B	A	D	A
Approach Vol, veh/h	37		1029			1388
Approach Delay, s/veh	27.2		12.5			12.6
Approach LOS	C		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		59.0		8.2	10.0	48.9		
Change Period (Y+Rc), s		5.7		* 4.2	3.7	5.7		
Max Green Setting (Gmax), s		59.1		* 21	7.5	47.9		
Max Q Clear Time (g_c+I1), s		31.4		2.9	7.0	28.6		
Green Ext Time (p_c), s		19.2		0.1	0.0	14.7		

Intersection Summary	
HCM 2010 Ctrl Delay	12.8
HCM 2010 LOS	B

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1194	112	55	962	197	58
Future Volume (veh/h)	1194	112	55	962	197	58
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1900	1845	1600	1881	1900
Adj Flow Rate, veh/h	1388	130	64	1119	229	67
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	3	0	1	0
Cap, veh/h	1070	100	81	1301	213	192
Arrive On Green	0.74	0.74	0.05	0.81	0.12	0.12
Sat Flow, veh/h	1441	135	1757	1600	1792	1615
Grp Volume(v), veh/h	0	1518	64	1119	229	67
Grp Sat Flow(s),veh/h/ln	0	1576	1757	1600	1792	1615
Q Serve(g_s), s	0.0	111.3	5.4	65.1	17.8	5.7
Cycle Q Clear(g_c), s	0.0	111.3	5.4	65.1	17.8	5.7
Prop In Lane		0.09	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	1170	81	1301	213	192
V/C Ratio(X)	0.00	1.30	0.79	0.86	1.08	0.35
Avail Cap(c_a), veh/h	0	1170	82	1302	213	192
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.3	70.8	8.7	66.0	60.7
Incr Delay (d2), s/veh	0.0	140.1	39.3	6.1	83.5	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	93.3	3.5	30.2	13.7	2.6
LnGrp Delay(d),s/veh	0.0	159.4	110.0	14.8	149.5	61.8
LnGrp LOS		F	F	B	F	E
Approach Vol, veh/h	1518			1183	296	
Approach Delay, s/veh	159.4			20.0	129.6	
Approach LOS	F			B	F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.6	117.3				127.9		22.0
Change Period (Y+Rc), s	3.7	6.0				6.0		4.2
Max Green Setting (Gmax), s	7.0	111.3				122.0		17.8
Max Q Clear Time (g_c+I1), s	7.4	113.3				67.1		19.8
Green Ext Time (p_c), s	0.0	0.0				43.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	101.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	265	924	3	12	961	655	12	35	9	795	22	396
Future Volume (veh/h)	265	924	3	12	961	655	12	35	9	795	22	396
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.90	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1652	1598	1900	1900	1600	1776	1900	1900	1900	1845	1827	1863
Adj Flow Rate, veh/h	305	1062	3	14	1105	753	14	40	10	914	25	455
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	15	0	0	0	0	7	0	0	0	3	4	2
Cap, veh/h	293	1563	4	53	1054	944	101	80	20	951	510	436
Arrive On Green	0.19	0.50	0.50	0.03	0.35	0.35	0.06	0.06	0.06	0.28	0.28	0.28
Sat Flow, veh/h	1573	3105	9	1810	3040	1507	1810	1432	358	3408	1827	1562
Grp Volume(v), veh/h	305	519	546	14	1105	753	14	0	50	914	25	455
Grp Sat Flow(s),veh/h/ln	1573	1518	1596	1810	1520	1507	1810	0	1790	1704	1827	1562
Q Serve(g_s), s	27.8	38.6	38.6	1.1	51.8	51.8	1.1	0.0	4.1	39.5	1.5	41.7
Cycle Q Clear(g_c), s	27.8	38.6	38.6	1.1	51.8	51.8	1.1	0.0	4.1	39.5	1.5	41.7
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	293	764	804	53	1054	944	101	0	100	951	510	436
V/C Ratio(X)	1.04	0.68	0.68	0.26	1.05	0.80	0.14	0.00	0.50	0.96	0.05	1.04
Avail Cap(c_a), veh/h	293	764	804	121	1054	944	109	0	108	951	510	436
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.8	28.0	28.0	70.9	48.8	20.1	67.1	0.0	68.5	53.0	39.3	53.8
Incr Delay (d2), s/veh	63.8	2.4	2.3	2.6	41.2	4.9	0.6	0.0	3.8	20.2	0.0	54.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.2	16.7	17.5	0.6	27.7	32.2	0.6	0.0	2.1	21.2	0.8	24.7
LnGrp Delay(d),s/veh	124.6	30.4	30.3	73.5	90.0	25.0	67.7	0.0	72.3	73.2	39.4	108.7
LnGrp LOS	F	C	C	E	F	C	E		E	E	D	F
Approach Vol, veh/h		1370			1872			64			1394	
Approach Delay, s/veh		51.3			63.7			71.3			84.2	
Approach LOS		D			E			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.6	81.2		47.0	32.0	57.8		12.6
Change Period (Y+Rc), s	* 4.2	6.0		5.3	* 4.2	6.0		4.2
Max Green Setting (Gmax), s	* 16	69.6		41.7	* 28	51.8		9.0
Max Q Clear Time (g_c+I1), s	13.1	40.6		43.7	29.8	53.8		6.1
Green Ext Time (p_c), s	0.0	17.8		0.0	0.0	0.0		0.0

Intersection Summary

HCM 2010 Ctrl Delay	66.3
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	448	1217	0	0	1578	40	0	0	0	0	0	113
Future Volume (veh/h)	448	1217	0	0	1578	40	0	0	0	0	0	113
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1600	0	0	1599	1900				0	1863	1759
Adj Flow Rate, veh/h	482	1309	0	0	1697	43				0	0	122
Adj No. of Lanes	1	2	0	0	2	0				0	1	2
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93				0.93	0.92	0.93
Percent Heavy Veh, %	1	0	0	0	0	0				0	2	8
Cap, veh/h	515	2888	0	0	1855	47				0	0	0
Arrive On Green	0.29	0.95	0.00	0.00	0.61	0.61				0.00	0.00	0.00
Sat Flow, veh/h	1792	3120	0	0	3108	77					0	
Grp Volume(v), veh/h	482	1309	0	0	849	891					0.0	
Grp Sat Flow(s),veh/h/ln	1792	1520	0	0	1519	1585						
Q Serve(g_s), s	21.0	3.0	0.0	0.0	39.3	39.8						
Cycle Q Clear(g_c), s	21.0	3.0	0.0	0.0	39.3	39.8						
Prop In Lane	1.00		0.00	0.00		0.05						
Lane Grp Cap(c), veh/h	515	2888	0	0	931	971						
V/C Ratio(X)	0.94	0.45	0.00	0.00	0.91	0.92						
Avail Cap(c_a), veh/h	515	2888	0	0	931	971						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	27.8	0.2	0.0	0.0	13.6	13.7						
Incr Delay (d2), s/veh	24.8	0.1	0.0	0.0	13.1	13.2						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	13.9	1.1	0.0	0.0	19.7	20.6						
LnGrp Delay(d),s/veh	52.6	0.3	0.0	0.0	26.7	26.9						
LnGrp LOS	D	A			C	C						
Approach Vol, veh/h		1791			1740							
Approach Delay, s/veh		14.4			26.8							
Approach LOS		B			C							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		80.0			27.0	53.0		
Change Period (Y+Rc), s		4.0			4.0	4.0		
Max Green Setting (Gmax), s		76.0			23.0	49.0		
Max Q Clear Time (g_c+I1), s		5.0			23.0	41.8		
Green Ext Time (p_c), s		30.6			0.0	6.3		

Intersection Summary

HCM 2010 Ctrl Delay	20.5
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	235	990	1418	395	86	110
Future Volume (veh/h)	235	990	1418	395	86	110
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1600	1600	1881	1776	1759
Adj Flow Rate, veh/h	261	1100	1576	439	96	122
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	0	0	1	7	8
Cap, veh/h	196	1330	1106	1106	164	145
Arrive On Green	0.11	0.83	0.69	0.69	0.10	0.10
Sat Flow, veh/h	1774	1600	1600	1599	1691	1495
Grp Volume(v), veh/h	261	1100	1576	439	96	122
Grp Sat Flow(s),veh/h/ln	1774	1600	1600	1599	1691	1495
Q Serve(g_s), s	15.8	53.0	98.8	16.7	7.8	11.5
Cycle Q Clear(g_c), s	15.8	53.0	98.8	16.7	7.8	11.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	196	1330	1106	1106	164	145
V/C Ratio(X)	1.33	0.83	1.42	0.40	0.58	0.84
Avail Cap(c_a), veh/h	196	1330	1106	1106	249	220
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.5	6.5	22.0	9.4	61.7	63.4
Incr Delay (d2), s/veh	179.4	4.6	196.4	0.3	3.3	16.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.5	24.3	103.4	7.4	3.8	9.8
LnGrp Delay(d),s/veh	242.9	11.1	218.4	9.7	65.0	79.4
LnGrp LOS	F	B	F	A	E	E
Approach Vol, veh/h		1361	2015		218	
Approach Delay, s/veh		55.6	172.9		73.1	
Approach LOS		E	F		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		124.8		18.1	20.0	104.8		
Change Period (Y+Rc), s		6.0		* 4.2	* 4.2	6.0		
Max Green Setting (Gmax), s		118.8		* 21	* 16	98.8		
Max Q Clear Time (g_c+I1), s		55.0		13.5	17.8	100.8		
Green Ext Time (p_c), s		58.5		0.4	0.0	0.0		

Intersection Summary

HCM 2010 Ctrl Delay	122.4
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	1029	24	27	1686	25	71	5	28	32	1	72
Future Volume (veh/h)	35	1029	24	27	1686	25	71	5	28	32	1	72
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1600	1759	1900	1600	1681	1900	1738	1900	1900	1900	1863
Adj Flow Rate, veh/h	41	1197	28	31	1960	29	83	6	33	37	1	84
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	3	0	8	0	0	13	0	0	0	0	0	2
Cap, veh/h	60	1179	1102	55	1172	1046	162	30	166	198	5	205
Arrive On Green	0.03	0.74	0.74	0.03	0.73	0.73	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1757	1600	1495	1810	1600	1428	1330	232	1275	1127	36	1577
Grp Volume(v), veh/h	41	1197	28	31	1960	29	83	0	39	38	0	84
Grp Sat Flow(s),veh/h/ln	1757	1600	1495	1810	1600	1428	1330	0	1507	1163	0	1577
Q Serve(g_s), s	3.2	102.3	0.7	2.3	101.7	0.8	8.5	0.0	3.2	3.4	0.0	6.8
Cycle Q Clear(g_c), s	3.2	102.3	0.7	2.3	101.7	0.8	15.0	0.0	3.2	6.6	0.0	6.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.85	0.97		1.00
Lane Grp Cap(c), veh/h	60	1179	1102	55	1172	1046	162	0	196	208	0	205
V/C Ratio(X)	0.68	1.02	0.03	0.57	1.67	0.03	0.51	0.00	0.20	0.18	0.00	0.41
Avail Cap(c_a), veh/h	76	1179	1102	78	1172	1046	257	0	304	307	0	318
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	66.3	18.3	4.9	66.4	18.6	5.1	62.3	0.0	53.9	56.5	0.0	55.5
Incr Delay (d2), s/veh	15.9	30.2	0.0	9.0	306.4	0.0	2.5	0.0	0.5	0.4	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	54.4	0.3	1.3	144.0	0.3	3.2	0.0	1.4	1.3	0.0	3.0
LnGrp Delay(d),s/veh	82.2	48.4	4.9	75.4	324.9	5.1	64.7	0.0	54.4	56.9	0.0	56.8
LnGrp LOS	F	F	A	E	F	A	E		D	E		E
Approach Vol, veh/h		1266			2020			122			122	
Approach Delay, s/veh		48.6			316.5			61.4			56.8	
Approach LOS		D			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.9	108.3		22.7	8.5	107.7		22.7
Change Period (Y+Rc), s	3.7	6.0		4.6	3.7	6.0		4.6
Max Green Setting (Gmax), s	6.6	101.7		28.0	6.0	101.7		28.0
Max Q Clear Time (g_c+I1), s	4.3	104.3		8.8	5.2	103.7		17.0
Green Ext Time (p_c), s	0.0	0.0		0.8	0.0	0.0		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	202.6
HCM 2010 LOS	F

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	828	258	268	1594	234	286
Future Volume (veh/h)	828	258	268	1594	234	286
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1845	1827	1600	1881	1881
Adj Flow Rate, veh/h	862	269	279	1660	244	298
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	3	4	0	1	1
Cap, veh/h	1005	985	328	1205	320	441
Arrive On Green	0.63	0.63	0.10	0.75	0.18	0.18
Sat Flow, veh/h	1600	1568	3375	1600	1792	1599
Grp Volume(v), veh/h	862	269	279	1660	244	298
Grp Sat Flow(s),veh/h/ln	1600	1568	1688	1600	1792	1599
Q Serve(g_s), s	65.1	11.5	12.2	113.0	19.4	24.9
Cycle Q Clear(g_c), s	65.1	11.5	12.2	113.0	19.4	24.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1005	985	328	1205	320	441
V/C Ratio(X)	0.86	0.27	0.85	1.38	0.76	0.68
Avail Cap(c_a), veh/h	1005	985	392	1205	320	441
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.5	12.5	66.7	18.5	58.6	48.4
Incr Delay (d2), s/veh	7.5	0.1	14.3	175.0	10.3	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	30.6	5.0	6.3	107.5	10.5	11.5
LnGrp Delay(d),s/veh	30.0	12.7	81.0	193.5	68.9	52.4
LnGrp LOS	C	B	F	F	E	D
Approach Vol, veh/h	1131			1939	542	
Approach Delay, s/veh	25.8			177.3	59.8	
Approach LOS	C			F	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	18.8	100.2				119.0		31.0
Change Period (Y+Rc), s	4.2	6.0				6.0		4.2
Max Green Setting (Gmax), s	13.6	91.4				113.0		26.8
Max Q Clear Time (g_c+I1), s	14.2	67.1				115.0		26.9
Green Ext Time (p_c), s	0.4	20.8				0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	112.3
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1078	45	154	1837	5	161	0	262	0	1	0
Future Volume (veh/h)	1	1078	45	154	1837	5	161	0	262	0	1	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1845	1759	1599	1900	1900	1810	1863	1900	1900	1900
Adj Flow Rate, veh/h	1	1253	52	179	2136	6	187	0	305	0	1	0
Adj No. of Lanes	1	1	1	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	3	8	0	0	0	0	2	0	0	0
Cap, veh/h	1	1008	988	168	1163	3	307	0	454	0	361	306
Arrive On Green	0.00	0.63	0.63	0.10	0.73	0.72	0.19	0.00	0.19	0.00	0.19	0.00
Sat Flow, veh/h	1810	1600	1568	1675	1593	4	1367	0	1583	0	1900	1615
Grp Volume(v), veh/h	1	1253	52	179	0	2142	187	0	305	0	1	0
Grp Sat Flow(s),veh/h/ln	1810	1600	1568	1675	0	1598	1367	0	1583	0	1900	1615
Q Serve(g_s), s	0.1	94.5	1.9	15.0	0.0	109.5	19.2	0.0	25.5	0.0	0.1	0.0
Cycle Q Clear(g_c), s	0.1	94.5	1.9	15.0	0.0	109.5	19.3	0.0	25.5	0.0	0.1	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1	1008	988	168	0	1166	307	0	454	0	361	306
V/C Ratio(X)	0.83	1.24	0.05	1.07	0.00	1.84	0.61	0.00	0.67	0.00	0.00	0.00
Avail Cap(c_a), veh/h	121	1008	988	168	0	1166	331	0	480	0	393	334
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.51	0.51	0.51	0.09	0.00	0.09	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	75.0	27.7	10.6	67.5	0.0	20.2	57.1	0.0	47.3	0.0	49.3	0.0
Incr Delay (d2), s/veh	221.6	113.6	0.1	41.9	0.0	376.7	2.9	0.0	3.4	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	73.3	0.8	8.9	0.0	169.7	7.5	0.0	11.6	0.0	0.0	0.0
LnGrp Delay(d),s/veh	296.6	141.4	10.7	109.4	0.0	396.9	59.9	0.0	50.7	0.0	49.3	0.0
LnGrp LOS	F	F	B	F		F	E		D		D	
Approach Vol, veh/h		1306			2321			492			1	
Approach Delay, s/veh		136.3			374.7			54.2			49.3	
Approach LOS		F			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.0	98.5		32.5	4.0	113.5		32.5
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	15.3	90.0		* 31	10.3	95.0		* 31
Max Q Clear Time (g_c+I1), s	17.0	96.5		2.1	2.1	111.5		27.5
Green Ext Time (p_c), s	0.0	0.0		2.2	0.0	0.0		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	260.8
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1210	108	153	1750	1	197	0	245	1	0	1
Future Volume (veh/h)	0	1210	108	153	1750	1	197	0	245	1	0	1
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1827	1810	1600	1900	1900	1827	1810	1900	1900	1900
Adj Flow Rate, veh/h	0	1375	123	174	1989	1	224	0	278	1	0	1
Adj No. of Lanes	1	1	1	2	1	0	0	1	1	0	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	4	5	0	0	0	0	5	0	0	0
Cap, veh/h	1	1059	1015	172	1202	1	197	0	170	99	0	88
Arrive On Green	0.00	1.00	1.00	0.05	0.75	0.74	0.11	0.00	0.11	0.05	0.00	0.05
Sat Flow, veh/h	1810	1600	1533	3343	1599	1	1740	0	1502	1809	0	1615
Grp Volume(v), veh/h	0	1375	123	174	0	1990	224	0	278	1	0	1
Grp Sat Flow(s),veh/h/ln	1810	1600	1533	1672	0	1600	1740	0	1502	1810	0	1615
Q Serve(g_s), s	0.0	0.0	0.0	7.7	0.0	112.8	17.0	0.0	17.0	0.1	0.0	0.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.7	0.0	112.8	17.0	0.0	17.0	0.1	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1	1059	1015	172	0	1203	197	0	170	99	0	88
V/C Ratio(X)	0.00	1.30	0.12	1.01	0.00	1.65	1.14	0.00	1.63	0.01	0.00	0.01
Avail Cap(c_a), veh/h	93	1059	1015	172	0	1203	197	0	170	292	0	261
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	71.2	0.0	18.6	66.5	0.0	66.5	67.1	0.0	67.1
Incr Delay (d2), s/veh	0.0	134.8	0.0	72.4	0.0	298.1	105.4	0.0	309.8	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	39.7	0.0	5.3	0.0	148.7	13.9	0.0	21.7	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	134.8	0.0	143.6	0.0	316.7	171.9	0.0	376.3	67.1	0.0	67.1
LnGrp LOS		F	A	F		F	F		F	E		E
Approach Vol, veh/h		1498			2164			502			2	
Approach Delay, s/veh		123.8			302.8			285.1			67.1	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.7	105.1		12.2	0.0	116.8		21.0
Change Period (Y+Rc), s	3.7	* 6		* 4.2	3.7	6.0		4.2
Max Green Setting (Gmax), s	8.0	* 85		* 24	8.0	83.1		16.8
Max Q Clear Time (g_c+I1), s	19.7	2.0		2.1	0.0	114.8		19.0
Green Ext Time (p_c), s	0.0	81.9		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	236.2
HCM 2010 LOS	F

Notes

Intersection						
Int Delay, s/veh	447.7					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	113	1351	1307	2	12	538
Future Vol, veh/h	113	1351	1307	2	12	538
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	230	-	-	250	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	4	3	6	67	0	1
Mvmt Flow	133	1589	1538	2	14	633

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1538	0	-	0	3393	1538
Stage 1	-	-	-	-	1538	-
Stage 2	-	-	-	-	1855	-
Critical Hdwy	4.14	-	-	-	6.4	6.21
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.236	-	-	-	3.5	3.309
Pot Cap-1 Maneuver	426	-	-	-	~ 8	~ 143
Stage 1	-	-	-	-	197	-
Stage 2	-	-	-	-	137	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	426	-	-	-	~ 6	~ 143
Mov Cap-2 Maneuver	-	-	-	-	~ 6	-
Stage 1	-	-	-	-	197	-
Stage 2	-	-	-	-	94	-

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	$ 2701.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	426	-	-	-	95
HCM Lane V/C Ratio	0.312	-	-	-	6.811
HCM Control Delay (s)	17.2	-	-	-	$ 2701.6
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	1.3	-	-	-	72.4

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	706	14	100	1129	218	27	31	185	421	39	251
Future Volume (veh/h)	112	706	14	100	1129	218	27	31	185	421	39	251
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1900	1900	1584	1827	1900	1892	1900	1900	1883	1881
Adj Flow Rate, veh/h	119	751	15	106	1201	232	29	33	197	448	41	267
Adj No. of Lanes	1	1	1	1	1	1	0	1	0	0	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	1	4	0	0	0	0	0	1
Cap, veh/h	100	779	770	112	782	750	27	40	126	136	8	574
Arrive On Green	0.06	0.49	0.49	0.06	0.49	0.49	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1810	1600	1581	1810	1584	1521	0	111	352	251	23	1599
Grp Volume(v), veh/h	119	751	15	106	1201	232	259	0	0	489	0	267
Grp Sat Flow(s),veh/h/ln	1810	1600	1581	1810	1584	1521	463	0	0	274	0	1599
Q Serve(g_s), s	8.3	68.1	0.7	8.8	74.0	13.7	0.0	0.0	0.0	0.0	0.0	19.3
Cycle Q Clear(g_c), s	8.3	68.1	0.7	8.8	74.0	13.7	53.8	0.0	0.0	53.8	0.0	19.3
Prop In Lane	1.00		1.00	1.00		1.00	0.11		0.76	0.92		1.00
Lane Grp Cap(c), veh/h	100	779	770	112	782	750	193	0	0	144	0	574
V/C Ratio(X)	1.19	0.96	0.02	0.94	1.54	0.31	1.34	0.00	0.00	3.39	0.00	0.47
Avail Cap(c_a), veh/h	100	779	770	112	782	750	193	0	0	144	0	574
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	70.8	37.2	20.0	70.1	38.0	22.7	53.0	0.0	0.0	56.7	0.0	37.0
Incr Delay (d2), s/veh	149.2	23.9	0.0	67.7	248.0	0.3	185.3	0.0	0.0	1093.9	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	35.2	0.3	6.5	86.2	5.8	16.8	0.0	0.0	49.8	0.0	8.7
LnGrp Delay(d),s/veh	220.1	61.1	20.0	137.8	286.0	23.0	238.3	0.0	0.0	1150.6	0.0	37.9
LnGrp LOS	F	E	B	F	F	C	F			F		D
Approach Vol, veh/h		885			1539			259			756	
Approach Delay, s/veh		81.8			236.1			238.3			757.6	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.0	79.0		58.0	12.0	80.0		58.0
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	9.3	73.0		* 54	8.3	74.0		* 54
Max Q Clear Time (g_c+I1), s	10.8	70.1		55.8	10.3	76.0		55.8
Green Ext Time (p_c), s	0.0	2.6		0.0	0.0	0.0		0.0

Intersection Summary			
HCM 2010 Ctrl Delay		311.2	
HCM 2010 LOS		F	

Notes

Intersection												
Int Delay, s/veh	9.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	19	329	82	19	14	149	62	64	14	79	20
Future Vol, veh/h	21	19	329	82	19	14	149	62	64	14	79	20
Conflicting Peds, #/hr	0	0	1	0	0	0	1	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	92	93	92	92	92	93	93	92	92	93	93
Heavy Vehicles, %	5	2	1	2	2	2	2	1	2	2	2	8
Mvmt Flow	23	21	354	89	21	15	160	67	70	15	85	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	567	584	98	559	560	101	107	0	0	136	0	0
Stage 1	127	127	-	422	422	-	-	-	-	-	-	-
Stage 2	440	457	-	137	138	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.52	6.21	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.15	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.018	3.309	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	430	423	961	440	437	954	1484	-	-	1448	-	-
Stage 1	870	791	-	609	588	-	-	-	-	-	-	-
Stage 2	590	568	-	866	782	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	366	369	959	240	381	954	1483	-	-	1448	-	-
Mov Cap-2 Maneuver	366	369	-	240	381	-	-	-	-	-	-	-
Stage 1	767	782	-	537	519	-	-	-	-	-	-	-
Stage 2	492	501	-	526	773	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.5	27.4	4.2	0.9
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1483	-	-	367	959	283	1448	-	-
HCM Lane V/C Ratio	0.108	-	-	0.118	0.369	0.442	0.011	-	-
HCM Control Delay (s)	7.7	0	-	16.1	10.9	27.4	7.5	0	-
HCM Lane LOS	A	A	-	C	B	D	A	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0.4	1.7	2.1	0	-	-

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	61	1	14	53	18	12	0	37	0	0	0
Future Vol, veh/h	1	61	1	14	53	18	12	0	37	0	0	0
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Heavy Vehicles, %	0	0	0	0	8	0	0	0	0	0	0	0
Mvmt Flow	2	98	2	23	85	29	19	0	60	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	7.9	8.1	7.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	24%	2%	21%	0%
Vol Thru, %	0%	97%	79%	0%
Vol Right, %	76%	2%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	49	63	67	18
LT Vol	12	1	14	0
Through Vol	0	61	53	0
RT Vol	37	1	0	18
Lane Flow Rate	79	102	108	29
Geometry Grp	2	5	7	7
Degree of Util (X)	0.089	0.12	0.144	0.033
Departure Headway (Hd)	4.045	4.234	4.797	4.127
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	891	835	743	861
Service Time	2.045	2.319	2.554	1.883
HCM Lane V/C Ratio	0.089	0.122	0.145	0.034
HCM Control Delay	7.4	7.9	8.4	7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.4	0.5	0.1

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	185	23	8	31	0	33	0	46	1	4	2
Future Vol, veh/h	0	185	23	8	31	0	33	0	46	1	4	2
Conflicting Peds, #/hr	1	0	1	1	0	4	2	0	1	4	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	1	0	0	0	0	0	0	5	0	25	0
Mvmt Flow	0	203	25	9	34	0	36	0	51	1	4	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	204	0	0	264	256	208	285	256	39
Stage 1	-	-	-	-	-	-	204	204	-	52	52	-
Stage 2	-	-	-	-	-	-	60	52	-	233	204	-
Critical Hdwy	-	-	-	4.1	-	-	7.1	6.5	6.25	7.1	6.75	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.75	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.75	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.5	4	3.345	3.5	4.225	3.3
Pot Cap-1 Maneuver	0	-	-	1380	-	0	693	651	825	671	610	1038
Stage 1	0	-	-	-	-	0	803	737	-	966	808	-
Stage 2	0	-	-	-	-	0	957	856	-	775	692	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1375	-	-	681	646	822	624	605	1034
Mov Cap-2 Maneuver	-	-	-	-	-	-	681	646	-	624	605	-
Stage 1	-	-	-	-	-	-	803	736	-	966	802	-
Stage 2	-	-	-	-	-	-	939	850	-	725	691	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.6	10.4	10.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	757	-	-	1375	-	690
HCM Lane V/C Ratio	0.115	-	-	0.006	-	0.011
HCM Control Delay (s)	10.4	-	-	7.6	0	10.3
HCM Lane LOS	B	-	-	A	A	B
HCM 95th %tile Q(veh)	0.4	-	-	0	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	1055	85	117	769	39	120	40	231	13	12	23
Future Volume (veh/h)	58	1055	85	117	769	39	120	40	231	13	12	23
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		1.00	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1865	1900	1900	1849	1900	1900	1860	1900
Adj Flow Rate, veh/h	65	1185	96	131	864	44	135	45	0	15	13	26
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	2	0	0	2	2	8	8	0	9	9	9
Cap, veh/h	205	1463	664	279	1559	79	308	74	292	130	108	145
Arrive On Green	0.11	0.41	0.41	0.15	0.45	0.45	0.18	0.18	0.00	0.18	0.18	0.18
Sat Flow, veh/h	1810	3539	1605	1810	3429	175	1085	408	1615	268	598	804
Grp Volume(v), veh/h	65	1185	96	131	446	462	180	0	0	54	0	0
Grp Sat Flow(s),veh/h/ln	1810	1770	1605	1810	1771	1832	1493	0	1615	1670	0	0
Q Serve(g_s), s	1.9	16.7	2.1	3.7	10.4	10.4	4.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.9	16.7	2.1	3.7	10.4	10.4	6.2	0.0	0.0	1.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.10	0.75		1.00	0.28		0.48
Lane Grp Cap(c), veh/h	205	1463	664	279	805	833	381	0	292	383	0	0
V/C Ratio(X)	0.32	0.81	0.14	0.47	0.55	0.55	0.47	0.00	0.00	0.14	0.00	0.00
Avail Cap(c_a), veh/h	336	1616	733	320	805	833	886	0	858	927	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.0	14.6	10.3	21.8	11.2	11.2	21.4	0.0	0.0	19.6	0.0	0.0
Incr Delay (d2), s/veh	0.3	2.6	0.0	0.5	0.5	0.5	0.3	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	8.6	0.9	1.9	5.1	5.2	2.6	0.0	0.0	0.7	0.0	0.0
LnGrp Delay(d),s/veh	23.4	17.2	10.4	22.2	11.7	11.7	21.7	0.0	0.0	19.6	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	C			B		
Approach Vol, veh/h		1346			1039			180			54	
Approach Delay, s/veh		17.0			13.0			21.7			19.6	
Approach LOS		B			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.7	28.6		15.2	10.4	30.9		15.2
Change Period (Y+Rc), s	4.0	5.2		5.0	4.0	5.2		5.0
Max Green Setting (Gmax), s	10.0	25.8		30.0	10.5	25.3		30.0
Max Q Clear Time (g_c+I1), s	5.7	18.7		3.5	3.9	12.4		8.2
Green Ext Time (p_c), s	0.0	4.7		0.3	0.0	7.7		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	15.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	454	115	272	756	229	335	1146	501	172	563	350
Future Volume (veh/h)	232	454	115	272	756	229	335	1146	501	172	563	350
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1863	1845	1881	1881	1881	1845	1881	1863
Adj Flow Rate, veh/h	237	463	117	278	771	234	342	1169	511	176	574	357
Adj No. of Lanes	2	2	0	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	2	3	1	1	1	3	1	2
Cap, veh/h	325	808	202	336	1024	449	257	1270	558	186	1136	497
Arrive On Green	0.09	0.29	0.29	0.10	0.29	0.29	0.14	0.36	0.36	0.11	0.32	0.32
Sat Flow, veh/h	3476	2818	707	3476	3539	1550	1792	3574	1569	1757	3574	1562
Grp Volume(v), veh/h	237	292	288	278	771	234	342	1169	511	176	574	357
Grp Sat Flow(s),veh/h/ln	1738	1787	1738	1738	1770	1550	1792	1787	1569	1757	1787	1562
Q Serve(g_s), s	7.1	14.9	15.1	8.4	21.1	13.5	15.3	33.4	33.2	10.6	13.9	21.6
Cycle Q Clear(g_c), s	7.1	14.9	15.1	8.4	21.1	13.5	15.3	33.4	33.2	10.6	13.9	21.6
Prop In Lane	1.00		0.41	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	325	512	498	336	1024	449	257	1270	558	186	1136	497
V/C Ratio(X)	0.73	0.57	0.58	0.83	0.75	0.52	1.33	0.92	0.92	0.95	0.51	0.72
Avail Cap(c_a), veh/h	336	566	551	336	1121	491	257	1273	559	186	1139	498
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.0	32.5	32.5	47.3	34.4	31.7	45.7	32.9	32.9	47.4	29.6	32.2
Incr Delay (d2), s/veh	7.5	1.5	1.7	15.7	3.0	1.3	173.2	11.1	20.2	50.4	0.5	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	7.5	7.5	4.7	10.7	5.9	19.9	18.4	17.4	7.7	6.9	10.0
LnGrp Delay(d),s/veh	54.6	34.0	34.2	63.1	37.4	33.1	218.9	44.0	53.1	97.8	30.1	37.6
LnGrp LOS	D	C	C	E	D	C	F	D	D	F	C	D
Approach Vol, veh/h		817			1283			2022			1107	
Approach Delay, s/veh		40.0			42.2			75.9			43.3	
Approach LOS		D			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	35.2	19.0	38.5	13.7	35.5	15.0	42.5
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	10.3	33.8	15.3	34.0	10.3	33.8	11.3	38.0
Max Q Clear Time (g_c+I1), s	10.4	17.1	17.3	23.6	9.1	23.1	12.6	35.4
Green Ext Time (p_c), s	0.0	10.8	0.0	9.7	0.1	7.7	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	55.1
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	1001	279	222	661	61	398	507	312	167	317	191
Future Volume (veh/h)	230	1001	279	222	661	61	398	507	312	167	317	191
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1881	1881	1881	1881	1881	1881	1881	1900	1881	1858	1900
Adj Flow Rate, veh/h	235	1021	285	227	674	62	406	517	318	170	323	195
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	1	1	1	1	1	1	1	1	1	3	3
Cap, veh/h	167	1186	523	169	1186	528	189	595	365	183	595	350
Arrive On Green	0.09	0.33	0.33	0.09	0.33	0.33	0.11	0.28	0.28	0.10	0.28	0.28
Sat Flow, veh/h	1774	3574	1574	1792	3574	1592	1792	2100	1288	1792	2125	1252
Grp Volume(v), veh/h	235	1021	285	227	674	62	406	440	395	170	267	251
Grp Sat Flow(s),veh/h/ln	1774	1787	1574	1792	1787	1592	1792	1787	1601	1792	1765	1612
Q Serve(g_s), s	8.3	23.5	13.0	8.3	13.7	2.4	9.3	20.6	20.7	8.3	11.3	11.7
Cycle Q Clear(g_c), s	8.3	23.5	13.0	8.3	13.7	2.4	9.3	20.6	20.7	8.3	11.3	11.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.80	1.00		0.78
Lane Grp Cap(c), veh/h	167	1186	523	169	1186	528	189	506	454	183	494	451
V/C Ratio(X)	1.41	0.86	0.55	1.35	0.57	0.12	2.15	0.87	0.87	0.93	0.54	0.56
Avail Cap(c_a), veh/h	167	1217	536	169	1217	542	189	529	474	183	517	472
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	27.5	24.0	39.9	24.2	20.5	39.4	30.0	30.0	39.2	26.9	27.1
Incr Delay (d2), s/veh	214.6	6.4	1.1	189.4	0.6	0.1	533.4	14.2	15.9	46.5	1.2	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.0	12.7	5.8	13.0	6.8	1.1	32.6	12.1	11.1	6.5	5.7	5.4
LnGrp Delay(d),s/veh	254.5	33.9	25.1	229.3	24.8	20.6	572.8	44.2	45.9	85.8	28.1	28.6
LnGrp LOS	F	C	C	F	C	C	F	D	D	F	C	C
Approach Vol, veh/h		1541			963			1241			688	
Approach Delay, s/veh		65.9			72.7			217.7			42.5	
Approach LOS		E			E			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	29.6	12.0	33.8	13.0	29.3	12.0	33.8
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	9.0	26.1	8.3	30.0	9.3	25.8	8.3	30.0
Max Q Clear Time (g_c+I1), s	10.3	22.7	10.3	25.5	11.3	13.7	10.3	15.7
Green Ext Time (p_c), s	0.0	2.2	0.0	3.5	0.0	6.0	0.0	8.8

Intersection Summary		
HCM 2010 Ctrl Delay		106.3
HCM 2010 LOS		F

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	150	100	1267	604	178	380
Future Volume (veh/h)	150	100	1267	604	178	380
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1827	1881	1900	1900
Adj Flow Rate, veh/h	158	105	1334	636	187	400
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	4	1	0	0
Cap, veh/h	183	163	1279	1120	183	1576
Arrive On Green	0.10	0.10	0.70	0.70	0.10	0.83
Sat Flow, veh/h	1792	1599	1827	1599	1810	1900
Grp Volume(v), veh/h	158	105	1334	636	187	400
Grp Sat Flow(s),veh/h/ln	1792	1599	1827	1599	1810	1900
Q Serve(g_s), s	12.9	9.3	103.7	29.3	15.0	6.7
Cycle Q Clear(g_c), s	12.9	9.3	103.7	29.3	15.0	6.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	183	163	1279	1120	183	1576
V/C Ratio(X)	0.87	0.64	1.04	0.57	1.02	0.25
Avail Cap(c_a), veh/h	206	184	1279	1120	183	1576
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.5	63.9	22.2	11.0	66.5	2.7
Incr Delay (d2), s/veh	27.7	6.3	37.0	0.7	71.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.2	0.0
%ile BackOfQ(50%),veh/ln	7.8	8.5	64.7	13.1	11.1	3.5
LnGrp Delay(d),s/veh	93.2	70.3	59.2	11.7	138.6	2.8
LnGrp LOS	F	E	F	B	F	A
Approach Vol, veh/h	263		1970			587
Approach Delay, s/veh	84.1		43.9			46.1
Approach LOS	F		D			D

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		128.1		20.0	19.1	109.0		
Change Period (Y+Rc), s		5.3		4.9	4.1	5.3		
Max Green Setting (Gmax), s		122.8		17.0	15.0	103.7		
Max Q Clear Time (g_c+I1), s		8.7		14.9	17.0	105.7		
Green Ext Time (p_c), s		28.5		0.2	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	48.1
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	201.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	391	491	111	1594	413	87
Future Vol, veh/h	391	491	111	1594	413	87
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	40	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	15	2	5	0
Mvmt Flow	412	517	117	1678	435	92

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2347	435	435	0	-	0
Stage 1	435	-	-	-	-	-
Stage 2	1912	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.25	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.335	-	-	-
Pot Cap-1 Maneuver	~ 40	625	1059	-	-	-
Stage 1	657	-	-	-	-	-
Stage 2	~ 129	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 36	625	1059	-	-	-
Mov Cap-2 Maneuver	~ 97	-	-	-	-	-
Stage 1	657	-	-	-	-	-
Stage 2	~ 115	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s$	704.4	0.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1059	-	97	625	-	-
HCM Lane V/C Ratio	0.11	-	4.243	0.827	-	-
HCM Control Delay (s)	8.8	-	$ 1548.5	32.3	-	-
HCM Lane LOS	A	-	F	D	-	-
HCM 95th %tile Q(veh)	0.4	-	42.9	8.7	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	48	114	1567	8	13	900
Future Volume (veh/h)	48	114	1567	8	13	900
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1881	1387	1508	1881
Adj Flow Rate, veh/h	52	124	1703	9	14	978
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	3	1	37	26	1
Cap, veh/h	161	179	1480	928	30	1570
Arrive On Green	0.09	0.09	0.79	0.79	0.02	0.83
Sat Flow, veh/h	1723	1568	1881	1179	1436	1881
Grp Volume(v), veh/h	52	124	1703	9	14	978
Grp Sat Flow(s),veh/h/ln	1723	1568	1881	1179	1436	1881
Q Serve(g_s), s	3.9	10.5	108.4	0.2	1.3	24.7
Cycle Q Clear(g_c), s	3.9	10.5	108.4	0.2	1.3	24.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	161	179	1480	928	30	1570
V/C Ratio(X)	0.32	0.69	1.15	0.01	0.46	0.62
Avail Cap(c_a), veh/h	263	272	1480	928	73	1626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.4	58.7	14.7	3.2	66.7	3.9
Incr Delay (d2), s/veh	1.1	4.7	76.0	0.0	10.6	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	9.2	86.4	0.1	0.6	12.8
LnGrp Delay(d),s/veh	59.5	63.3	90.7	3.2	77.3	4.7
LnGrp LOS	E	E	F	A	E	A
Approach Vol, veh/h	176		1712			992
Approach Delay, s/veh	62.2		90.3			5.7
Approach LOS	E		F			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		120.7		17.1	6.6	114.1		
Change Period (Y+Rc), s		5.7		* 4.2	3.7	5.7		
Max Green Setting (Gmax), s		119.1		* 21	7.0	108.4		
Max Q Clear Time (g_c+I1), s		26.7		12.5	3.3	110.4		
Green Ext Time (p_c), s		72.0		0.4	0.0	0.0		

Intersection Summary

HCM 2010 Ctrl Delay	59.4
HCM 2010 LOS	E

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	801	81	72	1486	71	43
Future Volume (veh/h)	801	81	72	1486	71	43
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1569	1900	1900	1584	1900	1845
Adj Flow Rate, veh/h	843	85	76	1564	75	45
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	0	1	0	3
Cap, veh/h	1244	1281	96	1382	101	88
Arrive On Green	0.79	0.79	0.05	0.87	0.06	0.06
Sat Flow, veh/h	1569	1615	1810	1584	1810	1568
Grp Volume(v), veh/h	843	85	76	1564	75	45
Grp Sat Flow(s),veh/h/ln	1569	1615	1810	1584	1810	1568
Q Serve(g_s), s	34.1	1.6	5.9	123.8	5.8	4.0
Cycle Q Clear(g_c), s	34.1	1.6	5.9	123.8	5.8	4.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1244	1281	96	1382	101	88
V/C Ratio(X)	0.68	0.07	0.79	1.13	0.74	0.51
Avail Cap(c_a), veh/h	1244	1281	162	1382	204	177
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.6	3.2	66.4	9.1	66.0	65.1
Incr Delay (d2), s/veh	1.6	0.0	13.2	69.0	10.2	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.1	0.7	3.3	78.3	3.2	1.8
LnGrp Delay(d),s/veh	8.2	3.2	79.6	78.0	76.2	69.7
LnGrp LOS	A	A	E	F	E	E
Approach Vol, veh/h	928			1640	120	
Approach Delay, s/veh	7.7			78.1	73.7	
Approach LOS	A			E	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	11.3	118.5				129.8		12.1
Change Period (Y+Rc), s	3.7	6.0				6.0		4.2
Max Green Setting (Gmax), s	12.7	107.4				123.8		16.0
Max Q Clear Time (g_c+I1), s	7.9	36.1				125.8		7.8
Green Ext Time (p_c), s	0.1	51.5				0.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	53.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	330	850	11	3	1060	792	16	41	14	619	31	289
Future Volume (veh/h)	330	850	11	3	1060	792	16	41	14	619	31	289
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1569	1900	1900	1584	1845	1900	1831	1900	1863	1900	1845
Adj Flow Rate, veh/h	359	924	12	3	1152	861	17	45	15	673	34	314
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	2	2	0	1	3	0	5	5	2	0	3
Cap, veh/h	357	1756	23	14	1178	938	111	81	27	713	393	320
Arrive On Green	0.20	0.58	0.58	0.01	0.39	0.39	0.06	0.06	0.06	0.21	0.21	0.21
Sat Flow, veh/h	1792	3014	39	1810	3010	1568	1810	1315	438	3442	1900	1546
Grp Volume(v), veh/h	359	457	479	3	1152	861	17	0	60	673	34	314
Grp Sat Flow(s),veh/h/ln	1792	1491	1562	1810	1505	1568	1810	0	1754	1721	1900	1546
Q Serve(g_s), s	27.8	25.8	25.8	0.2	52.7	54.6	1.2	0.0	4.6	26.9	2.0	28.2
Cycle Q Clear(g_c), s	27.8	25.8	25.8	0.2	52.7	54.6	1.2	0.0	4.6	26.9	2.0	28.2
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	357	868	910	14	1178	938	111	0	107	713	393	320
V/C Ratio(X)	1.01	0.53	0.53	0.21	0.98	0.92	0.15	0.00	0.56	0.94	0.09	0.98
Avail Cap(c_a), veh/h	357	868	910	130	1178	938	117	0	113	713	393	320
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.9	17.5	17.5	68.8	41.9	22.2	62.1	0.0	63.7	54.5	44.7	55.0
Incr Delay (d2), s/veh	49.1	0.6	0.6	7.2	21.1	13.6	0.6	0.0	5.4	21.2	0.1	44.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.6	10.7	11.2	0.1	25.4	36.6	0.6	0.0	2.4	14.9	1.1	16.0
LnGrp Delay(d),s/veh	105.0	18.1	18.1	75.9	62.9	35.8	62.7	0.0	69.1	75.7	44.8	100.0
LnGrp LOS	F	B	B	E	E	D	E		E	E	D	F
Approach Vol, veh/h		1295			2016			77			1021	
Approach Delay, s/veh		42.2			51.4			67.7			82.1	
Approach LOS		D			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.3	87.3		34.2	32.0	60.6		12.7
Change Period (Y+Rc), s	* 4.2	6.0		5.3	* 4.2	6.0		4.2
Max Green Setting (Gmax), s	* 16	72.4		28.9	* 28	54.6		9.0
Max Q Clear Time (g_c+I1), s	12.2	27.8		30.2	29.8	56.6		6.6
Green Ext Time (p_c), s	0.0	23.3		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	56.1
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	1350	0	0	1191	12	0	0	0	0	0	665
Future Volume (veh/h)	132	1350	0	0	1191	12	0	0	0	0	0	665
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1681	1569	0	0	1569	1900				0	1863	1863
Adj Flow Rate, veh/h	147	1500	0	0	1323	13				0	0	739
Adj No. of Lanes	1	2	0	0	2	0				0	1	2
Peak Hour Factor	0.90	0.90	0.92	0.92	0.90	0.90				0.90	0.92	0.90
Percent Heavy Veh, %	13	2	0	0	2	2				0	2	2
Cap, veh/h	186	2762	0	0	2305	23				0	0	0
Arrive On Green	0.12	0.93	0.00	0.00	0.76	0.76				0.00	0.00	0.00
Sat Flow, veh/h	1601	3059	0	0	3103	30					0	
Grp Volume(v), veh/h	147	1500	0	0	652	684					0.0	
Grp Sat Flow(s),veh/h/ln	1601	1490	0	0	1490	1564						
Q Serve(g_s), s	7.3	6.1	0.0	0.0	15.2	15.2						
Cycle Q Clear(g_c), s	7.3	6.1	0.0	0.0	15.2	15.2						
Prop In Lane	1.00		0.00	0.00		0.02						
Lane Grp Cap(c), veh/h	186	2762	0	0	1136	1192						
V/C Ratio(X)	0.79	0.54	0.00	0.00	0.57	0.57						
Avail Cap(c_a), veh/h	1269	4979	0	0	1181	1239						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	35.3	0.4	0.0	0.0	4.1	4.1						
Incr Delay (d2), s/veh	7.3	0.2	0.0	0.0	0.7	0.7						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	3.6	2.4	0.0	0.0	6.4	6.7						
LnGrp Delay(d),s/veh	42.6	0.6	0.0	0.0	4.8	4.8						
LnGrp LOS	D	A			A	A						
Approach Vol, veh/h		1647			1336							
Approach Delay, s/veh		4.4			4.8							
Approach LOS		A			A							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		82.0			13.5	68.5		
Change Period (Y+Rc), s		* 6			4.0	6.0		
Max Green Setting (Gmax), s		* 1.4E2			65.0	65.0		
Max Q Clear Time (g_c+I1), s		8.1			9.3	17.2		
Green Ext Time (p_c), s		35.1			0.5	25.9		

Intersection Summary	
HCM 2010 Ctrl Delay	4.6
HCM 2010 LOS	A

Notes

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	93	1240	1085	127	353	127
Future Volume (veh/h)	93	1240	1085	127	353	127
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1584	1584	1845	1900	1881
Adj Flow Rate, veh/h	98	1305	1142	134	372	134
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	0	1
Cap, veh/h	93	1183	1056	1045	335	296
Arrive On Green	0.05	0.75	0.67	0.67	0.19	0.19
Sat Flow, veh/h	1792	1584	1584	1568	1810	1599
Grp Volume(v), veh/h	98	1305	1142	134	372	134
Grp Sat Flow(s),veh/h/ln	1792	1584	1584	1568	1810	1599
Q Serve(g_s), s	7.8	112.0	100.0	4.7	27.8	11.2
Cycle Q Clear(g_c), s	7.8	112.0	100.0	4.7	27.8	11.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	93	1183	1056	1045	335	296
V/C Ratio(X)	1.05	1.10	1.08	0.13	1.11	0.45
Avail Cap(c_a), veh/h	93	1183	1056	1045	335	296
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.1	19.0	25.0	9.1	61.1	54.3
Incr Delay (d2), s/veh	108.0	59.2	52.4	0.1	81.9	1.1
Initial Q Delay(d3),s/veh	0.9	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	67.8	58.8	2.0	21.5	10.2
LnGrp Delay(d),s/veh	180.0	78.2	77.4	9.2	143.0	55.4
LnGrp LOS	F	F	F	A	F	E
Approach Vol, veh/h		1403	1276		506	
Approach Delay, s/veh		85.3	70.3		119.8	
Approach LOS		F	E		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		118.0		32.0	12.0	106.0		
Change Period (Y+Rc), s		6.0		* 4.2	* 4.2	6.0		
Max Green Setting (Gmax), s		112.0		* 28	* 7.8	100.0		
Max Q Clear Time (g_c+I1), s		114.0		29.8	9.8	102.0		
Green Ext Time (p_c), s		0.0		0.0	0.0	0.0		

Intersection Summary

HCM 2010 Ctrl Delay	84.8
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	1501	71	14	1098	36	47	4	9	22	2	49
Future Volume (veh/h)	89	1501	71	14	1098	36	47	4	9	22	2	49
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1584	1900	1900	1584	1900	1900	1900	1900	1900	1900	1845
Adj Flow Rate, veh/h	92	1547	73	14	1132	37	48	4	9	23	2	51
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	0	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	1	0	0	1	0	0	0	0	0	0	3
Cap, veh/h	111	1262	1287	33	1194	1217	128	39	87	143	10	116
Arrive On Green	0.06	0.80	0.80	0.02	0.75	0.75	0.07	0.07	0.07	0.07	0.07	0.07
Sat Flow, veh/h	1810	1584	1615	1810	1584	1615	1373	521	1172	1210	139	1568
Grp Volume(v), veh/h	92	1547	73	14	1132	37	48	0	13	25	0	51
Grp Sat Flow(s),veh/h/ln	1810	1584	1615	1810	1584	1615	1373	0	1693	1349	0	1568
Q Serve(g_s), s	6.5	102.7	1.2	1.0	79.5	0.7	4.4	0.0	0.9	1.9	0.0	4.0
Cycle Q Clear(g_c), s	6.5	102.7	1.2	1.0	79.5	0.7	7.2	0.0	0.9	2.8	0.0	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.69	0.92		1.00
Lane Grp Cap(c), veh/h	111	1262	1287	33	1194	1217	128	0	125	155	0	116
V/C Ratio(X)	0.83	1.23	0.06	0.42	0.95	0.03	0.38	0.00	0.10	0.16	0.00	0.44
Avail Cap(c_a), veh/h	111	1262	1287	84	1226	1250	324	0	368	362	0	340
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.9	13.1	2.8	62.6	13.7	4.0	60.0	0.0	55.7	56.8	0.0	57.1
Incr Delay (d2), s/veh	38.6	108.8	0.0	8.3	15.0	0.0	1.8	0.0	0.4	0.5	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	82.0	0.6	0.6	38.9	0.3	1.7	0.0	0.4	0.9	0.0	1.8
LnGrp Delay(d),s/veh	98.5	121.9	2.8	70.9	28.7	4.0	61.8	0.0	56.1	57.3	0.0	59.7
LnGrp LOS	F	F	A	E	C	A	E		E	E		E
Approach Vol, veh/h		1712			1183			61			76	
Approach Delay, s/veh		115.6			28.4			60.6			58.9	
Approach LOS		F			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.1	108.7		14.1	11.6	103.2		14.1
Change Period (Y+Rc), s	3.7	6.0		4.6	3.7	6.0		4.6
Max Green Setting (Gmax), s	6.8	101.7		28.0	7.9	99.8		28.0
Max Q Clear Time (g_c+I1), s	3.0	104.7		6.0	8.5	81.5		9.2
Green Ext Time (p_c), s	0.0	0.0		0.4	0.0	15.7		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	79.1
HCM 2010 LOS	E

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1248	176	230	932	218	355
Future Volume (veh/h)	1248	176	230	932	218	355
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1553	1863	1881	1584	1863	1827
Adj Flow Rate, veh/h	1300	183	240	971	227	370
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	2	1	1	2	4
Cap, veh/h	1054	1075	227	1223	284	350
Arrive On Green	0.68	0.68	0.07	0.77	0.16	0.16
Sat Flow, veh/h	1553	1583	3476	1584	1774	1553
Grp Volume(v), veh/h	1300	183	240	971	227	370
Grp Sat Flow(s),veh/h/ln	1553	1583	1738	1584	1774	1553
Q Serve(g_s), s	101.8	6.3	9.8	54.2	18.5	24.0
Cycle Q Clear(g_c), s	101.8	6.3	9.8	54.2	18.5	24.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1054	1075	227	1223	284	350
V/C Ratio(X)	1.23	0.17	1.06	0.79	0.80	1.06
Avail Cap(c_a), veh/h	1054	1075	227	1223	284	350
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	8.8	70.1	10.1	60.7	58.1
Incr Delay (d2), s/veh	113.3	0.1	75.5	3.7	14.9	64.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	76.2	2.8	7.1	24.5	10.3	20.7
LnGrp Delay(d),s/veh	137.4	8.8	145.6	13.8	75.6	122.1
LnGrp LOS	F	A	F	B	E	F
Approach Vol, veh/h	1483			1211	597	
Approach Delay, s/veh	121.5			39.9	104.4	
Approach LOS	F			D	F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	14.0	107.8				121.8		28.2
Change Period (Y+Rc), s	4.2	6.0				6.0		4.2
Max Green Setting (Gmax), s	9.8	101.8				115.8		24.0
Max Q Clear Time (g_c+I1), s	11.8	103.8				56.2		26.0
Green Ext Time (p_c), s	0.0	0.0				25.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	88.4
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1484	83	195	1089	8	78	0	139	8	1	4
Future Volume (veh/h)	5	1484	83	195	1089	8	78	0	139	8	1	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1584	1845	1863	1569	1900	1900	1881	1863	1900	1900	1900
Adj Flow Rate, veh/h	5	1546	86	203	1134	8	81	0	145	8	1	4
Adj No. of Lanes	1	1	1	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	3	2	2	2	0	0	2	0	0	0
Cap, veh/h	18	1022	988	154	1126	8	48	0	430	48	3	301
Arrive On Green	0.01	0.65	0.63	0.12	0.96	0.95	0.18	0.00	0.18	0.19	0.19	0.19
Sat Flow, veh/h	1810	1584	1568	1774	1556	11	0	0	1583	12	19	1615
Grp Volume(v), veh/h	5	1546	86	203	0	1142	81	0	145	9	0	4
Grp Sat Flow(s),veh/h/ln	1810	1584	1568	1774	0	1567	0	0	1583	31	0	1615
Q Serve(g_s), s	0.4	96.8	3.2	13.0	0.0	108.6	0.0	0.0	11.0	0.3	0.0	0.3
Cycle Q Clear(g_c), s	0.4	96.8	3.2	13.0	0.0	108.6	27.7	0.0	11.0	28.0	0.0	0.3
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.89		1.00
Lane Grp Cap(c), veh/h	18	1022	988	154	0	1134	48	0	430	51	0	301
V/C Ratio(X)	0.28	1.51	0.09	1.32	0.00	1.01	1.69	0.00	0.34	0.18	0.00	0.01
Avail Cap(c_a), veh/h	100	1022	988	154	0	1134	48	0	430	51	0	301
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	0.00	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	73.7	26.6	10.9	66.4	0.0	2.8	74.9	0.0	43.8	65.1	0.0	49.7
Incr Delay (d2), s/veh	0.8	231.0	0.0	148.4	0.0	9.7	383.6	0.0	0.5	2.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	107.6	1.4	12.7	0.0	39.4	7.1	0.0	4.9	0.4	0.0	0.1
LnGrp Delay(d),s/veh	74.5	257.6	10.9	214.7	0.0	12.5	458.5	0.0	44.3	67.5	0.0	49.8
LnGrp LOS	E	F	B	F		F	F		D	E		D
Approach Vol, veh/h		1637			1345			226			13	
Approach Delay, s/veh		244.1			43.0			192.7			62.0	
Approach LOS		F			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.0	100.8		32.2	5.2	112.6		32.2
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	13.3	94.8		* 28	8.3	99.8		* 28
Max Q Clear Time (g_c+I1), s	15.0	98.8		30.0	2.4	110.6		29.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary

HCM 2010 Ctrl Delay	155.8
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	1542	86	177	1245	2	57	0	89	1	0	2
Future Volume (veh/h)	3	1542	86	177	1245	2	57	0	89	1	0	2
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1569	1881	1863	1569	1900	1900	1900	1845	1900	1900	1900
Adj Flow Rate, veh/h	3	1606	90	184	1297	2	59	0	93	1	0	2
Adj No. of Lanes	1	1	1	2	1	0	0	1	1	0	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	1	2	2	2	0	0	3	0	0	0
Cap, veh/h	8	1138	1145	184	1213	2	103	0	86	93	0	83
Arrive On Green	0.01	0.96	0.96	0.05	0.77	0.76	0.06	0.00	0.06	0.05	0.00	0.05
Sat Flow, veh/h	1810	1569	1579	3442	1566	2	1810	0	1526	1809	0	1615
Grp Volume(v), veh/h	3	1606	90	184	0	1299	59	0	93	1	0	2
Grp Sat Flow(s),veh/h/ln	1810	1569	1579	1721	0	1568	1810	0	1526	1810	0	1615
Q Serve(g_s), s	0.2	108.8	0.3	8.0	0.0	116.2	4.8	0.0	8.5	0.1	0.0	0.2
Cycle Q Clear(g_c), s	0.2	108.8	0.3	8.0	0.0	116.2	4.8	0.0	8.5	0.1	0.0	0.2
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	8	1138	1145	184	0	1214	103	0	86	93	0	83
V/C Ratio(X)	0.39	1.41	0.08	1.00	0.00	1.07	0.58	0.00	1.08	0.01	0.00	0.02
Avail Cap(c_a), veh/h	93	1138	1145	184	0	1214	103	0	86	286	0	255
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	74.4	2.6	0.7	71.0	0.0	16.9	69.0	0.0	70.8	67.5	0.0	67.6
Incr Delay (d2), s/veh	2.9	185.7	0.0	67.1	0.0	46.6	7.6	0.0	118.7	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	94.7	0.1	5.5	0.0	65.0	2.6	0.0	6.4	0.0	0.0	0.1
LnGrp Delay(d),s/veh	77.2	188.3	0.7	138.1	0.0	63.5	76.6	0.0	190.1	67.6	0.0	67.7
LnGrp LOS	E	F	A	F		F	E		F	E		E
Approach Vol, veh/h		1699			1483			152			3	
Approach Delay, s/veh		178.2			72.8			146.1			67.7	
Approach LOS		F			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	112.8		12.2	4.6	120.2		13.0
Change Period (Y+Rc), s	3.7	* 6		* 4.2	3.7	6.0		4.2
Max Green Setting (Gmax), s	8.3	* 93		* 24	8.0	91.1		8.8
Max Q Clear Time (g_c+I1), s	10.3	110.8		2.2	2.2	118.2		10.5
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary

HCM 2010 Ctrl Delay	129.8
HCM 2010 LOS	F

Notes

Intersection						
Int Delay, s/veh	11.9					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	89	1576	1358	55	12	53
Future Vol, veh/h	89	1576	1358	55	12	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	230	-	-	250	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	1	2	0	0	0
Mvmt Flow	93	1642	1415	57	13	55

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1415	0	-	0	3242	1415
Stage 1	-	-	-	-	1415	-
Stage 2	-	-	-	-	1827	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	488	-	-	-	~ 11	170
Stage 1	-	-	-	-	227	-
Stage 2	-	-	-	-	142	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	488	-	-	-	~ 9	170
Mov Cap-2 Maneuver	-	-	-	-	~ 9	-
Stage 1	-	-	-	-	227	-
Stage 2	-	-	-	-	115	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	$ 555.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	488	-	-	-	40
HCM Lane V/C Ratio	0.19	-	-	-	1.693
HCM Control Delay (s)	14.1	-	-	-	$ 555.6
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.7	-	-	-	7.1

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	187	948	33	100	823	461	43	44	138	165	30	97
Future Volume (veh/h)	187	948	33	100	823	461	43	44	138	165	30	97
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1900	1863	1600	1881	1900	1870	1900	1900	1736	1652
Adj Flow Rate, veh/h	217	1102	38	116	957	536	50	51	160	192	35	113
Adj No. of Lanes	1	1	1	1	1	1	0	1	0	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	2	0	1	3	3	3	12	12	15
Cap, veh/h	198	926	915	105	846	828	31	37	59	143	17	371
Arrive On Green	0.11	0.58	0.58	0.06	0.53	0.53	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1810	1600	1582	1774	1600	1566	0	141	223	360	66	1404
Grp Volume(v), veh/h	217	1102	38	116	957	536	261	0	0	227	0	113
Grp Sat Flow(s),veh/h/ln	1810	1600	1582	1774	1600	1566	363	0	0	426	0	1404
Q Serve(g_s), s	15.3	81.0	1.5	8.3	74.0	34.3	0.0	0.0	0.0	0.0	0.0	9.0
Cycle Q Clear(g_c), s	15.3	81.0	1.5	8.3	74.0	34.3	37.0	0.0	0.0	37.0	0.0	9.0
Prop In Lane	1.00		1.00	1.00		1.00	0.19		0.61	0.85		1.00
Lane Grp Cap(c), veh/h	198	926	915	105	846	828	127	0	0	160	0	371
V/C Ratio(X)	1.10	1.19	0.04	1.10	1.13	0.65	2.06	0.00	0.00	1.42	0.00	0.30
Avail Cap(c_a), veh/h	198	926	915	105	846	828	127	0	0	160	0	371
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.3	29.5	12.7	65.8	33.0	23.7	45.0	0.0	0.0	57.0	0.0	41.2
Incr Delay (d2), s/veh	92.4	96.5	0.0	118.2	73.9	1.9	503.6	0.0	0.0	220.6	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.7	60.3	0.6	7.5	49.8	15.2	22.6	0.0	0.0	16.0	0.0	3.6
LnGrp Delay(d),s/veh	154.8	126.0	12.8	184.0	106.9	25.5	548.6	0.0	0.0	277.6	0.0	41.9
LnGrp LOS	F	F	B	F	F	C	F			F		D
Approach Vol, veh/h		1357			1609			261			340	
Approach Delay, s/veh		127.4			85.3			548.6			199.2	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	87.0		41.0	19.0	80.0		41.0
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	8.3	81.0		* 37	15.3	74.0		* 37
Max Q Clear Time (g_c+I1), s	10.3	83.0		39.0	17.3	76.0		39.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	146.1
HCM 2010 LOS	F

Notes

Intersection												
Int Delay, s/veh	9.2											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	14	165	28	3	7	389	34	45	6	20	3
Future Vol, veh/h	14	14	165	28	3	7	389	34	45	6	20	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	15	2	10	2	2	2	2	4	2	2	11	0
Mvmt Flow	15	15	179	30	3	8	423	37	49	7	22	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	949	968	23	951	945	61	25	0	0	86	0	0
Stage 1	36	36	-	907	907	-	-	-	-	-	-	-
Stage 2	913	932	-	44	38	-	-	-	-	-	-	-
Critical Hdwy	7.25	6.52	6.3	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.25	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.25	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.635	4.018	3.39	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	228	254	1031	240	262	1004	1589	-	-	1510	-	-
Stage 1	947	865	-	330	355	-	-	-	-	-	-	-
Stage 2	311	345	-	970	863	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	174	182	1031	145	187	1004	1589	-	-	1510	-	-
Mov Cap-2 Maneuver	174	182	-	145	187	-	-	-	-	-	-	-
Stage 1	681	861	-	237	255	-	-	-	-	-	-	-
Stage 2	219	248	-	783	859	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.1	31.6	6.7	1.5
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1589	-	-	178	1031	176	1510	-	-
HCM Lane V/C Ratio	0.266	-	-	0.171	0.174	0.235	0.004	-	-
HCM Control Delay (s)	8.1	0	-	29.4	9.2	31.6	7.4	0	-
HCM Lane LOS	A	A	-	D	A	D	A	A	-
HCM 95th %tile Q(veh)	1.1	-	-	0.6	0.6	0.9	0	-	-

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	16	2	8	38	5	24	0	8	0	0	0
Future Vol, veh/h	5	16	2	8	38	5	24	0	8	0	0	0
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Heavy Vehicles, %	0	0	0	0	8	0	0	0	0	0	0	0
Mvmt Flow	8	26	3	13	61	8	39	0	13	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	7.4	7.8	7.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	75%	22%	17%	0%
Vol Thru, %	0%	70%	83%	0%
Vol Right, %	25%	9%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	23	46	5
LT Vol	24	5	8	0
Through Vol	0	16	38	0
RT Vol	8	2	0	5
Lane Flow Rate	52	37	74	8
Geometry Grp	2	5	7	7
Degree of Util (X)	0.059	0.043	0.097	0.009
Departure Headway (Hd)	4.102	4.144	4.697	4.045
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	861	858	763	883
Service Time	2.183	2.198	2.429	1.777
HCM Lane V/C Ratio	0.06	0.043	0.097	0.009
HCM Control Delay	7.4	7.4	7.9	6.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.1	0.3	0

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	15	47	24	68	0	50	0	18	0	22	8
Future Vol, veh/h	0	15	47	24	68	0	50	0	18	0	22	8
Conflicting Peds, #/hr	4	0	1	0	0	3	1	0	0	3	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	5	0	5	0	7	0	13	0	10	0
Mvmt Flow	0	17	53	27	76	0	56	0	20	0	25	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	18	0	0	169	148	21	160	148	80
Stage 1	-	-	-	-	-	-	18	18	-	130	130	-
Stage 2	-	-	-	-	-	-	151	130	-	30	18	-
Critical Hdwy	-	-	-	4.1	-	-	7.17	6.5	6.33	7.1	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.17	5.5	-	6.1	5.6	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.17	5.5	-	6.1	5.6	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.563	4	3.417	3.5	4.09	3.3
Pot Cap-1 Maneuver	0	-	-	1612	-	0	784	747	1026	810	729	986
Stage 1	0	-	-	-	-	0	988	884	-	878	773	-
Stage 2	0	-	-	-	-	0	840	792	-	992	865	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1608	-	-	743	733	1023	781	715	983
Mov Cap-2 Maneuver	-	-	-	-	-	-	743	733	-	781	715	-
Stage 1	-	-	-	-	-	-	988	883	-	878	759	-
Stage 2	-	-	-	-	-	-	788	778	-	970	864	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.9	10	9.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	801	-	-	1608	-	771
HCM Lane V/C Ratio	0.095	-	-	0.017	-	0.044
HCM Control Delay (s)	10	-	-	7.3	0	9.9
HCM Lane LOS	B	-	-	A	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	617	66	137	1453	22	88	9	81	26	26	25
Future Volume (veh/h)	23	617	66	137	1453	22	88	9	81	26	26	25
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		1.00	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1845	1863	1862	1900	1900	1833	1743	1900	1876	1900
Adj Flow Rate, veh/h	26	686	73	152	1614	24	98	10	0	29	29	28
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	4	3	2	2	2	0	0	9	0	0	0
Cap, veh/h	105	1714	770	263	2084	31	323	28	246	138	125	90
Arrive On Green	0.06	0.49	0.49	0.15	0.58	0.56	0.17	0.17	0.00	0.17	0.17	0.15
Sat Flow, veh/h	1810	3471	1560	1774	3568	53	1283	167	1482	365	752	539
Grp Volume(v), veh/h	26	686	73	152	799	839	108	0	0	86	0	0
Grp Sat Flow(s),veh/h/ln	1810	1736	1560	1774	1769	1852	1450	0	1482	1656	0	0
Q Serve(g_s), s	0.9	7.8	1.6	5.0	21.5	21.6	1.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.9	7.8	1.6	5.0	21.5	21.6	3.7	0.0	0.0	2.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	0.91		1.00	0.34		0.33
Lane Grp Cap(c), veh/h	105	1714	770	263	1033	1082	351	0	246	352	0	0
V/C Ratio(X)	0.25	0.40	0.09	0.58	0.77	0.78	0.31	0.00	0.00	0.24	0.00	0.00
Avail Cap(c_a), veh/h	303	2272	1021	453	1313	1375	793	0	733	875	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	28.2	10.0	8.4	24.8	9.9	9.9	23.2	0.0	0.0	23.0	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.1	0.0	0.7	1.6	1.6	0.2	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.7	0.7	2.5	10.7	11.2	1.7	0.0	0.0	1.3	0.0	0.0
LnGrp Delay(d),s/veh	28.6	10.1	8.4	25.6	11.5	11.5	23.4	0.0	0.0	23.2	0.0	0.0
LnGrp LOS	C	B	A	C	B	B	C			C		
Approach Vol, veh/h		785			1790			108			86	
Approach Delay, s/veh		10.5			12.7			23.4			23.2	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.3	34.9		14.4	7.6	40.6		14.4
Change Period (Y+Rc), s	4.0	5.2		5.0	4.0	5.2		5.0
Max Green Setting (Gmax), s	16.0	39.8		30.0	10.5	45.3		30.0
Max Q Clear Time (g_c+I1), s	7.0	9.8		4.7	2.9	23.6		5.7
Green Ext Time (p_c), s	0.0	13.8		0.2	0.0	11.8		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	12.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	218	588	140	411	459	107	158	360	194	127	816	338
Future Volume (veh/h)	218	588	140	411	459	107	158	360	194	127	816	338
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1838	1900	1881	1827	1863	1810	1863	1845	1759	1827	1810
Adj Flow Rate, veh/h	237	639	152	447	499	116	172	391	211	138	887	367
Adj No. of Lanes	2	2	0	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	4	2	5	2	3	8	4	5
Cap, veh/h	309	831	197	456	1174	527	178	1159	508	157	1104	478
Arrive On Green	0.09	0.30	0.29	0.13	0.34	0.34	0.10	0.33	0.33	0.09	0.32	0.32
Sat Flow, veh/h	3408	2789	662	3476	3471	1559	1723	3539	1551	1675	3471	1503
Grp Volume(v), veh/h	237	400	391	447	499	116	172	391	211	138	887	367
Grp Sat Flow(s),veh/h/ln	1704	1746	1705	1738	1736	1559	1723	1770	1551	1675	1736	1503
Q Serve(g_s), s	7.3	22.3	22.4	13.7	11.9	5.7	10.6	8.9	11.3	8.7	25.0	23.5
Cycle Q Clear(g_c), s	7.3	22.3	22.4	13.7	11.9	5.7	10.6	8.9	11.3	8.7	25.0	23.5
Prop In Lane	1.00		0.39	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	309	520	508	456	1174	527	178	1159	508	157	1104	478
V/C Ratio(X)	0.77	0.77	0.77	0.98	0.43	0.22	0.97	0.34	0.42	0.88	0.80	0.77
Avail Cap(c_a), veh/h	415	562	549	456	1174	527	178	1180	517	157	1125	487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.4	34.1	34.3	46.3	27.3	25.3	47.7	27.1	27.9	47.8	33.3	32.8
Incr Delay (d2), s/veh	5.9	6.5	6.7	37.1	0.3	0.3	58.2	0.2	0.8	39.4	4.5	7.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	11.6	11.5	8.9	5.7	2.5	7.9	4.4	5.0	5.7	12.6	10.8
LnGrp Delay(d),s/veh	53.4	40.6	41.0	83.3	27.7	25.6	105.9	27.4	28.7	87.2	37.8	40.5
LnGrp LOS	D	D	D	F	C	C	F	C	C	F	D	D
Approach Vol, veh/h		1028			1062			774			1392	
Approach Delay, s/veh		43.7			50.9			45.2			43.4	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	35.8	15.0	38.0	13.7	40.1	14.0	39.0
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	14.3	33.8	11.3	34.0	13.3	34.8	10.3	35.0
Max Q Clear Time (g_c+I1), s	15.7	24.4	12.6	27.0	9.3	13.9	10.7	13.3
Green Ext Time (p_c), s	0.0	5.9	0.0	5.9	0.3	11.4	0.0	15.3

Intersection Summary	
HCM 2010 Ctrl Delay	45.7
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	506	340	276	925	77	348	285	104	80	455	135
Future Volume (veh/h)	142	506	340	276	925	77	348	285	104	80	455	135
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1792	1845	1863	1900	1845	1835	1900	1863	1789	1900
Adj Flow Rate, veh/h	151	538	362	294	984	82	370	303	111	85	484	144
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	3	6	3	2	0	3	3	3	2	6	6
Cap, veh/h	173	962	415	268	1157	527	350	853	306	138	563	166
Arrive On Green	0.10	0.27	0.27	0.15	0.33	0.33	0.20	0.34	0.34	0.08	0.22	0.22
Sat Flow, veh/h	1723	3505	1512	1757	3539	1612	1757	2509	900	1774	2584	764
Grp Volume(v), veh/h	151	538	362	294	984	82	370	209	205	85	317	311
Grp Sat Flow(s),veh/h/ln	1723	1752	1512	1757	1770	1612	1757	1743	1666	1774	1699	1649
Q Serve(g_s), s	9.2	14.0	24.4	16.3	27.7	3.9	21.3	9.6	9.9	5.0	19.2	19.4
Cycle Q Clear(g_c), s	9.2	14.0	24.4	16.3	27.7	3.9	21.3	9.6	9.9	5.0	19.2	19.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.54	1.00		0.46
Lane Grp Cap(c), veh/h	173	962	415	268	1157	527	350	593	566	138	370	359
V/C Ratio(X)	0.87	0.56	0.87	1.10	0.85	0.16	1.06	0.35	0.36	0.62	0.86	0.87
Avail Cap(c_a), veh/h	173	985	425	268	1180	538	350	593	566	196	411	398
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.4	33.2	36.9	45.2	33.5	25.5	42.7	26.4	26.5	47.7	40.1	40.2
Incr Delay (d2), s/veh	35.7	0.7	17.5	83.1	6.0	0.1	63.5	0.4	0.5	4.5	15.5	17.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	6.9	12.2	14.0	14.5	1.7	16.4	4.6	4.6	2.6	10.6	10.5
LnGrp Delay(d),s/veh	83.0	33.9	54.4	128.3	39.5	25.6	106.2	26.9	27.0	52.2	55.7	57.2
LnGrp LOS	F	C	D	F	D	C	F	C	C	D	E	E
Approach Vol, veh/h		1051			1360			784			713	
Approach Delay, s/veh		48.0			57.9			64.3			55.9	
Approach LOS		D			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	40.9	20.0	33.9	25.0	27.9	14.4	39.5
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	11.8	35.3	16.3	30.0	21.3	25.8	10.7	35.6
Max Q Clear Time (g_c+I1), s	7.0	11.9	18.3	26.4	23.3	21.4	11.2	29.7
Green Ext Time (p_c), s	0.1	5.9	0.0	2.8	0.0	1.6	0.0	4.3

Intersection Summary	
HCM 2010 Ctrl Delay	56.2
HCM 2010 LOS	E

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	663	174	375	132	143	940
Future Volume (veh/h)	663	174	375	132	143	940
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1827	1881	1900	1900
Adj Flow Rate, veh/h	753	198	426	150	162	1068
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	1	1	4	1	0	0
Cap, veh/h	695	621	686	601	192	986
Arrive On Green	0.39	0.39	0.38	0.38	0.11	0.52
Sat Flow, veh/h	1792	1599	1827	1599	1810	1900
Grp Volume(v), veh/h	753	198	426	150	162	1068
Grp Sat Flow(s),veh/h/ln	1792	1599	1827	1599	1810	1900
Q Serve(g_s), s	42.7	9.5	20.9	7.1	9.7	57.1
Cycle Q Clear(g_c), s	42.7	9.5	20.9	7.1	9.7	57.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	695	621	686	601	192	986
V/C Ratio(X)	1.08	0.32	0.62	0.25	0.84	1.08
Avail Cap(c_a), veh/h	695	621	686	601	224	986
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.6	23.5	28.0	23.7	48.3	26.5
Incr Delay (d2), s/veh	58.7	0.3	1.7	0.2	21.9	53.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	32.4	9.7	10.9	3.2	6.0	44.3
LnGrp Delay(d),s/veh	92.4	23.8	29.7	23.9	70.1	80.3
LnGrp LOS	F	C	C	C	E	F
Approach Vol, veh/h	951		576			1230
Approach Delay, s/veh	78.1		28.2			78.9
Approach LOS	E		C			E

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		62.4		47.6	15.8	46.6		
Change Period (Y+Rc), s		5.3		4.9	4.1	5.3		
Max Green Setting (Gmax), s		57.1		42.7	13.6	39.4		
Max Q Clear Time (g_c+I1), s		59.1		44.7	11.7	22.9		
Green Ext Time (p_c), s		0.0		0.0	0.1	7.6		

Intersection Summary	
HCM 2010 Ctrl Delay	68.0
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	35.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	83	115	507	394	1223	432
Future Vol, veh/h	83	115	507	394	1223	432
Conflicting Peds, #/hr	1	0	0	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	40	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	12	20	19	3	3	5
Mvmt Flow	95	132	583	453	1406	497

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3026	1407	1407	0	-	0
Stage 1	1407	-	-	-	-	-
Stage 2	1619	-	-	-	-	-
Critical Hdwy	6.52	6.4	4.29	-	-	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.48	2.371	-	-	-
Pot Cap-1 Maneuver	~ 13	155	~ 436	-	-	-
Stage 1	215	-	-	-	-	-
Stage 2	169	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	0	155	~ 436	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	215	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s		108.3	0
HCM LOS	-		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	~ 436	-	-	155	-	-
HCM Lane V/C Ratio	1.337	-	-	0.853	-	-
HCM Control Delay (s)	192.4	-	-	95.2	-	-
HCM Lane LOS	F	-	-	F	-	-
HCM 95th %tile Q(veh)	26.6	-	-	5.8	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	14	20	893	53	113	1168
Future Volume (veh/h)	14	20	893	53	113	1168
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1532	1583	1845	1792	1696	1863
Adj Flow Rate, veh/h	15	22	971	58	123	1270
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	24	20	3	6	12	2
Cap, veh/h	87	207	1188	981	152	1478
Arrive On Green	0.06	0.06	0.64	0.64	0.09	0.79
Sat Flow, veh/h	1459	1346	1845	1524	1616	1863
Grp Volume(v), veh/h	15	22	971	58	123	1270
Grp Sat Flow(s),veh/h/ln	1459	1346	1845	1524	1616	1863
Q Serve(g_s), s	0.7	0.9	26.6	0.9	5.0	29.8
Cycle Q Clear(g_c), s	0.7	0.9	26.6	0.9	5.0	29.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	87	207	1188	981	152	1478
V/C Ratio(X)	0.17	0.11	0.82	0.06	0.81	0.86
Avail Cap(c_a), veh/h	456	547	1315	1086	180	1638
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	24.5	9.0	4.4	29.9	4.5
Incr Delay (d2), s/veh	0.9	0.2	4.0	0.0	20.3	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.8	14.5	0.4	3.1	16.4
LnGrp Delay(d),s/veh	31.0	24.7	12.9	4.5	50.2	9.1
LnGrp LOS	C	C	B	A	D	A
Approach Vol, veh/h	37		1029			1393
Approach Delay, s/veh	27.2		12.5			12.8
Approach LOS	C		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		59.0		8.2	10.0	49.0		
Change Period (Y+Rc), s		5.7		* 4.2	3.7	5.7		
Max Green Setting (Gmax), s		59.1		* 21	7.5	47.9		
Max Q Clear Time (g_c+I1), s		31.8		2.9	7.0	28.6		
Green Ext Time (p_c), s		19.1		0.1	0.0	14.7		

Intersection Summary	
HCM 2010 Ctrl Delay	12.9
HCM 2010 LOS	B

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1192	112	55	960	197	58
Future Volume (veh/h)	1192	112	55	960	197	58
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1900	1845	1600	1881	1900
Adj Flow Rate, veh/h	1386	130	64	1116	229	67
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	3	0	1	0
Cap, veh/h	1070	100	81	1301	213	192
Arrive On Green	0.74	0.74	0.05	0.81	0.12	0.12
Sat Flow, veh/h	1441	135	1757	1600	1792	1615
Grp Volume(v), veh/h	0	1516	64	1116	229	67
Grp Sat Flow(s),veh/h/ln	0	1576	1757	1600	1792	1615
Q Serve(g_s), s	0.0	111.3	5.4	64.6	17.8	5.7
Cycle Q Clear(g_c), s	0.0	111.3	5.4	64.6	17.8	5.7
Prop In Lane		0.09	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	1170	81	1301	213	192
V/C Ratio(X)	0.00	1.30	0.79	0.86	1.08	0.35
Avail Cap(c_a), veh/h	0	1170	82	1302	213	192
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.3	70.8	8.6	66.0	60.7
Incr Delay (d2), s/veh	0.0	139.3	39.3	6.0	83.5	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	93.1	3.5	30.1	13.7	2.6
LnGrp Delay(d),s/veh	0.0	158.6	110.0	14.7	149.5	61.8
LnGrp LOS		F	F	B	F	E
Approach Vol, veh/h	1516			1180	296	
Approach Delay, s/veh	158.6			19.8	129.6	
Approach LOS	F			B	F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.6	117.3				127.9		22.0
Change Period (Y+Rc), s	3.7	6.0				6.0		4.2
Max Green Setting (Gmax), s	7.0	111.3				122.0		17.8
Max Q Clear Time (g_c+I1), s	7.4	113.3				66.6		19.8
Green Ext Time (p_c), s	0.0	0.0				43.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	101.0
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	264	923	3	12	959	656	12	35	9	798	22	397
Future Volume (veh/h)	264	923	3	12	959	656	12	35	9	798	22	397
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.90	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1652	1598	1900	1900	1600	1776	1900	1900	1900	1845	1827	1863
Adj Flow Rate, veh/h	303	1061	3	14	1102	754	14	40	10	917	25	456
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	15	0	0	0	0	7	0	0	0	3	4	2
Cap, veh/h	293	1563	4	53	1054	944	101	80	20	951	510	436
Arrive On Green	0.19	0.50	0.50	0.03	0.35	0.35	0.06	0.06	0.06	0.28	0.28	0.28
Sat Flow, veh/h	1573	3105	9	1810	3040	1507	1810	1432	358	3408	1827	1562
Grp Volume(v), veh/h	303	519	545	14	1102	754	14	0	50	917	25	456
Grp Sat Flow(s),veh/h/ln	1573	1518	1596	1810	1520	1507	1810	0	1790	1704	1827	1562
Q Serve(g_s), s	27.8	38.5	38.5	1.1	51.8	51.8	1.1	0.0	4.1	39.6	1.5	41.7
Cycle Q Clear(g_c), s	27.8	38.5	38.5	1.1	51.8	51.8	1.1	0.0	4.1	39.6	1.5	41.7
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	293	764	804	53	1054	944	101	0	100	951	510	436
V/C Ratio(X)	1.03	0.68	0.68	0.26	1.05	0.80	0.14	0.00	0.50	0.96	0.05	1.05
Avail Cap(c_a), veh/h	293	764	804	121	1054	944	109	0	108	951	510	436
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.8	28.0	28.0	70.9	48.8	20.1	67.1	0.0	68.5	53.1	39.3	53.8
Incr Delay (d2), s/veh	61.9	2.4	2.3	2.6	40.3	4.9	0.6	0.0	3.8	20.8	0.0	55.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.1	16.7	17.5	0.6	27.6	32.3	0.6	0.0	2.1	21.3	0.8	24.7
LnGrp Delay(d),s/veh	122.6	30.4	30.3	73.5	89.1	25.0	67.7	0.0	72.3	73.9	39.4	109.4
LnGrp LOS	F	C	C	E	F	C	E		E	E	D	F
Approach Vol, veh/h		1367			1870			64			1398	
Approach Delay, s/veh		50.8			63.1			71.3			84.9	
Approach LOS		D			E			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.6	81.2		47.0	32.0	57.8		12.6
Change Period (Y+Rc), s	* 4.2	6.0		5.3	* 4.2	6.0		4.2
Max Green Setting (Gmax), s	* 10	69.6		41.7	* 28	51.8		9.0
Max Q Clear Time (g_c+I1), s	3.1	40.5		43.7	29.8	53.8		6.1
Green Ext Time (p_c), s	0.0	17.8		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	66.1
HCM 2010 LOS	E

Notes

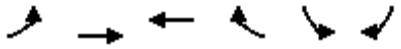
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	448	1219	0	0	1577	40	0	0	0	0	0	113
Future Volume (veh/h)	448	1219	0	0	1577	40	0	0	0	0	0	113
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1600	0	0	1599	1900				0	1863	1759
Adj Flow Rate, veh/h	482	1311	0	0	1696	43				0	0	122
Adj No. of Lanes	1	2	0	0	2	0				0	1	2
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93				0.93	0.92	0.93
Percent Heavy Veh, %	1	0	0	0	0	0				0	2	8
Cap, veh/h	515	2888	0	0	1855	47				0	0	0
Arrive On Green	0.29	0.95	0.00	0.00	0.61	0.61				0.00	0.00	0.00
Sat Flow, veh/h	1792	3120	0	0	3108	77					0	
Grp Volume(v), veh/h	482	1311	0	0	849	890					0.0	
Grp Sat Flow(s),veh/h/ln	1792	1520	0	0	1519	1585						
Q Serve(g_s), s	21.0	3.0	0.0	0.0	39.2	39.7						
Cycle Q Clear(g_c), s	21.0	3.0	0.0	0.0	39.2	39.7						
Prop In Lane	1.00		0.00	0.00		0.05						
Lane Grp Cap(c), veh/h	515	2888	0	0	931	971						
V/C Ratio(X)	0.94	0.45	0.00	0.00	0.91	0.92						
Avail Cap(c_a), veh/h	515	2888	0	0	931	971						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	27.8	0.2	0.0	0.0	13.6	13.7						
Incr Delay (d2), s/veh	24.8	0.1	0.0	0.0	13.0	13.1						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	13.9	1.1	0.0	0.0	19.4	20.6						
LnGrp Delay(d),s/veh	52.6	0.3	0.0	0.0	26.6	26.8						
LnGrp LOS	D	A			C	C						
Approach Vol, veh/h		1793			1739							
Approach Delay, s/veh		14.3			26.7							
Approach LOS		B			C							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		80.0			27.0	53.0		
Change Period (Y+Rc), s		4.0			4.0	4.0		
Max Green Setting (Gmax), s		76.0			23.0	49.0		
Max Q Clear Time (g_c+I1), s		5.0			23.0	41.7		
Green Ext Time (p_c), s		30.6			0.0	6.3		

Intersection Summary

HCM 2010 Ctrl Delay	20.4	
HCM 2010 LOS	C	

Notes



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	235	992	1417	395	86	110
Future Volume (veh/h)	235	992	1417	395	86	110
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1600	1600	1881	1776	1759
Adj Flow Rate, veh/h	261	1102	1574	439	96	122
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	0	0	1	7	8
Cap, veh/h	196	1330	1106	1106	164	145
Arrive On Green	0.11	0.83	0.69	0.69	0.10	0.10
Sat Flow, veh/h	1774	1600	1600	1599	1691	1495
Grp Volume(v), veh/h	261	1102	1574	439	96	122
Grp Sat Flow(s),veh/h/ln	1774	1600	1600	1599	1691	1495
Q Serve(g_s), s	15.8	53.3	98.8	16.7	7.8	11.5
Cycle Q Clear(g_c), s	15.8	53.3	98.8	16.7	7.8	11.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	196	1330	1106	1106	164	145
V/C Ratio(X)	1.33	0.83	1.42	0.40	0.58	0.84
Avail Cap(c_a), veh/h	196	1330	1106	1106	249	220
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.5	6.5	22.0	9.4	61.7	63.4
Incr Delay (d2), s/veh	179.4	4.7	195.6	0.3	3.3	16.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.5	24.7	103.1	7.4	3.8	9.8
LnGrp Delay(d),s/veh	242.9	11.2	217.6	9.7	65.0	79.4
LnGrp LOS	F	B	F	A	E	E
Approach Vol, veh/h		1363	2013		218	
Approach Delay, s/veh		55.6	172.3		73.1	
Approach LOS		E	F		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		124.8		18.1	20.0	104.8		
Change Period (Y+Rc), s		6.0		* 4.2	* 4.2	6.0		
Max Green Setting (Gmax), s		118.8		* 21	* 16	98.8		
Max Q Clear Time (g_c+I1), s		55.3		13.5	17.8	100.8		
Green Ext Time (p_c), s		58.2		0.4	0.0	0.0		

Intersection Summary

HCM 2010 Ctrl Delay	122.0
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	1031	24	27	1685	25	71	5	28	32	1	72
Future Volume (veh/h)	35	1031	24	27	1685	25	71	5	28	32	1	72
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1600	1759	1900	1600	1681	1900	1738	1900	1900	1900	1863
Adj Flow Rate, veh/h	41	1199	28	31	1959	29	83	6	33	37	1	84
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	3	0	8	0	0	13	0	0	0	0	0	2
Cap, veh/h	60	1179	1102	55	1172	1046	162	30	166	198	5	205
Arrive On Green	0.03	0.74	0.74	0.03	0.73	0.73	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1757	1600	1495	1810	1600	1428	1330	232	1275	1127	36	1577
Grp Volume(v), veh/h	41	1199	28	31	1959	29	83	0	39	38	0	84
Grp Sat Flow(s),veh/h/ln	1757	1600	1495	1810	1600	1428	1330	0	1507	1163	0	1577
Q Serve(g_s), s	3.2	102.3	0.7	2.3	101.7	0.8	8.5	0.0	3.2	3.4	0.0	6.8
Cycle Q Clear(g_c), s	3.2	102.3	0.7	2.3	101.7	0.8	15.0	0.0	3.2	6.6	0.0	6.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.85	0.97		1.00
Lane Grp Cap(c), veh/h	60	1179	1102	55	1172	1046	162	0	196	208	0	205
V/C Ratio(X)	0.68	1.02	0.03	0.57	1.67	0.03	0.51	0.00	0.20	0.18	0.00	0.41
Avail Cap(c_a), veh/h	76	1179	1102	78	1172	1046	257	0	304	307	0	318
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	66.3	18.3	4.9	66.4	18.6	5.1	62.3	0.0	53.9	56.5	0.0	55.5
Incr Delay (d2), s/veh	15.9	30.6	0.0	9.0	306.0	0.0	2.5	0.0	0.5	0.4	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	54.5	0.3	1.3	143.9	0.3	3.2	0.0	1.4	1.3	0.0	3.0
LnGrp Delay(d),s/veh	82.2	48.9	4.9	75.4	324.6	5.1	64.7	0.0	54.4	56.9	0.0	56.8
LnGrp LOS	F	F	A	E	F	A	E		D	E		E
Approach Vol, veh/h		1268			2019			122			122	
Approach Delay, s/veh		49.0			316.2			61.4			56.8	
Approach LOS		D			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.9	108.3		22.7	8.5	107.7		22.7
Change Period (Y+Rc), s	3.7	6.0		4.6	3.7	6.0		4.6
Max Green Setting (Gmax), s	6.0	101.7		28.0	6.0	101.7		28.0
Max Q Clear Time (g_c+I1), s	4.3	104.3		8.8	5.2	103.7		17.0
Green Ext Time (p_c), s	0.0	0.0		0.8	0.0	0.0		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	202.5
HCM 2010 LOS	F

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	830	258	268	1593	234	286
Future Volume (veh/h)	830	258	268	1593	234	286
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1845	1827	1600	1881	1881
Adj Flow Rate, veh/h	865	269	279	1659	244	298
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	3	4	0	1	1
Cap, veh/h	1005	985	328	1205	320	441
Arrive On Green	0.63	0.63	0.10	0.75	0.18	0.18
Sat Flow, veh/h	1600	1568	3375	1600	1792	1599
Grp Volume(v), veh/h	865	269	279	1659	244	298
Grp Sat Flow(s),veh/h/ln	1600	1568	1688	1600	1792	1599
Q Serve(g_s), s	65.6	11.5	12.2	113.0	19.4	24.9
Cycle Q Clear(g_c), s	65.6	11.5	12.2	113.0	19.4	24.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1005	985	328	1205	320	441
V/C Ratio(X)	0.86	0.27	0.85	1.38	0.76	0.68
Avail Cap(c_a), veh/h	1005	985	392	1205	320	441
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	12.5	66.7	18.5	58.6	48.4
Incr Delay (d2), s/veh	7.7	0.1	14.3	174.7	10.3	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	31.0	5.0	6.3	107.4	10.5	11.5
LnGrp Delay(d),s/veh	30.2	12.7	81.0	193.2	68.9	52.4
LnGrp LOS	C	B	F	F	E	D
Approach Vol, veh/h	1134			1938	542	
Approach Delay, s/veh	26.1			177.0	59.8	
Approach LOS	C			F	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	18.8	100.2				119.0		31.0
Change Period (Y+Rc), s	4.2	6.0				6.0		4.2
Max Green Setting (Gmax), s	17.3	91.4				113.0		26.8
Max Q Clear Time (g_c+I1), s	14.2	67.6				115.0		26.9
Green Ext Time (p_c), s	0.4	20.4				0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	112.1
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1080	45	154	1836	5	161	0	262	0	1	0
Future Volume (veh/h)	1	1080	45	154	1836	5	161	0	262	0	1	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1845	1759	1599	1900	1900	1810	1863	1900	1900	1900
Adj Flow Rate, veh/h	1	1256	52	179	2135	6	187	0	305	0	1	0
Adj No. of Lanes	1	1	1	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	3	8	0	0	0	0	2	0	0	0
Cap, veh/h	1	1008	988	168	1163	3	307	0	454	0	361	306
Arrive On Green	0.00	0.63	0.63	0.10	0.73	0.72	0.19	0.00	0.19	0.00	0.19	0.00
Sat Flow, veh/h	1810	1600	1568	1675	1593	4	1367	0	1583	0	1900	1615
Grp Volume(v), veh/h	1	1256	52	179	0	2141	187	0	305	0	1	0
Grp Sat Flow(s),veh/h/ln	1810	1600	1568	1675	0	1598	1367	0	1583	0	1900	1615
Q Serve(g_s), s	0.1	94.5	1.9	15.0	0.0	109.5	19.2	0.0	25.5	0.0	0.1	0.0
Cycle Q Clear(g_c), s	0.1	94.5	1.9	15.0	0.0	109.5	19.3	0.0	25.5	0.0	0.1	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1	1008	988	168	0	1166	307	0	454	0	361	306
V/C Ratio(X)	0.83	1.25	0.05	1.07	0.00	1.84	0.61	0.00	0.67	0.00	0.00	0.00
Avail Cap(c_a), veh/h	121	1008	988	168	0	1166	331	0	480	0	393	334
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.50	0.50	0.50	0.09	0.00	0.09	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	75.0	27.7	10.6	67.5	0.0	20.2	57.1	0.0	47.3	0.0	49.3	0.0
Incr Delay (d2), s/veh	221.0	114.9	0.1	41.9	0.0	376.3	2.9	0.0	3.4	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	73.6	0.8	8.9	0.0	169.5	7.5	0.0	11.6	0.0	0.0	0.0
LnGrp Delay(d),s/veh	296.0	142.6	10.7	109.4	0.0	396.5	59.9	0.0	50.7	0.0	49.3	0.0
LnGrp LOS	F	F	B	F		F	E		D		D	
Approach Vol, veh/h		1309			2320			492			1	
Approach Delay, s/veh		137.5			374.4			54.2			49.3	
Approach LOS		F			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	98.5		32.5	4.0	113.5		32.5
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	5.3	90.0		* 31	10.3	95.0		* 31
Max Q Clear Time (g_c+I1), s	17.0	96.5		2.1	2.1	111.5		27.5
Green Ext Time (p_c), s	0.0	0.0		2.2	0.0	0.0		0.7

Intersection Summary		
HCM 2010 Ctrl Delay	260.9	
HCM 2010 LOS	F	

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1212	108	153	1749	1	197	0	245	1	0	1
Future Volume (veh/h)	0	1212	108	153	1749	1	197	0	245	1	0	1
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1827	1810	1600	1900	1900	1827	1810	1900	1900	1900
Adj Flow Rate, veh/h	0	1377	123	174	1988	1	224	0	278	1	0	1
Adj No. of Lanes	1	1	1	2	1	0	0	1	1	0	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	4	5	0	0	0	0	5	0	0	0
Cap, veh/h	1	1059	1015	172	1202	1	197	0	170	99	0	88
Arrive On Green	0.00	1.00	1.00	0.05	0.75	0.74	0.11	0.00	0.11	0.05	0.00	0.05
Sat Flow, veh/h	1810	1600	1533	3343	1599	1	1740	0	1502	1809	0	1615
Grp Volume(v), veh/h	0	1377	123	174	0	1989	224	0	278	1	0	1
Grp Sat Flow(s),veh/h/ln	1810	1600	1533	1672	0	1600	1740	0	1502	1810	0	1615
Q Serve(g_s), s	0.0	99.3	0.0	7.7	0.0	112.8	17.0	0.0	17.0	0.1	0.0	0.1
Cycle Q Clear(g_c), s	0.0	99.3	0.0	7.7	0.0	112.8	17.0	0.0	17.0	0.1	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1	1059	1015	172	0	1203	197	0	170	99	0	88
V/C Ratio(X)	0.00	1.30	0.12	1.01	0.00	1.65	1.14	0.00	1.63	0.01	0.00	0.01
Avail Cap(c_a), veh/h	93	1059	1015	172	0	1203	197	0	170	292	0	261
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	71.2	0.0	18.6	66.5	0.0	66.5	67.1	0.0	67.1
Incr Delay (d2), s/veh	0.0	135.7	0.0	72.4	0.0	297.7	105.4	0.0	309.8	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	39.9	0.0	5.3	0.0	148.3	13.9	0.0	21.7	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	135.7	0.0	143.6	0.0	316.3	171.9	0.0	376.3	67.1	0.0	67.1
LnGrp LOS		F	A	F		F	F		F	E		E
Approach Vol, veh/h		1500			2163			502			2	
Approach Delay, s/veh		124.6			302.4			285.1			67.1	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.7	105.1		12.2	0.0	116.8		21.0
Change Period (Y+Rc), s	3.7	* 6		* 4.2	3.7	6.0		4.2
Max Green Setting (Gmax), s	8.0	* 85		* 24	8.0	83.1		16.8
Max Q Clear Time (g_c+I1), s	9.7	101.3		2.1	0.0	114.8		19.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary

HCM 2010 Ctrl Delay	236.2	
HCM 2010 LOS	F	

Notes

Intersection						
Int Delay, s/veh	442.2					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	113	1353	1306	2	12	538
Future Vol, veh/h	113	1353	1306	2	12	538
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	230	-	-	250	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	4	3	6	67	0	1
Mvmt Flow	133	1592	1536	2	14	633

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1536	0	-	0	3394	1536
Stage 1	-	-	-	-	1536	-
Stage 2	-	-	-	-	1858	-
Critical Hdwy	4.14	-	-	-	6.4	6.21
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.236	-	-	-	3.5	3.309
Pot Cap-1 Maneuver	427	-	-	-	~ 8	~ 144
Stage 1	-	-	-	-	198	-
Stage 2	-	-	-	-	137	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	427	-	-	-	~ 6	~ 144
Mov Cap-2 Maneuver	-	-	-	-	~ 6	-
Stage 1	-	-	-	-	198	-
Stage 2	-	-	-	-	94	-

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	$ 2668.9
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	427	-	-	-	96
HCM Lane V/C Ratio	0.311	-	-	-	6.74
HCM Control Delay (s)	17.2	-	-	-	$ 2668.9
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	1.3	-	-	-	72.2

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	706	14	100	1129	219	27	30	185	420	39	251
Future Volume (veh/h)	111	706	14	100	1129	219	27	30	185	420	39	251
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1600	1900	1900	1584	1827	1900	1891	1900	1900	1883	1881
Adj Flow Rate, veh/h	118	751	15	106	1201	233	29	32	197	447	41	267
Adj No. of Lanes	1	1	1	1	1	1	0	1	0	0	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	1	4	0	0	0	0	0	1
Cap, veh/h	100	779	770	112	782	750	27	39	126	136	8	574
Arrive On Green	0.06	0.49	0.49	0.06	0.49	0.49	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1810	1600	1581	1810	1584	1521	0	109	352	251	23	1599
Grp Volume(v), veh/h	118	751	15	106	1201	233	258	0	0	488	0	267
Grp Sat Flow(s),veh/h/ln	1810	1600	1581	1810	1584	1521	461	0	0	274	0	1599
Q Serve(g_s), s	8.3	68.1	0.7	8.8	74.0	13.8	0.0	0.0	0.0	0.0	0.0	19.3
Cycle Q Clear(g_c), s	8.3	68.1	0.7	8.8	74.0	13.8	53.8	0.0	0.0	53.8	0.0	19.3
Prop In Lane	1.00		1.00	1.00		1.00	0.11		0.76	0.92		1.00
Lane Grp Cap(c), veh/h	100	779	770	112	782	750	192	0	0	144	0	574
V/C Ratio(X)	1.18	0.96	0.02	0.94	1.54	0.31	1.34	0.00	0.00	3.38	0.00	0.47
Avail Cap(c_a), veh/h	100	779	770	112	782	750	192	0	0	144	0	574
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	70.8	37.2	20.0	70.1	38.0	22.7	53.0	0.0	0.0	56.7	0.0	37.0
Incr Delay (d2), s/veh	145.7	23.9	0.0	67.7	248.0	0.3	185.3	0.0	0.0	1088.2	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	35.2	0.3	6.5	86.2	5.8	16.8	0.0	0.0	49.6	0.0	8.7
LnGrp Delay(d),s/veh	216.6	61.1	20.0	137.8	286.0	23.0	238.3	0.0	0.0	1144.9	0.0	37.9
LnGrp LOS	F	E	B	F	F	C	F			F		D
Approach Vol, veh/h		884			1540			258			755	
Approach Delay, s/veh		81.2			236.0			238.3			753.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.0	79.0		58.0	12.0	80.0		58.0
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	9.3	73.0		* 54	8.3	74.0		* 54
Max Q Clear Time (g_c+I1), s	10.8	70.1		55.8	10.3	76.0		55.8
Green Ext Time (p_c), s	0.0	2.6		0.0	0.0	0.0		0.0

Intersection Summary			
HCM 2010 Ctrl Delay		310.0	
HCM 2010 LOS		F	

Notes

Intersection												
Int Delay, s/veh	9.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	19	329	82	19	14	149	61	64	14	77	19
Future Vol, veh/h	20	19	329	82	19	14	149	61	64	14	77	19
Conflicting Peds, #/hr	0	0	1	0	0	0	1	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	92	93	92	92	92	93	93	92	92	93	93
Heavy Vehicles, %	5	2	1	2	2	2	2	1	2	2	2	8
Mvmt Flow	22	21	354	89	21	15	160	66	70	15	83	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	563	580	95	556	556	100	104	0	0	135	0	0
Stage 1	124	124	-	421	421	-	-	-	-	-	-	-
Stage 2	439	456	-	135	135	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.52	6.21	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.15	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.018	3.309	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	432	426	964	442	439	956	1488	-	-	1449	-	-
Stage 1	873	793	-	610	589	-	-	-	-	-	-	-
Stage 2	591	568	-	868	785	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	368	372	962	242	383	956	1487	-	-	1449	-	-
Mov Cap-2 Maneuver	368	372	-	242	383	-	-	-	-	-	-	-
Stage 1	770	784	-	539	520	-	-	-	-	-	-	-
Stage 2	493	502	-	528	776	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.4	27.1	4.2	1
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1487	-	-	370	962	285	1449	-	-
HCM Lane V/C Ratio	0.108	-	-	0.114	0.368	0.439	0.011	-	-
HCM Control Delay (s)	7.7	0	-	16	10.9	27.1	7.5	0	-
HCM Lane LOS	A	A	-	C	B	D	A	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0.4	1.7	2.1	0	-	-

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	59	1	14	51	18	12	0	37	0	0	0
Future Vol, veh/h	1	59	1	14	51	18	12	0	37	0	0	0
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Heavy Vehicles, %	0	0	0	0	8	0	0	0	0	0	0	0
Mvmt Flow	2	95	2	23	82	29	19	0	60	0	0	0
Number of Lanes	0	1	0	0	1	1	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	7.9	8	7.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2
Vol Left, %	24%	2%	22%	0%
Vol Thru, %	0%	97%	78%	0%
Vol Right, %	76%	2%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	49	61	65	18
LT Vol	12	1	14	0
Through Vol	0	59	51	0
RT Vol	37	1	0	18
Lane Flow Rate	79	98	105	29
Geometry Grp	2	5	7	7
Degree of Util (X)	0.088	0.116	0.14	0.033
Departure Headway (Hd)	4.031	4.232	4.798	4.125
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	895	836	743	862
Service Time	2.031	2.313	2.552	1.879
HCM Lane V/C Ratio	0.088	0.117	0.141	0.034
HCM Control Delay	7.4	7.9	8.3	7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.4	0.5	0.1

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	185	23	8	31	0	33	0	46	1	4	2
Future Vol, veh/h	0	185	23	8	31	0	33	0	46	1	4	2
Conflicting Peds, #/hr	1	0	1	1	0	4	2	0	1	4	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	1	0	0	0	0	0	0	5	0	25	0
Mvmt Flow	0	203	25	9	34	0	36	0	51	1	4	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	204	0	0	264	256	208	285	256	39
Stage 1	-	-	-	-	-	-	204	204	-	52	52	-
Stage 2	-	-	-	-	-	-	60	52	-	233	204	-
Critical Hdwy	-	-	-	4.1	-	-	7.1	6.5	6.25	7.1	6.75	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.75	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.75	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.5	4	3.345	3.5	4.225	3.3
Pot Cap-1 Maneuver	0	-	-	1380	-	0	693	651	825	671	610	1038
Stage 1	0	-	-	-	-	0	803	737	-	966	808	-
Stage 2	0	-	-	-	-	0	957	856	-	775	692	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1375	-	-	681	646	822	624	605	1034
Mov Cap-2 Maneuver	-	-	-	-	-	-	681	646	-	624	605	-
Stage 1	-	-	-	-	-	-	803	736	-	966	802	-
Stage 2	-	-	-	-	-	-	939	850	-	725	691	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.6	10.4	10.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	757	-	-	1375	-	690
HCM Lane V/C Ratio	0.115	-	-	0.006	-	0.011
HCM Control Delay (s)	10.4	-	-	7.6	0	10.3
HCM Lane LOS	B	-	-	A	A	B
HCM 95th %tile Q(veh)	0.4	-	-	0	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	1055	85	117	768	39	120	40	231	13	12	23
Future Volume (veh/h)	58	1055	85	117	768	39	120	40	231	13	12	23
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		1.00	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1865	1900	1900	1849	1900	1900	1860	1900
Adj Flow Rate, veh/h	65	1185	96	131	863	44	135	45	0	15	13	26
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	2	0	0	2	2	8	8	0	9	9	9
Cap, veh/h	205	1463	664	279	1559	79	308	74	292	130	108	145
Arrive On Green	0.11	0.41	0.41	0.15	0.45	0.45	0.18	0.18	0.00	0.18	0.18	0.18
Sat Flow, veh/h	1810	3539	1605	1810	3429	175	1085	408	1615	268	598	804
Grp Volume(v), veh/h	65	1185	96	131	446	461	180	0	0	54	0	0
Grp Sat Flow(s),veh/h/ln	1810	1770	1605	1810	1771	1832	1493	0	1615	1670	0	0
Q Serve(g_s), s	1.9	16.7	2.1	3.7	10.4	10.4	4.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.9	16.7	2.1	3.7	10.4	10.4	6.2	0.0	0.0	1.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.10	0.75		1.00	0.28		0.48
Lane Grp Cap(c), veh/h	205	1463	664	279	805	833	381	0	292	383	0	0
V/C Ratio(X)	0.32	0.81	0.14	0.47	0.55	0.55	0.47	0.00	0.00	0.14	0.00	0.00
Avail Cap(c_a), veh/h	336	1616	733	320	805	833	886	0	858	927	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.0	14.6	10.3	21.8	11.2	11.2	21.4	0.0	0.0	19.6	0.0	0.0
Incr Delay (d2), s/veh	0.3	2.6	0.0	0.5	0.5	0.5	0.3	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	8.6	0.9	1.9	5.1	5.2	2.6	0.0	0.0	0.7	0.0	0.0
LnGrp Delay(d),s/veh	23.4	17.2	10.4	22.2	11.7	11.7	21.7	0.0	0.0	19.6	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	C			B		
Approach Vol, veh/h		1346			1038			180			54	
Approach Delay, s/veh		17.0			13.0			21.7			19.6	
Approach LOS		B			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.7	28.6		15.2	10.4	30.9		15.2
Change Period (Y+Rc), s	4.0	5.2		5.0	4.0	5.2		5.0
Max Green Setting (Gmax), s	10.0	25.8		30.0	10.5	25.3		30.0
Max Q Clear Time (g_c+I1), s	5.7	18.7		3.5	3.9	12.4		8.2
Green Ext Time (p_c), s	0.0	4.7		0.3	0.0	7.7		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	15.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	454	115	272	756	229	335	1146	501	172	563	350
Future Volume (veh/h)	232	454	115	272	756	229	335	1146	501	172	563	350
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1863	1845	1881	1881	1881	1845	1881	1863
Adj Flow Rate, veh/h	237	463	117	278	771	234	342	1169	511	176	574	357
Adj No. of Lanes	2	2	0	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	2	3	1	1	1	3	1	2
Cap, veh/h	325	808	202	336	1024	449	257	1270	558	186	1136	497
Arrive On Green	0.09	0.29	0.29	0.10	0.29	0.29	0.14	0.36	0.36	0.11	0.32	0.32
Sat Flow, veh/h	3476	2818	707	3476	3539	1550	1792	3574	1569	1757	3574	1562
Grp Volume(v), veh/h	237	292	288	278	771	234	342	1169	511	176	574	357
Grp Sat Flow(s),veh/h/ln	1738	1787	1738	1738	1770	1550	1792	1787	1569	1757	1787	1562
Q Serve(g_s), s	7.1	14.9	15.1	8.4	21.1	13.5	15.3	33.4	33.2	10.6	13.9	21.6
Cycle Q Clear(g_c), s	7.1	14.9	15.1	8.4	21.1	13.5	15.3	33.4	33.2	10.6	13.9	21.6
Prop In Lane	1.00		0.41	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	325	512	498	336	1024	449	257	1270	558	186	1136	497
V/C Ratio(X)	0.73	0.57	0.58	0.83	0.75	0.52	1.33	0.92	0.92	0.95	0.51	0.72
Avail Cap(c_a), veh/h	336	566	551	336	1121	491	257	1273	559	186	1139	498
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.0	32.5	32.5	47.3	34.4	31.7	45.7	32.9	32.9	47.4	29.6	32.2
Incr Delay (d2), s/veh	7.5	1.5	1.7	15.7	3.0	1.3	173.2	11.1	20.2	50.4	0.5	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	7.5	7.5	4.7	10.7	5.9	19.9	18.4	17.4	7.7	6.9	10.0
LnGrp Delay(d),s/veh	54.6	34.0	34.2	63.1	37.4	33.1	218.9	44.0	53.1	97.8	30.1	37.6
LnGrp LOS	D	C	C	E	D	C	F	D	D	F	C	D
Approach Vol, veh/h		817			1283			2022			1107	
Approach Delay, s/veh		40.0			42.2			75.9			43.3	
Approach LOS		D			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	35.2	19.0	38.5	13.7	35.5	15.0	42.5
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	10.3	33.8	15.3	34.0	10.3	33.8	11.3	38.0
Max Q Clear Time (g_c+I1), s	10.4	17.1	17.3	23.6	9.1	23.1	12.6	35.4
Green Ext Time (p_c), s	0.0	10.8	0.0	9.7	0.1	7.7	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	55.1
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	1000	280	223	660	61	398	507	314	167	317	191
Future Volume (veh/h)	230	1000	280	223	660	61	398	507	314	167	317	191
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1881	1881	1881	1881	1881	1881	1881	1900	1881	1858	1900
Adj Flow Rate, veh/h	235	1020	286	228	673	62	406	517	320	170	323	195
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	1	1	1	1	1	1	1	1	1	3	3
Cap, veh/h	167	1186	522	169	1186	528	189	594	367	183	595	351
Arrive On Green	0.09	0.33	0.33	0.09	0.33	0.33	0.11	0.28	0.28	0.10	0.28	0.28
Sat Flow, veh/h	1774	3574	1574	1792	3574	1592	1792	2094	1293	1792	2125	1252
Grp Volume(v), veh/h	235	1020	286	228	673	62	406	441	396	170	267	251
Grp Sat Flow(s),veh/h/ln	1774	1787	1574	1792	1787	1592	1792	1787	1600	1792	1765	1612
Q Serve(g_s), s	8.3	23.5	13.1	8.3	13.7	2.4	9.3	20.7	20.8	8.3	11.3	11.7
Cycle Q Clear(g_c), s	8.3	23.5	13.1	8.3	13.7	2.4	9.3	20.7	20.8	8.3	11.3	11.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.81	1.00		0.78
Lane Grp Cap(c), veh/h	167	1186	522	169	1186	528	189	507	454	183	494	451
V/C Ratio(X)	1.41	0.86	0.55	1.35	0.57	0.12	2.15	0.87	0.87	0.93	0.54	0.56
Avail Cap(c_a), veh/h	167	1217	536	169	1217	542	189	529	474	183	517	472
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	27.5	24.0	39.9	24.2	20.5	39.4	30.0	30.1	39.2	26.9	27.0
Incr Delay (d2), s/veh	214.6	6.3	1.1	191.8	0.6	0.1	533.5	14.4	16.1	46.6	1.2	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.0	12.7	5.8	13.1	6.8	1.1	32.6	12.2	11.2	6.5	5.7	5.4
LnGrp Delay(d),s/veh	254.5	33.9	25.2	231.7	24.8	20.6	572.9	44.5	46.2	85.8	28.1	28.6
LnGrp LOS	F	C	C	F	C	C	F	D	D	F	C	C
Approach Vol, veh/h		1541			963			1243			688	
Approach Delay, s/veh		65.9			73.5			217.6			42.5	
Approach LOS		E			E			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	29.6	12.0	33.8	13.0	29.3	12.0	33.8
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	9.0	26.1	8.3	30.0	9.3	25.8	8.3	30.0
Max Q Clear Time (g_c+I1), s	10.3	22.8	10.3	25.5	11.3	13.7	10.3	15.7
Green Ext Time (p_c), s	0.0	2.2	0.0	3.5	0.0	6.0	0.0	8.8

Intersection Summary	
HCM 2010 Ctrl Delay	106.5
HCM 2010 LOS	F

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	150	100	1269	694	178	382
Future Volume (veh/h)	150	100	1269	694	178	382
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1827	1881	1900	1900
Adj Flow Rate, veh/h	158	105	1336	731	187	402
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	4	1	0	0
Cap, veh/h	183	163	1279	1120	183	1576
Arrive On Green	0.10	0.10	0.70	0.70	0.10	0.83
Sat Flow, veh/h	1792	1599	1827	1599	1810	1900
Grp Volume(v), veh/h	158	105	1336	731	187	402
Grp Sat Flow(s),veh/h/ln	1792	1599	1827	1599	1810	1900
Q Serve(g_s), s	12.9	9.3	103.7	37.4	15.0	6.8
Cycle Q Clear(g_c), s	12.9	9.3	103.7	37.4	15.0	6.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	183	163	1279	1120	183	1576
V/C Ratio(X)	0.87	0.64	1.04	0.65	1.02	0.26
Avail Cap(c_a), veh/h	206	184	1279	1120	183	1576
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.5	63.9	22.2	12.3	66.5	2.7
Incr Delay (d2), s/veh	27.7	6.3	37.5	1.4	71.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.2	0.0
%ile BackOfQ(50%),veh/ln	7.8	8.5	64.9	16.7	11.1	3.5
LnGrp Delay(d),s/veh	93.2	70.3	59.7	13.6	138.6	2.8
LnGrp LOS	F	E	F	B	F	A
Approach Vol, veh/h	263		2067			589
Approach Delay, s/veh	84.1		43.4			45.9
Approach LOS	F		D			D

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		128.1		20.0	19.1	109.0		
Change Period (Y+Rc), s		5.3		4.9	4.1	5.3		
Max Green Setting (Gmax), s		122.8		17.0	15.0	103.7		
Max Q Clear Time (g_c+I1), s		8.8		14.9	17.0	105.7		
Green Ext Time (p_c), s		31.6		0.2	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	47.6
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	205

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	392	492	112	1595	414	88
Future Vol, veh/h	392	492	112	1595	414	88
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	40	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	15	2	5	0
Mvmt Flow	413	518	118	1679	436	93

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2351	436	436	0	-	0
Stage 1	436	-	-	-	-	-
Stage 2	1915	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.25	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.335	-	-	-
Pot Cap-1 Maneuver	~ 40	625	1058	-	-	-
Stage 1	656	-	-	-	-	-
Stage 2	~ 128	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 36	625	1058	-	-	-
Mov Cap-2 Maneuver	~ 96	-	-	-	-	-
Stage 1	656	-	-	-	-	-
Stage 2	~ 114	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, $	$ 716.1	0.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1058	-	96	625	-	-
HCM Lane V/C Ratio	0.111	-	4.298	0.829	-	-
HCM Control Delay (s)	8.8	-	$ 1574.1	32.5	-	-
HCM Lane LOS	A	-	F	D	-	-
HCM 95th %tile Q(veh)	0.4	-	43.2	8.8	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	48	114	1569	8	13	902
Future Volume (veh/h)	48	114	1569	8	13	902
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1881	1387	1508	1881
Adj Flow Rate, veh/h	52	124	1705	9	14	980
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	3	1	37	26	1
Cap, veh/h	161	179	1480	928	30	1570
Arrive On Green	0.09	0.09	0.79	0.79	0.02	0.83
Sat Flow, veh/h	1723	1568	1881	1179	1436	1881
Grp Volume(v), veh/h	52	124	1705	9	14	980
Grp Sat Flow(s),veh/h/ln	1723	1568	1881	1179	1436	1881
Q Serve(g_s), s	3.9	10.5	108.4	0.2	1.3	24.8
Cycle Q Clear(g_c), s	3.9	10.5	108.4	0.2	1.3	24.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	161	179	1480	928	30	1570
V/C Ratio(X)	0.32	0.69	1.15	0.01	0.46	0.62
Avail Cap(c_a), veh/h	263	272	1480	928	73	1626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.4	58.7	14.7	3.2	66.7	3.9
Incr Delay (d2), s/veh	1.1	4.7	76.6	0.0	10.6	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	9.2	86.6	0.1	0.6	12.9
LnGrp Delay(d),s/veh	59.5	63.3	91.3	3.2	77.3	4.7
LnGrp LOS	E	E	F	A	E	A
Approach Vol, veh/h	176		1714			994
Approach Delay, s/veh	62.2		90.8			5.7
Approach LOS	E		F			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		120.7		17.1	6.6	114.1		
Change Period (Y+Rc), s		5.7		* 4.2	3.7	5.7		
Max Green Setting (Gmax), s		119.1		* 21	7.0	108.4		
Max Q Clear Time (g_c+I1), s		26.8		12.5	3.3	110.4		
Green Ext Time (p_c), s		72.2		0.4	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	59.7
HCM 2010 LOS	E

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	800	81	72	1486	71	43
Future Volume (veh/h)	800	81	72	1486	71	43
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1569	1900	1900	1584	1900	1845
Adj Flow Rate, veh/h	842	85	76	1564	75	45
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	0	1	0	3
Cap, veh/h	1244	1281	96	1382	101	88
Arrive On Green	0.79	0.79	0.05	0.87	0.06	0.06
Sat Flow, veh/h	1569	1615	1810	1584	1810	1568
Grp Volume(v), veh/h	842	85	76	1564	75	45
Grp Sat Flow(s),veh/h/ln	1569	1615	1810	1584	1810	1568
Q Serve(g_s), s	34.1	1.6	5.9	123.8	5.8	4.0
Cycle Q Clear(g_c), s	34.1	1.6	5.9	123.8	5.8	4.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1244	1281	96	1382	101	88
V/C Ratio(X)	0.68	0.07	0.79	1.13	0.74	0.51
Avail Cap(c_a), veh/h	1244	1281	162	1382	204	177
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.6	3.2	66.4	9.1	66.0	65.1
Incr Delay (d2), s/veh	1.6	0.0	13.2	69.0	10.2	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.0	0.7	3.3	78.3	3.2	1.8
LnGrp Delay(d),s/veh	8.1	3.2	79.6	78.0	76.2	69.7
LnGrp LOS	A	A	E	F	E	E
Approach Vol, veh/h	927			1640	120	
Approach Delay, s/veh	7.7			78.1	73.7	
Approach LOS	A			E	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	11.3	118.5				129.8		12.1
Change Period (Y+Rc), s	3.7	6.0				6.0		4.2
Max Green Setting (Gmax), s	12.7	107.4				123.8		16.0
Max Q Clear Time (g_c+I1), s	7.9	36.1				125.8		7.8
Green Ext Time (p_c), s	0.1	51.6				0.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	53.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	331	848	11	3	1060	793	16	41	14	620	31	290
Future Volume (veh/h)	331	848	11	3	1060	793	16	41	14	620	31	290
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1569	1900	1900	1584	1845	1900	1831	1900	1863	1900	1845
Adj Flow Rate, veh/h	360	922	12	3	1152	862	17	45	15	674	34	315
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	2	2	0	1	3	0	5	5	2	0	3
Cap, veh/h	357	1756	23	14	1178	938	111	81	27	713	393	320
Arrive On Green	0.20	0.58	0.58	0.01	0.39	0.39	0.06	0.06	0.06	0.21	0.21	0.21
Sat Flow, veh/h	1792	3013	39	1810	3010	1568	1810	1315	438	3442	1900	1546
Grp Volume(v), veh/h	360	456	478	3	1152	862	17	0	60	674	34	315
Grp Sat Flow(s),veh/h/ln	1792	1491	1562	1810	1505	1568	1810	0	1754	1721	1900	1546
Q Serve(g_s), s	27.8	25.7	25.7	0.2	52.7	54.6	1.2	0.0	4.6	26.9	2.0	28.3
Cycle Q Clear(g_c), s	27.8	25.7	25.7	0.2	52.7	54.6	1.2	0.0	4.6	26.9	2.0	28.3
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	357	868	910	14	1178	938	111	0	107	713	393	320
V/C Ratio(X)	1.01	0.53	0.53	0.21	0.98	0.92	0.15	0.00	0.56	0.95	0.09	0.98
Avail Cap(c_a), veh/h	357	868	910	130	1178	938	117	0	113	713	393	320
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.9	17.5	17.5	68.8	41.9	22.2	62.1	0.0	63.7	54.5	44.7	55.1
Incr Delay (d2), s/veh	49.8	0.6	0.6	7.2	21.1	13.8	0.6	0.0	5.4	21.4	0.1	45.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.6	10.7	11.2	0.1	25.4	36.6	0.6	0.0	2.4	14.9	1.1	16.2
LnGrp Delay(d),s/veh	105.7	18.1	18.1	75.9	62.9	36.0	62.7	0.0	69.1	76.0	44.8	100.9
LnGrp LOS	F	B	B	E	E	D	E		E	E	D	F
Approach Vol, veh/h		1294			2017			77			1023	
Approach Delay, s/veh		42.5			51.4			67.7			82.6	
Approach LOS		D			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.3	87.3		34.2	32.0	60.6		12.7
Change Period (Y+Rc), s	* 4.2	6.0		5.3	* 4.2	6.0		4.2
Max Green Setting (Gmax), s	* 11	72.4		28.9	* 28	54.6		9.0
Max Q Clear Time (g_c+I1), s	12.2	27.7		30.3	29.8	56.6		6.6
Green Ext Time (p_c), s	0.0	23.3		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	56.3
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	1350	0	0	1192	12	0	0	0	0	0	665
Future Volume (veh/h)	131	1350	0	0	1192	12	0	0	0	0	0	665
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1681	1569	0	0	1569	1900				0	1863	1863
Adj Flow Rate, veh/h	146	1500	0	0	1324	13				0	0	739
Adj No. of Lanes	1	2	0	0	2	0				0	1	2
Peak Hour Factor	0.90	0.90	0.92	0.92	0.90	0.90				0.90	0.92	0.90
Percent Heavy Veh, %	13	2	0	0	2	2				0	2	2
Cap, veh/h	185	2762	0	0	2307	23				0	0	0
Arrive On Green	0.12	0.93	0.00	0.00	0.76	0.76				0.00	0.00	0.00
Sat Flow, veh/h	1601	3059	0	0	3103	30					0	
Grp Volume(v), veh/h	146	1500	0	0	652	685					0.0	
Grp Sat Flow(s),veh/h/ln	1601	1490	0	0	1490	1564						
Q Serve(g_s), s	7.3	6.1	0.0	0.0	15.1	15.2						
Cycle Q Clear(g_c), s	7.3	6.1	0.0	0.0	15.1	15.2						
Prop In Lane	1.00		0.00	0.00		0.02						
Lane Grp Cap(c), veh/h	185	2762	0	0	1137	1193						
V/C Ratio(X)	0.79	0.54	0.00	0.00	0.57	0.57						
Avail Cap(c_a), veh/h	1269	4979	0	0	1181	1239						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00						
Uniform Delay (d), s/veh	35.3	0.4	0.0	0.0	4.1	4.1						
Incr Delay (d2), s/veh	7.4	0.2	0.0	0.0	0.7	0.7						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	3.6	2.4	0.0	0.0	6.2	6.5						
LnGrp Delay(d),s/veh	42.7	0.6	0.0	0.0	4.8	4.8						
LnGrp LOS	D	A			A	A						
Approach Vol, veh/h		1646			1337							
Approach Delay, s/veh		4.3			4.8							
Approach LOS		A			A							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		82.0			13.5	68.5		
Change Period (Y+Rc), s		* 6			4.0	6.0		
Max Green Setting (Gmax), s		* 1.4E2			65.0	65.0		
Max Q Clear Time (g_c+I1), s		8.1			9.3	17.2		
Green Ext Time (p_c), s		35.1			0.5	26.0		

Intersection Summary

HCM 2010 Ctrl Delay		4.5
HCM 2010 LOS		A

Notes

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	93	1240	1086	127	353	127
Future Volume (veh/h)	93	1240	1086	127	353	127
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1584	1584	1845	1900	1881
Adj Flow Rate, veh/h	98	1305	1143	134	372	134
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	0	1
Cap, veh/h	93	1183	1056	1045	335	296
Arrive On Green	0.05	0.75	0.67	0.67	0.19	0.19
Sat Flow, veh/h	1792	1584	1584	1568	1810	1599
Grp Volume(v), veh/h	98	1305	1143	134	372	134
Grp Sat Flow(s),veh/h/ln	1792	1584	1584	1568	1810	1599
Q Serve(g_s), s	7.8	112.0	100.0	4.7	27.8	11.2
Cycle Q Clear(g_c), s	7.8	112.0	100.0	4.7	27.8	11.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	93	1183	1056	1045	335	296
V/C Ratio(X)	1.05	1.10	1.08	0.13	1.11	0.45
Avail Cap(c_a), veh/h	93	1183	1056	1045	335	296
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.1	19.0	25.0	9.1	61.1	54.3
Incr Delay (d2), s/veh	108.0	59.2	52.8	0.1	81.9	1.1
Initial Q Delay(d3),s/veh	0.9	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	67.8	58.9	2.0	21.5	10.2
LnGrp Delay(d),s/veh	180.0	78.2	77.8	9.2	143.0	55.4
LnGrp LOS	F	F	F	A	F	E
Approach Vol, veh/h		1403	1277		506	
Approach Delay, s/veh		85.3	70.6		119.8	
Approach LOS		F	E		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		118.0		32.0	12.0	106.0		
Change Period (Y+Rc), s		6.0		* 4.2	* 4.2	6.0		
Max Green Setting (Gmax), s		112.0		* 28	* 7.8	100.0		
Max Q Clear Time (g_c+I1), s		114.0		29.8	9.8	102.0		
Green Ext Time (p_c), s		0.0		0.0	0.0	0.0		

Intersection Summary

HCM 2010 Ctrl Delay	84.9
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	1501	71	14	1099	36	47	4	9	22	2	49
Future Volume (veh/h)	89	1501	71	14	1099	36	47	4	9	22	2	49
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1584	1900	1900	1584	1900	1900	1900	1900	1900	1900	1845
Adj Flow Rate, veh/h	92	1547	73	14	1133	37	48	4	9	23	2	51
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	0	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	1	0	0	1	0	0	0	0	0	0	3
Cap, veh/h	111	1262	1287	33	1194	1217	128	39	87	143	10	116
Arrive On Green	0.06	0.80	0.80	0.02	0.75	0.75	0.07	0.07	0.07	0.07	0.07	0.07
Sat Flow, veh/h	1810	1584	1615	1810	1584	1615	1373	521	1172	1210	139	1568
Grp Volume(v), veh/h	92	1547	73	14	1133	37	48	0	13	25	0	51
Grp Sat Flow(s),veh/h/ln	1810	1584	1615	1810	1584	1615	1373	0	1693	1349	0	1568
Q Serve(g_s), s	6.5	102.7	1.2	1.0	79.7	0.7	4.4	0.0	0.9	1.9	0.0	4.0
Cycle Q Clear(g_c), s	6.5	102.7	1.2	1.0	79.7	0.7	7.2	0.0	0.9	2.8	0.0	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.69	0.92		1.00
Lane Grp Cap(c), veh/h	111	1262	1287	33	1194	1217	128	0	125	155	0	116
V/C Ratio(X)	0.83	1.23	0.06	0.42	0.95	0.03	0.38	0.00	0.10	0.16	0.00	0.44
Avail Cap(c_a), veh/h	111	1262	1287	84	1226	1250	324	0	368	362	0	340
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.9	13.1	2.8	62.6	13.7	4.0	60.0	0.0	55.7	56.8	0.0	57.1
Incr Delay (d2), s/veh	38.6	108.8	0.0	8.3	15.1	0.0	1.8	0.0	0.4	0.5	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	82.0	0.6	0.6	39.3	0.3	1.7	0.0	0.4	0.9	0.0	1.8
LnGrp Delay(d),s/veh	98.5	121.9	2.8	70.9	28.8	4.0	61.8	0.0	56.1	57.3	0.0	59.7
LnGrp LOS	F	F	A	E	C	A	E		E	E		E
Approach Vol, veh/h		1712			1184			61			76	
Approach Delay, s/veh		115.6			28.6			60.6			58.9	
Approach LOS		F			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.1	108.7		14.1	11.6	103.2		14.1
Change Period (Y+Rc), s	3.7	6.0		4.6	3.7	6.0		4.6
Max Green Setting (Gmax), s	6.0	101.7		28.0	7.9	99.8		28.0
Max Q Clear Time (g_c+I1), s	3.0	104.7		6.0	8.5	81.7		9.2
Green Ext Time (p_c), s	0.0	0.0		0.4	0.0	15.5		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	79.1
HCM 2010 LOS	E

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰↰	↑	↰	↱
Traffic Volume (veh/h)	1248	176	230	933	218	355
Future Volume (veh/h)	1248	176	230	933	218	355
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1553	1863	1881	1584	1863	1827
Adj Flow Rate, veh/h	1300	183	240	972	227	370
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	2	1	1	2	4
Cap, veh/h	1054	1075	227	1223	284	350
Arrive On Green	0.68	0.68	0.07	0.77	0.16	0.16
Sat Flow, veh/h	1553	1583	3476	1584	1774	1553
Grp Volume(v), veh/h	1300	183	240	972	227	370
Grp Sat Flow(s),veh/h/ln	1553	1583	1738	1584	1774	1553
Q Serve(g_s), s	101.8	6.3	9.8	54.3	18.5	24.0
Cycle Q Clear(g_c), s	101.8	6.3	9.8	54.3	18.5	24.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1054	1075	227	1223	284	350
V/C Ratio(X)	1.23	0.17	1.06	0.79	0.80	1.06
Avail Cap(c_a), veh/h	1054	1075	227	1223	284	350
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	8.8	70.1	10.1	60.7	58.1
Incr Delay (d2), s/veh	113.3	0.1	75.5	3.7	14.9	64.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	76.2	2.8	7.1	24.5	10.3	20.7
LnGrp Delay(d),s/veh	137.4	8.8	145.6	13.8	75.6	122.1
LnGrp LOS	F	A	F	B	E	F
Approach Vol, veh/h	1483			1212	597	
Approach Delay, s/veh	121.5			39.9	104.4	
Approach LOS	F			D	F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	14.0	107.8				121.8		28.2
Change Period (Y+Rc), s	4.2	6.0				6.0		4.2
Max Green Setting (Gmax), s	9.8	101.8				115.8		24.0
Max Q Clear Time (g_c+I1), s	11.8	103.8				56.3		26.0
Green Ext Time (p_c), s	0.0	0.0				25.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	88.4
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1484	83	195	1090	8	78	0	139	8	1	4
Future Volume (veh/h)	5	1484	83	195	1090	8	78	0	139	8	1	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1584	1845	1863	1569	1900	1900	1881	1863	1900	1900	1900
Adj Flow Rate, veh/h	5	1546	86	203	1135	8	81	0	145	8	1	4
Adj No. of Lanes	1	1	1	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	1	3	2	2	2	0	0	2	0	0	0
Cap, veh/h	18	1022	988	154	1126	8	48	0	430	48	3	301
Arrive On Green	0.01	0.65	0.63	0.12	0.96	0.95	0.18	0.00	0.18	0.19	0.19	0.19
Sat Flow, veh/h	1810	1584	1568	1774	1556	11	0	0	1583	12	19	1615
Grp Volume(v), veh/h	5	1546	86	203	0	1143	81	0	145	9	0	4
Grp Sat Flow(s),veh/h/ln	1810	1584	1568	1774	0	1567	0	0	1583	31	0	1615
Q Serve(g_s), s	0.4	96.8	3.2	13.0	0.0	108.6	0.0	0.0	11.0	0.3	0.0	0.3
Cycle Q Clear(g_c), s	0.4	96.8	3.2	13.0	0.0	108.6	27.7	0.0	11.0	28.0	0.0	0.3
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.89		1.00
Lane Grp Cap(c), veh/h	18	1022	988	154	0	1134	48	0	430	51	0	301
V/C Ratio(X)	0.28	1.51	0.09	1.32	0.00	1.01	1.69	0.00	0.34	0.18	0.00	0.01
Avail Cap(c_a), veh/h	100	1022	988	154	0	1134	48	0	430	51	0	301
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	0.00	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	73.7	26.6	10.9	66.4	0.0	2.8	74.9	0.0	43.8	65.1	0.0	49.7
Incr Delay (d2), s/veh	0.8	231.0	0.0	148.4	0.0	9.9	383.6	0.0	0.5	2.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	107.6	1.4	12.7	0.0	39.5	7.1	0.0	4.9	0.4	0.0	0.1
LnGrp Delay(d),s/veh	74.5	257.6	10.9	214.7	0.0	12.7	458.5	0.0	44.3	67.5	0.0	49.8
LnGrp LOS	E	F	B	F		F	F		D	E		D
Approach Vol, veh/h		1637			1346			226			13	
Approach Delay, s/veh		244.1			43.2			192.7			62.0	
Approach LOS		F			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.0	100.8		32.2	5.2	112.6		32.2
Change Period (Y+Rc), s	3.7	6.0		* 4.2	3.7	6.0		* 4.2
Max Green Setting (Gmax), s	13.3	94.8		* 28	8.3	99.8		* 28
Max Q Clear Time (g_c+I1), s	15.0	98.8		30.0	2.4	110.6		29.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary

HCM 2010 Ctrl Delay	155.8
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	1542	86	177	1246	2	57	0	89	1	0	2
Future Volume (veh/h)	3	1542	86	177	1246	2	57	0	89	1	0	2
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1569	1881	1863	1569	1900	1900	1900	1845	1900	1900	1900
Adj Flow Rate, veh/h	3	1606	90	184	1298	2	59	0	93	1	0	2
Adj No. of Lanes	1	1	1	2	1	0	0	1	1	0	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	1	2	2	2	0	0	3	0	0	0
Cap, veh/h	8	1138	1145	184	1213	2	103	0	86	93	0	83
Arrive On Green	0.01	0.96	0.96	0.05	0.77	0.76	0.06	0.00	0.06	0.05	0.00	0.05
Sat Flow, veh/h	1810	1569	1579	3442	1566	2	1810	0	1526	1809	0	1615
Grp Volume(v), veh/h	3	1606	90	184	0	1300	59	0	93	1	0	2
Grp Sat Flow(s),veh/h/ln	1810	1569	1579	1721	0	1568	1810	0	1526	1810	0	1615
Q Serve(g_s), s	0.2	108.8	0.3	8.0	0.0	116.2	4.8	0.0	8.5	0.1	0.0	0.2
Cycle Q Clear(g_c), s	0.2	108.8	0.3	8.0	0.0	116.2	4.8	0.0	8.5	0.1	0.0	0.2
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	8	1138	1145	184	0	1214	103	0	86	93	0	83
V/C Ratio(X)	0.39	1.41	0.08	1.00	0.00	1.07	0.58	0.00	1.08	0.01	0.00	0.02
Avail Cap(c_a), veh/h	93	1138	1145	184	0	1214	103	0	86	286	0	255
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	74.4	2.6	0.7	71.0	0.0	16.9	69.0	0.0	70.8	67.5	0.0	67.6
Incr Delay (d2), s/veh	2.9	185.7	0.0	67.1	0.0	46.9	7.6	0.0	118.7	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	94.7	0.1	5.5	0.0	65.1	2.6	0.0	6.4	0.0	0.0	0.1
LnGrp Delay(d),s/veh	77.2	188.3	0.7	138.1	0.0	63.8	76.6	0.0	190.1	67.6	0.0	67.7
LnGrp LOS	E	F	A	F		F	E		F	E		E
Approach Vol, veh/h		1699			1484			152			3	
Approach Delay, s/veh		178.2			73.0			146.1			67.7	
Approach LOS		F			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	112.8		12.2	4.6	120.2		13.0
Change Period (Y+Rc), s	3.7	* 6		* 4.2	3.7	6.0		4.2
Max Green Setting (Gmax), s	8.3	* 93		* 24	8.0	91.1		8.8
Max Q Clear Time (g_c+I1), s	10.0	110.8		2.2	2.2	118.2		10.5
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary

HCM 2010 Ctrl Delay	129.9
HCM 2010 LOS	F

Notes

Intersection						
Int Delay, s/veh	11.9					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	89	1576	1359	55	12	53
Future Vol, veh/h	89	1576	1359	55	12	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	230	-	-	250	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	1	2	0	0	0
Mvmt Flow	93	1642	1416	57	13	55

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1416	0	-	0	3243	1416
Stage 1	-	-	-	-	1416	-
Stage 2	-	-	-	-	1827	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	487	-	-	-	~ 11	170
Stage 1	-	-	-	-	226	-
Stage 2	-	-	-	-	142	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	487	-	-	-	~ 9	170
Mov Cap-2 Maneuver	-	-	-	-	~ 9	-
Stage 1	-	-	-	-	226	-
Stage 2	-	-	-	-	115	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	$ 555.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	487	-	-	-	40
HCM Lane V/C Ratio	0.19	-	-	-	1.693
HCM Control Delay (s)	14.1	-	-	-	$ 555.6
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.7	-	-	-	7.1

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	182	407	117	335	370	86	132	300	159	84	680	282
Future Volume (veh/h)	182	407	117	335	370	86	132	300	159	84	680	282
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1837	1900	1881	1827	1863	1810	1863	1845	1759	1827	1810
Adj Flow Rate, veh/h	198	442	127	364	402	93	143	326	173	91	739	307
Adj No. of Lanes	2	2	0	2	2	1	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	4	2	5	2	3	8	4	5
Cap, veh/h	337	766	218	428	1080	485	325	1187	520	152	1142	495
Arrive On Green	0.10	0.29	0.28	0.12	0.31	0.31	0.10	0.34	0.34	0.09	0.33	0.33
Sat Flow, veh/h	3408	2669	760	3476	3471	1557	3343	3539	1551	1675	3471	1504
Grp Volume(v), veh/h	198	287	282	364	402	93	143	326	173	91	739	307
Grp Sat Flow(s),veh/h/ln	1704	1745	1684	1738	1736	1557	1672	1770	1551	1675	1736	1504
Q Serve(g_s), s	5.4	13.7	14.0	10.0	8.8	4.3	3.9	6.6	8.1	5.1	17.7	16.8
Cycle Q Clear(g_c), s	5.4	13.7	14.0	10.0	8.8	4.3	3.9	6.6	8.1	5.1	17.7	16.8
Prop In Lane	1.00		0.45	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	337	501	483	428	1080	485	325	1187	520	152	1142	495
V/C Ratio(X)	0.59	0.57	0.58	0.85	0.37	0.19	0.44	0.27	0.33	0.60	0.65	0.62
Avail Cap(c_a), veh/h	384	615	593	498	1329	596	342	1290	566	172	1266	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.1	29.7	29.9	41.9	26.2	24.6	41.6	23.7	24.3	42.7	27.9	27.6
Incr Delay (d2), s/veh	1.8	1.5	1.6	11.8	0.3	0.3	0.9	0.2	0.5	4.6	1.2	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	6.8	6.7	5.5	4.2	1.9	1.9	3.2	3.6	2.5	8.7	7.3
LnGrp Delay(d),s/veh	43.9	31.2	31.5	53.7	26.5	24.9	42.5	23.9	24.8	47.2	29.2	29.9
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		767			859			642			1137	
Approach Delay, s/veh		34.6			37.9			28.3			30.8	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	32.0	13.5	36.1	13.7	34.4	12.9	36.8
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	14.3	33.8	10.3	35.0	11.3	36.8	10.3	35.0
Max Q Clear Time (g_c+I1), s	12.0	16.0	5.9	19.7	7.4	10.8	7.1	10.1
Green Ext Time (p_c), s	0.3	7.8	0.2	10.2	0.2	9.3	0.1	14.2

Intersection Summary	
HCM 2010 Ctrl Delay	33.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	419	203	162	758	64	279	222	76	67	276	103
Future Volume (veh/h)	116	419	203	162	758	64	279	222	76	67	276	103
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1792	1845	1863	1900	1845	1836	1900	1863	1788	1900
Adj Flow Rate, veh/h	123	446	216	172	806	68	297	236	81	71	294	110
Adj No. of Lanes	1	2	1	1	2	1	2	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	3	6	3	2	0	3	3	3	2	6	6
Cap, veh/h	176	1096	473	211	1169	532	429	614	205	169	509	186
Arrive On Green	0.10	0.31	0.31	0.12	0.33	0.33	0.13	0.24	0.24	0.10	0.21	0.21
Sat Flow, veh/h	1723	3505	1513	1757	3539	1612	3408	2560	854	1774	2433	890
Grp Volume(v), veh/h	123	446	216	172	806	68	297	159	158	71	203	201
Grp Sat Flow(s),veh/h/ln	1723	1752	1513	1757	1770	1612	1704	1744	1671	1774	1698	1625
Q Serve(g_s), s	4.9	7.2	8.2	6.8	14.1	2.1	6.0	5.4	5.7	2.7	7.7	8.0
Cycle Q Clear(g_c), s	4.9	7.2	8.2	6.8	14.1	2.1	6.0	5.4	5.7	2.7	7.7	8.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.51	1.00		0.55
Lane Grp Cap(c), veh/h	176	1096	473	211	1169	532	429	418	400	169	355	340
V/C Ratio(X)	0.70	0.41	0.46	0.82	0.69	0.13	0.69	0.38	0.40	0.42	0.57	0.59
Avail Cap(c_a), veh/h	193	1473	636	231	1557	709	430	611	585	224	595	569
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.0	19.3	19.7	30.6	20.7	16.7	29.9	22.7	22.8	30.4	25.4	25.5
Incr Delay (d2), s/veh	9.5	0.2	0.7	18.5	0.8	0.1	4.7	0.7	0.8	1.7	1.8	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	3.5	3.5	4.4	7.0	1.0	3.1	2.7	2.7	1.4	3.8	3.8
LnGrp Delay(d),s/veh	40.4	19.6	20.4	49.2	21.6	16.8	34.6	23.4	23.6	32.1	27.1	27.4
LnGrp LOS	D	B	C	D	C	B	C	C	C	C	C	C
Approach Vol, veh/h		785			1046			614			475	
Approach Delay, s/veh		23.1			25.8			28.9			28.0	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	21.7	12.3	26.9	12.7	19.5	11.0	28.2
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	9.8	25.0	9.4	30.0	9.0	25.0	8.0	31.4
Max Q Clear Time (g_c+I1), s	4.7	7.7	8.8	10.2	8.0	10.0	6.9	16.1
Green Ext Time (p_c), s	0.1	3.5	0.0	7.8	0.1	3.3	0.0	6.9

Intersection Summary	
HCM 2010 Ctrl Delay	26.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	193	362	96	223	553	170	279	955	410	140	469	292
Future Volume (veh/h)	193	362	96	223	553	170	279	955	410	140	469	292
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1863	1845	1881	1881	1881	1845	1881	1863
Adj Flow Rate, veh/h	197	369	98	228	564	173	285	974	418	143	479	298
Adj No. of Lanes	2	2	0	2	2	1	2	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	2	3	1	1	1	3	1	2
Cap, veh/h	353	762	200	353	968	424	363	1273	559	175	1256	550
Arrive On Green	0.10	0.27	0.27	0.10	0.27	0.27	0.10	0.36	0.36	0.10	0.35	0.35
Sat Flow, veh/h	3476	2789	730	3476	3539	1549	3476	3574	1569	1757	3574	1564
Grp Volume(v), veh/h	197	235	232	228	564	173	285	974	418	143	479	298
Grp Sat Flow(s),veh/h/ln	1738	1787	1732	1738	1770	1549	1738	1787	1569	1757	1787	1564
Q Serve(g_s), s	5.3	10.8	11.1	6.2	13.5	9.0	7.9	23.7	22.9	7.8	9.8	15.0
Cycle Q Clear(g_c), s	5.3	10.8	11.1	6.2	13.5	9.0	7.9	23.7	22.9	7.8	9.8	15.0
Prop In Lane	1.00		0.42	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	353	488	473	353	968	424	363	1273	559	175	1256	550
V/C Ratio(X)	0.56	0.48	0.49	0.65	0.58	0.41	0.79	0.77	0.75	0.82	0.38	0.54
Avail Cap(c_a), veh/h	365	626	607	365	1241	543	506	1326	582	220	1256	550
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.0	29.8	29.9	42.4	30.8	29.2	42.9	28.0	27.7	43.3	23.8	25.5
Incr Delay (d2), s/veh	1.8	1.0	1.1	3.7	0.8	0.9	5.4	2.8	5.6	17.0	0.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	5.5	5.4	3.2	6.7	3.9	4.0	12.1	10.8	4.6	4.9	6.6
LnGrp Delay(d),s/veh	43.8	30.9	31.1	46.1	31.6	30.1	48.3	30.8	33.3	60.2	24.1	26.9
LnGrp LOS	D	C	C	D	C	C	D	C	C	E	C	C
Approach Vol, veh/h		664			965			1677			920	
Approach Delay, s/veh		34.8			34.7			34.4			30.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	31.4	14.0	39.1	13.7	31.4	13.5	39.5
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	10.3	34.4	14.3	34.4	10.3	34.4	12.3	36.4
Max Q Clear Time (g_c+I1), s	8.2	13.1	9.9	17.0	7.3	15.5	9.8	25.7
Green Ext Time (p_c), s	0.2	9.6	0.4	14.3	0.2	9.0	0.1	9.3

Intersection Summary	
HCM 2010 Ctrl Delay	33.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	822	220	170	542	51	257	325	195	139	246	154
Future Volume (veh/h)	184	822	220	170	542	51	257	325	195	139	246	154
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1881	1881	1881	1881	1881	1881	1881	1900	1881	1859	1900
Adj Flow Rate, veh/h	188	839	224	173	553	52	262	332	199	142	251	157
Adj No. of Lanes	1	2	1	1	2	1	2	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	1	1	1	1	1	1	1	1	1	3	3
Cap, veh/h	203	1149	506	205	1149	512	383	544	318	190	526	316
Arrive On Green	0.11	0.32	0.32	0.11	0.32	0.32	0.11	0.25	0.25	0.11	0.25	0.25
Sat Flow, veh/h	1774	3574	1574	1792	3574	1592	3476	2140	1250	1792	2105	1266
Grp Volume(v), veh/h	188	839	224	173	553	52	262	276	255	142	209	199
Grp Sat Flow(s),veh/h/ln	1774	1787	1574	1792	1787	1592	1738	1787	1603	1792	1766	1606
Q Serve(g_s), s	8.5	16.9	9.2	7.7	10.1	1.9	5.9	11.1	11.5	6.3	8.2	8.6
Cycle Q Clear(g_c), s	8.5	16.9	9.2	7.7	10.1	1.9	5.9	11.1	11.5	6.3	8.2	8.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		0.79
Lane Grp Cap(c), veh/h	203	1149	506	205	1149	512	383	454	407	190	441	401
V/C Ratio(X)	0.93	0.73	0.44	0.84	0.48	0.10	0.68	0.61	0.63	0.75	0.47	0.50
Avail Cap(c_a), veh/h	203	1318	580	205	1318	587	384	551	494	198	545	495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	24.5	21.8	35.3	22.2	19.4	34.8	26.8	26.9	35.3	26.0	26.1
Incr Delay (d2), s/veh	43.2	1.8	0.6	26.3	0.3	0.1	4.9	1.6	2.1	13.8	1.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	8.6	4.0	5.3	5.0	0.8	3.1	5.6	5.3	3.8	4.1	3.9
LnGrp Delay(d),s/veh	78.9	26.3	22.4	61.7	22.5	19.4	39.7	28.4	29.0	49.1	26.9	27.3
LnGrp LOS	E	C	C	E	C	B	D	C	C	D	C	C
Approach Vol, veh/h		1251			778			793			550	
Approach Delay, s/veh		33.5			31.0			32.3			32.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	25.3	13.0	30.8	12.7	24.9	13.0	30.8
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	8.6	25.1	9.3	30.0	9.0	25.1	9.3	30.0
Max Q Clear Time (g_c+I1), s	10.3	13.5	9.7	18.9	7.9	10.6	10.5	12.1
Green Ext Time (p_c), s	0.0	4.0	0.0	6.1	0.1	4.4	0.0	8.1

Intersection Summary	
HCM 2010 Ctrl Delay	32.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	182	407	117	335	370	86	132	300	159	84	681	282
Future Volume (veh/h)	182	407	117	335	370	86	132	300	159	84	681	282
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1837	1900	1881	1827	1863	1810	1863	1845	1759	1827	1810
Adj Flow Rate, veh/h	198	442	127	364	402	93	143	326	173	91	740	307
Adj No. of Lanes	2	2	0	2	2	1	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	4	2	5	2	3	8	4	5
Cap, veh/h	337	766	218	428	1080	485	325	1188	520	152	1142	495
Arrive On Green	0.10	0.29	0.28	0.12	0.31	0.31	0.10	0.34	0.34	0.09	0.33	0.33
Sat Flow, veh/h	3408	2669	760	3476	3471	1557	3343	3539	1551	1675	3471	1504
Grp Volume(v), veh/h	198	287	282	364	402	93	143	326	173	91	740	307
Grp Sat Flow(s),veh/h/ln	1704	1745	1684	1738	1736	1557	1672	1770	1551	1675	1736	1504
Q Serve(g_s), s	5.4	13.7	14.0	10.0	8.8	4.3	3.9	6.6	8.1	5.1	17.8	16.8
Cycle Q Clear(g_c), s	5.4	13.7	14.0	10.0	8.8	4.3	3.9	6.6	8.1	5.1	17.8	16.8
Prop In Lane	1.00		0.45	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	337	500	483	428	1080	485	325	1188	520	152	1142	495
V/C Ratio(X)	0.59	0.57	0.58	0.85	0.37	0.19	0.44	0.27	0.33	0.60	0.65	0.62
Avail Cap(c_a), veh/h	384	615	593	498	1329	596	342	1290	565	172	1265	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.1	29.7	29.9	41.9	26.2	24.6	41.6	23.7	24.3	42.7	27.9	27.6
Incr Delay (d2), s/veh	1.8	1.5	1.6	11.8	0.3	0.3	0.9	0.2	0.5	4.6	1.2	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	6.8	6.7	5.5	4.2	1.9	1.9	3.2	3.5	2.5	8.7	7.3
LnGrp Delay(d),s/veh	43.9	31.2	31.5	53.7	26.5	24.9	42.5	23.9	24.8	47.3	29.2	29.9
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		767			859			642			1138	
Approach Delay, s/veh		34.6			37.9			28.3			30.8	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	32.0	13.5	36.1	13.7	34.4	12.9	36.8
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	14.3	33.8	10.3	35.0	11.3	36.8	10.3	35.0
Max Q Clear Time (g_c+I1), s	12.0	16.0	5.9	19.8	7.4	10.8	7.1	10.1
Green Ext Time (p_c), s	0.3	7.8	0.2	10.2	0.2	9.3	0.1	14.2

Intersection Summary	
HCM 2010 Ctrl Delay	33.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	419	204	161	759	64	282	222	76	67	276	104
Future Volume (veh/h)	116	419	204	161	759	64	282	222	76	67	276	104
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1792	1845	1863	1900	1845	1836	1900	1863	1788	1900
Adj Flow Rate, veh/h	123	446	217	171	807	68	300	236	81	71	294	111
Adj No. of Lanes	1	2	1	1	2	1	2	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	3	6	3	2	0	3	3	3	2	6	6
Cap, veh/h	176	1097	474	210	1168	532	428	614	205	169	508	188
Arrive On Green	0.10	0.31	0.31	0.12	0.33	0.33	0.13	0.24	0.24	0.10	0.21	0.21
Sat Flow, veh/h	1723	3505	1513	1757	3539	1612	3408	2560	854	1774	2426	896
Grp Volume(v), veh/h	123	446	217	171	807	68	300	159	158	71	204	201
Grp Sat Flow(s),veh/h/ln	1723	1752	1513	1757	1770	1612	1704	1744	1671	1774	1698	1624
Q Serve(g_s), s	4.9	7.2	8.2	6.8	14.1	2.1	6.0	5.4	5.7	2.7	7.7	8.0
Cycle Q Clear(g_c), s	4.9	7.2	8.2	6.8	14.1	2.1	6.0	5.4	5.7	2.7	7.7	8.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.51	1.00		0.55
Lane Grp Cap(c), veh/h	176	1097	474	210	1168	532	428	418	401	169	356	340
V/C Ratio(X)	0.70	0.41	0.46	0.82	0.69	0.13	0.70	0.38	0.40	0.42	0.57	0.59
Avail Cap(c_a), veh/h	193	1472	636	229	1551	707	430	613	587	224	597	571
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.0	19.3	19.7	30.7	20.8	16.7	29.9	22.7	22.8	30.4	25.4	25.5
Incr Delay (d2), s/veh	9.5	0.2	0.7	18.8	0.8	0.1	5.0	0.7	0.8	1.7	1.8	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	3.5	3.5	4.4	7.0	1.0	3.1	2.7	2.7	1.4	3.8	3.8
LnGrp Delay(d),s/veh	40.5	19.5	20.4	49.5	21.6	16.8	34.9	23.4	23.5	32.1	27.1	27.4
LnGrp LOS	D	B	C	D	C	B	C	C	C	C	C	C
Approach Vol, veh/h		786			1046			617			476	
Approach Delay, s/veh		23.0			25.8			29.0			28.0	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	21.7	12.2	27.0	12.7	19.6	11.0	28.2
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	6.8	25.1	9.3	30.0	9.0	25.1	8.0	31.3
Max Q Clear Time (g_c+I1), s	4.7	7.7	8.8	10.2	8.0	10.0	6.9	16.1
Green Ext Time (p_c), s	0.1	3.5	0.0	7.8	0.1	3.3	0.0	6.8

Intersection Summary	
HCM 2010 Ctrl Delay	26.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	193	362	96	223	553	170	279	956	410	140	470	292
Future Volume (veh/h)	193	362	96	223	553	170	279	956	410	140	470	292
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1863	1845	1881	1881	1881	1845	1881	1863
Adj Flow Rate, veh/h	197	369	98	228	564	173	285	976	418	143	480	298
Adj No. of Lanes	2	2	0	2	2	1	2	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	2	3	1	1	1	3	1	2
Cap, veh/h	352	762	200	353	968	424	363	1273	559	175	1256	550
Arrive On Green	0.10	0.27	0.27	0.10	0.27	0.27	0.10	0.36	0.36	0.10	0.35	0.35
Sat Flow, veh/h	3476	2789	730	3476	3539	1549	3476	3574	1569	1757	3574	1564
Grp Volume(v), veh/h	197	235	232	228	564	173	285	976	418	143	480	298
Grp Sat Flow(s),veh/h/ln	1738	1787	1732	1738	1770	1549	1738	1787	1569	1757	1787	1564
Q Serve(g_s), s	5.3	10.8	11.1	6.2	13.5	9.0	7.9	23.7	22.9	7.8	9.9	15.0
Cycle Q Clear(g_c), s	5.3	10.8	11.1	6.2	13.5	9.0	7.9	23.7	22.9	7.8	9.9	15.0
Prop In Lane	1.00		0.42	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	352	488	473	353	968	424	363	1273	559	175	1256	550
V/C Ratio(X)	0.56	0.48	0.49	0.65	0.58	0.41	0.79	0.77	0.75	0.82	0.38	0.54
Avail Cap(c_a), veh/h	365	626	607	365	1240	543	506	1326	582	220	1256	550
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.0	29.8	29.9	42.4	30.8	29.2	42.9	28.0	27.7	43.3	23.8	25.5
Incr Delay (d2), s/veh	1.8	1.0	1.1	3.7	0.8	0.9	5.4	2.9	5.6	17.0	0.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	5.5	5.4	3.2	6.7	4.0	4.0	12.2	10.7	4.6	4.9	6.7
LnGrp Delay(d),s/veh	43.8	30.9	31.1	46.1	31.6	30.1	48.3	30.9	33.3	60.3	24.1	26.9
LnGrp LOS	D	C	C	D	C	C	D	C	C	E	C	C
Approach Vol, veh/h		664			965			1679			921	
Approach Delay, s/veh		34.8			34.8			34.4			30.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	31.4	14.0	39.1	13.7	31.4	13.5	39.6
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	10.3	34.4	14.3	34.4	10.3	34.4	12.3	36.4
Max Q Clear Time (g_c+I1), s	8.2	13.1	9.9	17.0	7.3	15.5	9.8	25.7
Green Ext Time (p_c), s	0.2	9.6	0.4	14.3	0.2	9.0	0.1	9.2

Intersection Summary	
HCM 2010 Ctrl Delay	33.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	823	224	169	543	51	260	325	194	139	246	155
Future Volume (veh/h)	185	823	224	169	543	51	260	325	194	139	246	155
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1881	1881	1881	1881	1881	1881	1881	1900	1881	1859	1900
Adj Flow Rate, veh/h	189	840	229	172	554	52	265	332	198	142	251	158
Adj No. of Lanes	1	2	1	1	2	1	2	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	1	1	1	1	1	1	1	1	1	3	3
Cap, veh/h	203	1152	507	203	1148	511	384	545	317	190	525	318
Arrive On Green	0.11	0.32	0.32	0.11	0.32	0.32	0.11	0.25	0.25	0.11	0.25	0.25
Sat Flow, veh/h	1774	3574	1574	1792	3574	1592	3476	2144	1246	1792	2100	1271
Grp Volume(v), veh/h	189	840	229	172	554	52	265	275	255	142	209	200
Grp Sat Flow(s),veh/h/ln	1774	1787	1574	1792	1787	1592	1738	1787	1604	1792	1766	1605
Q Serve(g_s), s	8.6	16.9	9.4	7.7	10.1	1.9	6.0	11.0	11.5	6.3	8.2	8.7
Cycle Q Clear(g_c), s	8.6	16.9	9.4	7.7	10.1	1.9	6.0	11.0	11.5	6.3	8.2	8.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		0.79
Lane Grp Cap(c), veh/h	203	1152	507	203	1148	511	384	454	407	190	441	401
V/C Ratio(X)	0.93	0.73	0.45	0.85	0.48	0.10	0.69	0.61	0.63	0.75	0.47	0.50
Avail Cap(c_a), veh/h	203	1323	583	203	1319	587	385	552	495	198	545	496
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	24.4	21.8	35.4	22.2	19.4	34.8	26.7	26.9	35.3	26.0	26.1
Incr Delay (d2), s/veh	44.2	1.8	0.6	27.1	0.3	0.1	5.2	1.6	2.1	13.8	1.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	8.6	4.2	5.3	5.1	0.8	3.1	5.6	5.3	3.8	4.1	4.0
LnGrp Delay(d),s/veh	79.9	26.2	22.5	62.5	22.5	19.5	40.0	28.3	28.9	49.0	26.9	27.3
LnGrp LOS	E	C	C	E	C	B	D	C	C	D	C	C
Approach Vol, veh/h		1258			778			795			551	
Approach Delay, s/veh		33.6			31.1			32.4			32.7	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	25.3	12.9	30.8	12.7	24.9	13.0	30.7
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	9.6	25.1	9.2	30.1	9.0	25.1	9.3	30.0
Max Q Clear Time (g_c+I1), s	8.3	13.5	9.7	18.9	8.0	10.7	10.6	12.1
Green Ext Time (p_c), s	0.0	4.0	0.0	6.2	0.1	4.4	0.0	8.1

Intersection Summary	
HCM 2010 Ctrl Delay	32.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	182	407	117	336	370	86	132	301	159	84	682	282
Future Volume (veh/h)	182	407	117	336	370	86	132	301	159	84	682	282
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1837	1900	1881	1827	1863	1810	1863	1845	1759	1827	1810
Adj Flow Rate, veh/h	198	442	127	365	402	93	143	327	173	91	741	307
Adj No. of Lanes	2	2	0	2	2	1	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	4	2	5	2	3	8	4	5
Cap, veh/h	337	765	218	429	1081	485	325	1188	520	152	1142	495
Arrive On Green	0.10	0.29	0.28	0.12	0.31	0.31	0.10	0.34	0.34	0.09	0.33	0.33
Sat Flow, veh/h	3408	2669	760	3476	3471	1557	3343	3539	1551	1675	3471	1504
Grp Volume(v), veh/h	198	287	282	365	402	93	143	327	173	91	741	307
Grp Sat Flow(s),veh/h/ln	1704	1745	1684	1738	1736	1557	1672	1770	1551	1675	1736	1504
Q Serve(g_s), s	5.4	13.8	14.0	10.1	8.8	4.3	3.9	6.6	8.2	5.1	17.8	16.8
Cycle Q Clear(g_c), s	5.4	13.8	14.0	10.1	8.8	4.3	3.9	6.6	8.2	5.1	17.8	16.8
Prop In Lane	1.00		0.45	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	337	500	483	429	1081	485	325	1188	520	152	1142	495
V/C Ratio(X)	0.59	0.57	0.58	0.85	0.37	0.19	0.44	0.28	0.33	0.60	0.65	0.62
Avail Cap(c_a), veh/h	384	614	593	498	1328	596	342	1289	565	171	1265	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.1	29.8	30.0	42.0	26.2	24.6	41.6	23.8	24.3	42.7	28.0	27.6
Incr Delay (d2), s/veh	1.8	1.5	1.6	11.9	0.3	0.3	0.9	0.2	0.5	4.6	1.2	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	6.8	6.7	5.5	4.2	1.9	1.9	3.3	3.6	2.5	8.7	7.3
LnGrp Delay(d),s/veh	44.0	31.2	31.6	53.8	26.5	24.9	42.5	23.9	24.8	47.3	29.2	29.9
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		767			860			643			1139	
Approach Delay, s/veh		34.6			37.9			28.3			30.8	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.1	32.0	13.5	36.2	13.7	34.4	12.9	36.8
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	14.3	33.8	10.3	35.0	11.3	36.8	10.3	35.0
Max Q Clear Time (g_c+I1), s	12.1	16.0	5.9	19.8	7.4	10.8	7.1	10.2
Green Ext Time (p_c), s	0.3	7.8	0.2	10.2	0.2	9.3	0.1	14.2

Intersection Summary	
HCM 2010 Ctrl Delay	33.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	418	203	163	757	64	279	223	77	67	279	103
Future Volume (veh/h)	116	418	203	163	757	64	279	223	77	67	279	103
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1792	1845	1863	1900	1845	1835	1900	1863	1788	1900
Adj Flow Rate, veh/h	123	445	216	173	805	68	297	237	82	71	297	110
Adj No. of Lanes	1	2	1	1	2	1	2	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	3	6	3	2	0	3	3	3	2	6	6
Cap, veh/h	176	1092	471	212	1167	532	428	614	207	169	512	186
Arrive On Green	0.10	0.31	0.31	0.12	0.33	0.33	0.13	0.24	0.24	0.10	0.21	0.21
Sat Flow, veh/h	1723	3505	1513	1757	3539	1612	3408	2554	859	1774	2440	884
Grp Volume(v), veh/h	123	445	216	173	805	68	297	160	159	71	205	202
Grp Sat Flow(s),veh/h/ln	1723	1752	1513	1757	1770	1612	1704	1744	1670	1774	1698	1626
Q Serve(g_s), s	4.9	7.2	8.2	6.9	14.1	2.1	6.0	5.5	5.7	2.7	7.7	8.0
Cycle Q Clear(g_c), s	4.9	7.2	8.2	6.9	14.1	2.1	6.0	5.5	5.7	2.7	7.7	8.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.51	1.00		0.54
Lane Grp Cap(c), veh/h	176	1092	471	212	1167	532	428	419	401	169	357	341
V/C Ratio(X)	0.70	0.41	0.46	0.82	0.69	0.13	0.69	0.38	0.40	0.42	0.57	0.59
Avail Cap(c_a), veh/h	193	1472	636	231	1556	709	429	610	584	224	594	569
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.0	19.4	19.7	30.6	20.8	16.7	29.9	22.7	22.8	30.5	25.3	25.5
Incr Delay (d2), s/veh	9.5	0.2	0.7	18.7	0.8	0.1	4.7	0.7	0.8	1.7	1.8	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	3.5	3.5	4.4	7.0	1.0	3.1	2.7	2.7	1.4	3.8	3.8
LnGrp Delay(d),s/veh	40.5	19.6	20.4	49.4	21.6	16.9	34.7	23.4	23.6	32.1	27.1	27.4
LnGrp LOS	D	B	C	D	C	B	C	C	C	C	C	C
Approach Vol, veh/h		784			1046			616			478	
Approach Delay, s/veh		23.1			25.9			28.9			28.0	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	21.8	12.3	26.9	12.7	19.6	11.0	28.2
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	9.0	25.0	9.4	30.0	9.0	25.0	8.0	31.4
Max Q Clear Time (g_c+I1), s	4.7	7.7	8.9	10.2	8.0	10.0	6.9	16.1
Green Ext Time (p_c), s	0.1	3.5	0.0	7.7	0.1	3.3	0.0	6.8

Intersection Summary	
HCM 2010 Ctrl Delay	26.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	193	362	96	224	553	170	279	956	411	140	470	292
Future Volume (veh/h)	193	362	96	224	553	170	279	956	411	140	470	292
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1863	1845	1881	1881	1881	1845	1881	1863
Adj Flow Rate, veh/h	197	369	98	229	564	173	285	976	419	143	480	298
Adj No. of Lanes	2	2	0	2	2	1	2	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	2	3	1	1	1	3	1	2
Cap, veh/h	352	762	200	353	968	424	363	1273	559	175	1256	550
Arrive On Green	0.10	0.27	0.27	0.10	0.27	0.27	0.10	0.36	0.36	0.10	0.35	0.35
Sat Flow, veh/h	3476	2789	730	3476	3539	1549	3476	3574	1569	1757	3574	1564
Grp Volume(v), veh/h	197	235	232	229	564	173	285	976	419	143	480	298
Grp Sat Flow(s),veh/h/ln	1738	1787	1732	1738	1770	1549	1738	1787	1569	1757	1787	1564
Q Serve(g_s), s	5.3	10.8	11.1	6.2	13.5	9.0	7.9	23.7	23.0	7.8	9.9	15.0
Cycle Q Clear(g_c), s	5.3	10.8	11.1	6.2	13.5	9.0	7.9	23.7	23.0	7.8	9.9	15.0
Prop In Lane	1.00		0.42	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	352	488	473	353	968	424	363	1273	559	175	1256	550
V/C Ratio(X)	0.56	0.48	0.49	0.65	0.58	0.41	0.79	0.77	0.75	0.82	0.38	0.54
Avail Cap(c_a), veh/h	365	626	607	365	1240	543	506	1326	582	220	1256	550
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.0	29.8	29.9	42.4	30.8	29.2	42.9	28.0	27.8	43.3	23.8	25.5
Incr Delay (d2), s/veh	1.8	1.0	1.1	3.8	0.8	0.9	5.4	2.9	5.6	17.0	0.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	5.5	5.4	3.2	6.7	3.9	4.0	12.2	10.8	4.6	4.9	6.6
LnGrp Delay(d),s/veh	43.8	30.9	31.1	46.2	31.6	30.1	48.3	30.9	33.4	60.3	24.1	26.9
LnGrp LOS	D	C	C	D	C	C	D	C	C	E	C	C
Approach Vol, veh/h		664			966			1680			921	
Approach Delay, s/veh		34.8			34.8			34.4			30.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	31.4	14.0	39.1	13.7	31.4	13.5	39.6
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	10.3	34.4	14.3	34.4	10.3	34.4	12.3	36.4
Max Q Clear Time (g_c+I1), s	8.2	13.1	9.9	17.0	7.3	15.5	9.8	25.7
Green Ext Time (p_c), s	0.2	9.6	0.4	14.3	0.2	9.0	0.1	9.2

Intersection Summary	
HCM 2010 Ctrl Delay	33.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	821	220	171	541	51	257	327	196	139	248	154
Future Volume (veh/h)	184	821	220	171	541	51	257	327	196	139	248	154
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1881	1881	1881	1881	1881	1881	1881	1900	1881	1858	1900
Adj Flow Rate, veh/h	188	838	224	174	552	52	262	334	200	142	253	157
Adj No. of Lanes	1	2	1	1	2	1	2	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	1	1	1	1	1	1	1	1	1	3	3
Cap, veh/h	203	1148	506	205	1148	511	383	545	318	190	529	316
Arrive On Green	0.11	0.32	0.32	0.11	0.32	0.32	0.11	0.25	0.25	0.11	0.25	0.25
Sat Flow, veh/h	1774	3574	1574	1792	3574	1592	3476	2141	1250	1792	2112	1261
Grp Volume(v), veh/h	188	838	224	174	552	52	262	277	257	142	210	200
Grp Sat Flow(s),veh/h/ln	1774	1787	1574	1792	1787	1592	1738	1787	1603	1792	1766	1607
Q Serve(g_s), s	8.5	16.9	9.2	7.8	10.1	1.9	5.9	11.2	11.6	6.3	8.2	8.7
Cycle Q Clear(g_c), s	8.5	16.9	9.2	7.8	10.1	1.9	5.9	11.2	11.6	6.3	8.2	8.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		0.78
Lane Grp Cap(c), veh/h	203	1148	506	205	1148	511	383	455	408	190	442	402
V/C Ratio(X)	0.93	0.73	0.44	0.85	0.48	0.10	0.68	0.61	0.63	0.75	0.47	0.50
Avail Cap(c_a), veh/h	203	1317	580	205	1317	586	384	551	494	198	544	495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	24.5	21.9	35.4	22.2	19.4	34.9	26.8	26.9	35.3	26.0	26.1
Incr Delay (d2), s/veh	43.3	1.8	0.6	27.2	0.3	0.1	4.9	1.6	2.1	13.9	1.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	8.5	4.1	5.4	5.0	0.8	3.1	5.7	5.4	3.8	4.1	4.0
LnGrp Delay(d),s/veh	79.1	26.3	22.5	62.6	22.5	19.5	39.8	28.4	29.1	49.2	26.9	27.3
LnGrp LOS	E	C	C	E	C	B	D	C	C	D	C	C
Approach Vol, veh/h		1250			778			796			552	
Approach Delay, s/veh		33.5			31.3			32.4			32.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	25.3	13.0	30.8	12.7	25.0	13.0	30.8
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	9.0	25.1	9.3	30.0	9.0	25.1	9.3	30.0
Max Q Clear Time (g_c+I1), s	8.3	13.6	9.8	18.9	7.9	10.7	10.5	12.1
Green Ext Time (p_c), s	0.0	4.0	0.0	6.1	0.1	4.5	0.0	8.1

Intersection Summary	
HCM 2010 Ctrl Delay	32.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	450	129	369	408	95	145	330	175	93	748	310
Future Volume (veh/h)	200	450	129	369	408	95	145	330	175	93	748	310
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1837	1900	1881	1827	1863	1810	1863	1845	1759	1827	1810
Adj Flow Rate, veh/h	217	489	140	401	443	103	158	359	190	101	813	337
Adj No. of Lanes	2	2	0	2	2	1	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	4	2	5	2	3	8	4	5
Cap, veh/h	323	775	220	456	1134	509	314	1176	735	150	1137	652
Arrive On Green	0.09	0.29	0.28	0.13	0.33	0.33	0.09	0.33	0.33	0.09	0.33	0.33
Sat Flow, veh/h	3408	2670	759	3476	3471	1559	3343	3539	1551	1675	3471	1504
Grp Volume(v), veh/h	217	318	311	401	443	103	158	359	190	101	813	337
Grp Sat Flow(s),veh/h/ln	1704	1745	1684	1738	1736	1559	1672	1770	1551	1675	1736	1504
Q Serve(g_s), s	6.3	16.2	16.4	11.6	10.0	4.9	4.6	7.7	7.5	6.0	21.0	16.7
Cycle Q Clear(g_c), s	6.3	16.2	16.4	11.6	10.0	4.9	4.6	7.7	7.5	6.0	21.0	16.7
Prop In Lane	1.00		0.45	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	323	507	489	456	1134	509	314	1176	735	150	1137	652
V/C Ratio(X)	0.67	0.63	0.64	0.88	0.39	0.20	0.50	0.31	0.26	0.67	0.71	0.52
Avail Cap(c_a), veh/h	434	588	568	477	1204	541	328	1235	761	164	1211	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	31.4	31.6	43.5	26.5	24.8	44.0	25.3	16.2	45.0	30.1	21.3
Incr Delay (d2), s/veh	2.4	2.2	2.4	16.6	0.3	0.3	1.2	0.2	0.3	9.2	2.1	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	8.1	7.9	6.6	4.8	2.1	2.2	3.8	3.3	3.1	10.4	7.1
LnGrp Delay(d),s/veh	47.1	33.6	34.0	60.1	26.8	25.0	45.2	25.5	16.5	54.3	32.2	22.2
LnGrp LOS	D	C	C	E	C	C	D	C	B	D	C	C
Approach Vol, veh/h		846			947			707			1251	
Approach Delay, s/veh		37.2			40.7			27.5			31.3	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.4	33.6	13.6	37.4	13.7	37.3	13.1	37.9
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	14.3	33.8	10.3	35.0	13.3	34.8	10.3	35.0
Max Q Clear Time (g_c+I1), s	13.6	18.4	6.6	23.0	8.3	12.0	8.0	9.7
Green Ext Time (p_c), s	0.1	7.9	0.2	9.1	0.3	9.8	0.0	15.8

Intersection Summary	
HCM 2010 Ctrl Delay	34.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	461	224	178	836	71	307	245	84	74	305	115
Future Volume (veh/h)	128	461	224	178	836	71	307	245	84	74	305	115
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1792	1845	1863	1900	1845	1836	1900	1863	1788	1900
Adj Flow Rate, veh/h	136	490	238	189	889	76	327	261	89	79	324	122
Adj No. of Lanes	1	2	1	1	2	1	2	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	3	6	3	2	0	3	3	3	2	6	6
Cap, veh/h	172	1119	483	217	1213	552	407	615	205	171	527	195
Arrive On Green	0.10	0.32	0.32	0.12	0.34	0.34	0.12	0.24	0.24	0.10	0.22	0.22
Sat Flow, veh/h	1723	3505	1514	1757	3539	1612	3408	2563	852	1774	2426	896
Grp Volume(v), veh/h	136	490	238	189	889	76	327	175	175	79	225	221
Grp Sat Flow(s),veh/h/ln	1723	1752	1514	1757	1770	1612	1704	1744	1671	1774	1698	1624
Q Serve(g_s), s	5.8	8.3	9.6	8.0	16.6	2.4	7.0	6.4	6.7	3.2	9.0	9.3
Cycle Q Clear(g_c), s	5.8	8.3	9.6	8.0	16.6	2.4	7.0	6.4	6.7	3.2	9.0	9.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.51	1.00		0.55
Lane Grp Cap(c), veh/h	172	1119	483	217	1213	552	407	419	401	171	369	353
V/C Ratio(X)	0.79	0.44	0.49	0.87	0.73	0.14	0.80	0.42	0.43	0.46	0.61	0.63
Avail Cap(c_a), veh/h	185	1397	603	217	1467	668	407	581	557	212	566	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.1	20.3	20.7	32.4	21.7	17.1	32.3	24.2	24.3	32.1	26.6	26.7
Incr Delay (d2), s/veh	18.9	0.3	0.8	29.6	1.5	0.1	11.0	0.8	0.9	1.9	2.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	4.1	4.1	5.6	8.3	1.1	3.9	3.2	3.2	1.6	4.4	4.4
LnGrp Delay(d),s/veh	52.0	20.6	21.5	62.0	23.3	17.2	43.3	25.0	25.2	34.1	28.6	28.9
LnGrp LOS	D	C	C	E	C	B	D	C	C	C	C	C
Approach Vol, veh/h		864			1154			677			525	
Approach Delay, s/veh		25.8			29.2			33.9			29.5	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	22.7	13.0	28.6	12.7	21.0	11.2	30.4
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	9.0	25.1	9.3	30.0	9.0	25.1	8.1	31.2
Max Q Clear Time (g_c+I1), s	5.2	8.7	10.0	11.6	9.0	11.3	7.8	18.6
Green Ext Time (p_c), s	0.1	3.8	0.0	8.4	0.0	3.6	0.0	6.8

Intersection Summary	
HCM 2010 Ctrl Delay	29.3
HCM 2010 LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	28	45	18	350	1079	44
Future Volume (veh/h)	28	45	18	350	1079	44
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1696	1583	1597	1845	1845	1810
Adj Flow Rate, veh/h	32	52	21	402	1240	51
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	12	20	19	3	3	5
Cap, veh/h	115	95	433	2125	2125	932
Arrive On Green	0.07	0.07	0.61	0.61	0.61	0.61
Sat Flow, veh/h	1616	1346	365	3597	3597	1537
Grp Volume(v), veh/h	32	52	21	402	1240	51
Grp Sat Flow(s),veh/h/ln	1616	1346	365	1752	1752	1537
Q Serve(g_s), s	0.5	0.9	0.9	1.3	5.3	0.3
Cycle Q Clear(g_c), s	0.5	0.9	6.3	1.3	5.3	0.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	115	95	433	2125	2125	932
V/C Ratio(X)	0.28	0.55	0.05	0.19	0.58	0.05
Avail Cap(c_a), veh/h	1043	869	521	2969	2969	1302
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.9	11.1	4.9	2.2	3.0	2.0
Incr Delay (d2), s/veh	1.3	4.8	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.5	0.1	0.6	2.5	0.1
LnGrp Delay(d),s/veh	12.2	15.9	4.9	2.2	3.2	2.0
LnGrp LOS	B	B	A	A	A	A
Approach Vol, veh/h	84			423	1291	
Approach Delay, s/veh	14.5			2.3	3.2	
Approach LOS	B			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		19.0		5.8		19.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		21.0		16.0		21.0		
Max Q Clear Time (g_c+I1), s		8.3		2.9		7.3		
Green Ext Time (p_c), s		6.8		0.2		7.1		

Intersection Summary	
HCM 2010 Ctrl Delay	3.5
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	400	106	246	610	187	307	1051	451	154	516	321
Future Volume (veh/h)	213	400	106	246	610	187	307	1051	451	154	516	321
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1863	1845	1881	1881	1881	1845	1881	1863
Adj Flow Rate, veh/h	217	408	108	251	622	191	313	1072	460	157	527	328
Adj No. of Lanes	2	2	0	2	2	1	2	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	2	3	1	1	1	3	1	2
Cap, veh/h	341	768	201	341	975	427	386	1276	717	187	1259	706
Arrive On Green	0.10	0.28	0.28	0.10	0.28	0.28	0.11	0.36	0.36	0.11	0.35	0.35
Sat Flow, veh/h	3476	2789	730	3476	3539	1549	3476	3574	1569	1757	3574	1564
Grp Volume(v), veh/h	217	260	256	251	622	191	313	1072	460	157	527	328
Grp Sat Flow(s),veh/h/ln	1738	1787	1732	1738	1770	1549	1738	1787	1569	1757	1787	1564
Q Serve(g_s), s	6.1	12.5	12.8	7.1	15.7	10.4	9.0	28.0	23.0	8.9	11.4	14.8
Cycle Q Clear(g_c), s	6.1	12.5	12.8	7.1	15.7	10.4	9.0	28.0	23.0	8.9	11.4	14.8
Prop In Lane	1.00		0.42	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	341	492	477	341	975	427	386	1276	717	187	1259	706
V/C Ratio(X)	0.64	0.53	0.54	0.74	0.64	0.45	0.81	0.84	0.64	0.84	0.42	0.46
Avail Cap(c_a), veh/h	386	590	572	352	1134	496	488	1307	731	212	1259	706
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.1	31.3	31.4	44.6	32.4	30.5	44.2	30.1	21.4	44.6	25.0	19.5
Incr Delay (d2), s/veh	2.9	1.3	1.3	7.6	1.2	1.0	7.9	5.2	2.2	22.5	0.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	6.4	6.3	3.8	7.9	4.6	4.7	14.8	10.3	5.5	5.7	6.5
LnGrp Delay(d),s/veh	47.0	32.5	32.7	52.2	33.6	31.5	52.1	35.3	23.5	67.1	25.4	20.1
LnGrp LOS	D	C	C	D	C	C	D	D	C	E	C	C
Approach Vol, veh/h		733			1064			1845			1012	
Approach Delay, s/veh		36.9			37.6			35.2			30.1	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	32.6	15.0	40.4	13.7	32.6	14.5	40.9
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	10.3	33.6	14.3	35.2	11.3	32.6	12.3	37.2
Max Q Clear Time (g_c+I1), s	9.1	14.8	11.0	16.8	8.1	17.7	10.9	30.0
Green Ext Time (p_c), s	0.1	9.9	0.4	15.8	0.2	8.5	0.1	6.3

Intersection Summary	
HCM 2010 Ctrl Delay	34.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	906	242	188	599	56	283	359	216	153	272	171
Future Volume (veh/h)	203	906	242	188	599	56	283	359	216	153	272	171
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1881	1881	1881	1881	1881	1881	1881	1900	1881	1859	1900
Adj Flow Rate, veh/h	207	924	247	192	611	57	289	366	220	156	278	174
Adj No. of Lanes	1	2	1	1	2	1	2	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	1	1	1	1	1	1	1	1	1	3	3
Cap, veh/h	245	1161	511	230	1125	501	370	537	316	192	530	321
Arrive On Green	0.14	0.32	0.32	0.13	0.31	0.31	0.11	0.25	0.25	0.11	0.25	0.25
Sat Flow, veh/h	1774	3574	1574	1792	3574	1591	3476	2132	1256	1792	2100	1271
Grp Volume(v), veh/h	207	924	247	192	611	57	289	306	280	156	232	220
Grp Sat Flow(s),veh/h/ln	1774	1787	1574	1792	1787	1591	1738	1787	1601	1792	1766	1605
Q Serve(g_s), s	10.0	20.8	11.1	9.2	12.5	2.2	7.2	13.6	14.0	7.5	10.0	10.5
Cycle Q Clear(g_c), s	10.0	20.8	11.1	9.2	12.5	2.2	7.2	13.6	14.0	7.5	10.0	10.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		0.79
Lane Grp Cap(c), veh/h	245	1161	511	230	1125	501	370	450	403	192	445	405
V/C Ratio(X)	0.84	0.80	0.48	0.83	0.54	0.11	0.78	0.68	0.70	0.81	0.52	0.54
Avail Cap(c_a), veh/h	314	1263	556	292	1215	541	437	516	462	250	534	486
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.1	27.1	23.9	37.6	25.0	21.5	38.4	29.8	30.0	38.6	28.4	28.6
Incr Delay (d2), s/veh	15.2	3.4	0.7	15.2	0.4	0.1	7.5	3.3	4.1	14.5	1.1	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	10.8	4.9	5.6	6.2	1.0	3.8	7.1	6.6	4.5	5.0	4.8
LnGrp Delay(d),s/veh	52.3	30.5	24.6	52.7	25.4	21.6	46.0	33.1	34.1	53.0	29.6	30.0
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1378			860			875			608	
Approach Delay, s/veh		32.7			31.3			37.7			35.7	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.1	26.8	15.0	33.3	13.1	26.9	15.9	32.4
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	12.3	25.5	14.4	31.2	11.1	26.7	15.6	30.0
Max Q Clear Time (g_c+I1), s	9.5	16.0	11.2	22.8	9.2	12.5	12.0	14.5
Green Ext Time (p_c), s	0.1	3.9	0.2	5.5	0.3	4.9	0.2	8.3

Intersection Summary	
HCM 2010 Ctrl Delay	34.0
HCM 2010 LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	29	31	30	1420	361	22
Future Volume (veh/h)	29	31	30	1420	361	22
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1652	1863	1810	1900
Adj Flow Rate, veh/h	31	33	32	1495	380	23
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	15	2	5	0
Cap, veh/h	102	91	791	2315	2249	1056
Arrive On Green	0.06	0.06	0.65	0.65	0.65	0.65
Sat Flow, veh/h	1810	1615	867	3632	3529	1615
Grp Volume(v), veh/h	31	33	32	1495	380	23
Grp Sat Flow(s),veh/h/ln	1810	1615	867	1770	1719	1615
Q Serve(g_s), s	0.5	0.5	0.4	7.0	1.2	0.1
Cycle Q Clear(g_c), s	0.5	0.5	1.6	7.0	1.2	0.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	102	91	791	2315	2249	1056
V/C Ratio(X)	0.30	0.36	0.04	0.65	0.17	0.02
Avail Cap(c_a), veh/h	1048	936	1040	3332	3237	1520
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	12.6	2.2	2.9	1.9	1.7
Incr Delay (d2), s/veh	1.7	2.4	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	0.1	3.2	0.5	0.1
LnGrp Delay(d),s/veh	14.2	15.0	2.2	3.2	1.9	1.7
LnGrp LOS	B	B	A	A	A	A
Approach Vol, veh/h	64			1527	403	
Approach Delay, s/veh	14.6			3.1	1.9	
Approach LOS	B			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		22.1		5.6		22.1		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		26.0		16.0		26.0		
Max Q Clear Time (g_c+I1), s		9.0		2.5		3.2		
Green Ext Time (p_c), s		9.1		0.1		10.6		

Intersection Summary	
HCM 2010 Ctrl Delay	3.3
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	450	129	369	408	95	145	330	175	93	749	310
Future Volume (veh/h)	200	450	129	369	408	95	145	330	175	93	749	310
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1837	1900	1881	1827	1863	1810	1863	1845	1759	1827	1810
Adj Flow Rate, veh/h	217	489	140	401	443	103	158	359	190	101	814	337
Adj No. of Lanes	2	2	0	2	2	1	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	4	2	5	2	3	8	4	5
Cap, veh/h	323	775	220	456	1134	509	314	1176	735	150	1138	652
Arrive On Green	0.09	0.29	0.28	0.13	0.33	0.33	0.09	0.33	0.33	0.09	0.33	0.33
Sat Flow, veh/h	3408	2670	759	3476	3471	1559	3343	3539	1551	1675	3471	1504
Grp Volume(v), veh/h	217	318	311	401	443	103	158	359	190	101	814	337
Grp Sat Flow(s),veh/h/ln	1704	1745	1684	1738	1736	1559	1672	1770	1551	1675	1736	1504
Q Serve(g_s), s	6.3	16.2	16.4	11.6	10.1	4.9	4.6	7.7	7.5	6.0	21.0	16.8
Cycle Q Clear(g_c), s	6.3	16.2	16.4	11.6	10.1	4.9	4.6	7.7	7.5	6.0	21.0	16.8
Prop In Lane	1.00		0.45	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	323	507	489	456	1134	509	314	1176	735	150	1138	652
V/C Ratio(X)	0.67	0.63	0.64	0.88	0.39	0.20	0.50	0.31	0.26	0.67	0.72	0.52
Avail Cap(c_a), veh/h	434	588	568	477	1204	541	328	1235	761	164	1211	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	31.4	31.6	43.5	26.5	24.8	44.0	25.3	16.2	45.0	30.1	21.3
Incr Delay (d2), s/veh	2.4	2.2	2.4	16.6	0.3	0.3	1.2	0.2	0.3	9.3	2.1	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	8.1	7.9	6.6	4.8	2.1	2.2	3.8	3.3	3.1	10.4	7.1
LnGrp Delay(d),s/veh	47.1	33.6	34.0	60.1	26.8	25.0	45.2	25.5	16.5	54.3	32.3	22.2
LnGrp LOS	D	C	C	E	C	C	D	C	B	D	C	C
Approach Vol, veh/h		846			947			707			1252	
Approach Delay, s/veh		37.2			40.7			27.5			31.3	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.4	33.6	13.6	37.4	13.7	37.3	13.1	37.9
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	14.3	33.8	10.3	35.0	13.3	34.8	10.3	35.0
Max Q Clear Time (g_c+I1), s	13.6	18.4	6.6	23.0	8.3	12.1	8.0	9.7
Green Ext Time (p_c), s	0.1	7.9	0.2	9.0	0.3	9.8	0.0	15.8

Intersection Summary	
HCM 2010 Ctrl Delay	34.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	461	225	177	837	71	310	245	84	74	305	116
Future Volume (veh/h)	128	461	225	177	837	71	310	245	84	74	305	116
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1792	1845	1863	1900	1845	1836	1900	1863	1788	1900
Adj Flow Rate, veh/h	136	490	239	188	890	76	330	261	89	79	324	123
Adj No. of Lanes	1	2	1	1	2	1	2	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	3	6	3	2	0	3	3	3	2	6	6
Cap, veh/h	169	1084	468	225	1201	547	447	646	215	169	523	195
Arrive On Green	0.10	0.31	0.31	0.13	0.34	0.34	0.13	0.25	0.25	0.10	0.22	0.22
Sat Flow, veh/h	1723	3505	1513	1757	3539	1612	3408	2563	852	1774	2420	901
Grp Volume(v), veh/h	136	490	239	188	890	76	330	175	175	79	226	221
Grp Sat Flow(s),veh/h/ln	1723	1752	1513	1757	1770	1612	1704	1744	1672	1774	1698	1623
Q Serve(g_s), s	6.0	8.7	10.0	8.1	17.1	2.5	7.2	6.5	6.7	3.3	9.3	9.6
Cycle Q Clear(g_c), s	6.0	8.7	10.0	8.1	17.1	2.5	7.2	6.5	6.7	3.3	9.3	9.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.51	1.00		0.56
Lane Grp Cap(c), veh/h	169	1084	468	225	1201	547	447	440	421	169	367	351
V/C Ratio(X)	0.80	0.45	0.51	0.83	0.74	0.14	0.74	0.40	0.41	0.47	0.61	0.63
Avail Cap(c_a), veh/h	199	1363	589	235	1441	656	764	748	717	230	568	543
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	21.4	21.9	32.8	22.5	17.7	32.2	24.0	24.1	33.0	27.3	27.4
Incr Delay (d2), s/veh	18.3	0.3	0.9	21.5	1.7	0.1	2.4	0.7	0.8	2.0	2.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	4.2	4.2	5.3	8.6	1.1	3.5	3.2	3.2	1.7	4.5	4.5
LnGrp Delay(d),s/veh	52.4	21.7	22.7	54.3	24.2	17.8	34.6	24.7	24.9	35.1	29.3	29.7
LnGrp LOS	D	C	C	D	C	B	C	C	C	D	C	C
Approach Vol, veh/h		865			1154			680			526	
Approach Delay, s/veh		26.8			28.7			29.6			30.4	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	24.0	13.6	28.5	13.8	21.3	11.3	30.8
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	10.0	33.1	10.3	30.0	17.3	25.8	8.9	31.4
Max Q Clear Time (g_c+I1), s	5.3	8.7	10.1	12.0	9.2	11.6	8.0	19.1
Green Ext Time (p_c), s	0.1	4.3	0.0	8.3	0.9	3.6	0.0	6.7

Intersection Summary	
HCM 2010 Ctrl Delay	28.6
HCM 2010 LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	28	45	18	352	1078	44
Future Volume (veh/h)	28	45	18	352	1078	44
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1696	1583	1597	1845	1845	1810
Adj Flow Rate, veh/h	32	52	21	405	1239	51
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	12	20	19	3	3	5
Cap, veh/h	115	95	433	2125	2125	932
Arrive On Green	0.07	0.07	0.61	0.61	0.61	0.61
Sat Flow, veh/h	1616	1346	365	3597	3597	1537
Grp Volume(v), veh/h	32	52	21	405	1239	51
Grp Sat Flow(s),veh/h/ln	1616	1346	365	1752	1752	1537
Q Serve(g_s), s	0.5	0.9	0.9	1.3	5.3	0.3
Cycle Q Clear(g_c), s	0.5	0.9	6.3	1.3	5.3	0.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	115	95	433	2125	2125	932
V/C Ratio(X)	0.28	0.55	0.05	0.19	0.58	0.05
Avail Cap(c_a), veh/h	1043	869	521	2969	2969	1302
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.9	11.1	4.9	2.2	3.0	2.0
Incr Delay (d2), s/veh	1.3	4.8	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.5	0.1	0.6	2.5	0.1
LnGrp Delay(d),s/veh	12.2	15.9	4.9	2.2	3.2	2.0
LnGrp LOS	B	B	A	A	A	A
Approach Vol, veh/h	84			426	1290	
Approach Delay, s/veh	14.5			2.3	3.2	
Approach LOS	B			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		19.0		5.8		19.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		21.0		16.0		21.0		
Max Q Clear Time (g_c+I1), s		8.3		2.9		7.3		
Green Ext Time (p_c), s		6.8		0.2		7.1		

Intersection Summary	
HCM 2010 Ctrl Delay	3.5
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	400	106	246	610	187	307	1052	451	154	517	321
Future Volume (veh/h)	213	400	106	246	610	187	307	1052	451	154	517	321
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1863	1845	1881	1881	1881	1845	1881	1863
Adj Flow Rate, veh/h	217	408	108	251	622	191	313	1073	460	157	528	328
Adj No. of Lanes	2	2	0	2	2	1	2	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	2	3	1	1	1	3	1	2
Cap, veh/h	341	768	201	341	974	427	386	1276	717	187	1259	706
Arrive On Green	0.10	0.28	0.28	0.10	0.28	0.28	0.11	0.36	0.36	0.11	0.35	0.35
Sat Flow, veh/h	3476	2789	730	3476	3539	1549	3476	3574	1569	1757	3574	1564
Grp Volume(v), veh/h	217	260	256	251	622	191	313	1073	460	157	528	328
Grp Sat Flow(s),veh/h/ln	1738	1787	1732	1738	1770	1549	1738	1787	1569	1757	1787	1564
Q Serve(g_s), s	6.1	12.5	12.8	7.1	15.7	10.4	9.0	28.1	23.0	8.9	11.4	14.8
Cycle Q Clear(g_c), s	6.1	12.5	12.8	7.1	15.7	10.4	9.0	28.1	23.0	8.9	11.4	14.8
Prop In Lane	1.00		0.42	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	341	492	477	341	974	427	386	1276	717	187	1259	706
V/C Ratio(X)	0.64	0.53	0.54	0.74	0.64	0.45	0.81	0.84	0.64	0.84	0.42	0.46
Avail Cap(c_a), veh/h	386	590	572	352	1134	496	488	1307	731	212	1259	706
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.1	31.3	31.4	44.6	32.4	30.5	44.2	30.1	21.4	44.6	25.0	19.4
Incr Delay (d2), s/veh	2.9	1.3	1.3	7.6	1.2	1.0	7.9	5.2	2.2	22.5	0.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	6.4	6.3	3.8	7.9	4.6	4.7	14.8	10.3	5.5	5.7	6.5
LnGrp Delay(d),s/veh	47.0	32.5	32.7	52.2	33.6	31.5	52.1	35.3	23.5	67.1	25.4	20.1
LnGrp LOS	D	C	C	D	C	C	D	D	C	E	C	C
Approach Vol, veh/h		733			1064			1846			1013	
Approach Delay, s/veh		36.9			37.6			35.2			30.1	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	32.6	15.0	40.4	13.7	32.6	14.5	40.9
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	10.3	33.6	14.3	35.2	11.3	32.6	12.3	37.2
Max Q Clear Time (g_c+I1), s	9.1	14.8	11.0	16.8	8.1	17.7	10.9	30.1
Green Ext Time (p_c), s	0.1	9.9	0.4	15.8	0.2	8.5	0.1	6.2

Intersection Summary	
HCM 2010 Ctrl Delay	34.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	907	246	187	600	56	286	359	215	153	272	172
Future Volume (veh/h)	204	907	246	187	600	56	286	359	215	153	272	172
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1881	1881	1881	1881	1881	1881	1881	1900	1881	1859	1900
Adj Flow Rate, veh/h	208	926	251	191	612	57	292	366	219	156	278	176
Adj No. of Lanes	1	2	1	1	2	1	2	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	1	1	1	1	1	1	1	1	1	3	3
Cap, veh/h	247	1164	512	229	1124	500	374	538	315	191	525	321
Arrive On Green	0.14	0.33	0.33	0.13	0.31	0.31	0.11	0.25	0.25	0.11	0.25	0.25
Sat Flow, veh/h	1774	3574	1574	1792	3574	1591	3476	2136	1253	1792	2090	1279
Grp Volume(v), veh/h	208	926	251	191	612	57	292	305	280	156	233	221
Grp Sat Flow(s),veh/h/ln	1774	1787	1574	1792	1787	1591	1738	1787	1602	1792	1766	1604
Q Serve(g_s), s	10.1	20.8	11.3	9.2	12.5	2.2	7.2	13.6	14.0	7.5	10.1	10.5
Cycle Q Clear(g_c), s	10.1	20.8	11.3	9.2	12.5	2.2	7.2	13.6	14.0	7.5	10.1	10.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		0.80
Lane Grp Cap(c), veh/h	247	1164	512	229	1124	500	374	450	403	191	443	403
V/C Ratio(X)	0.84	0.80	0.49	0.83	0.54	0.11	0.78	0.68	0.69	0.81	0.53	0.55
Avail Cap(c_a), veh/h	315	1267	558	292	1214	541	445	518	464	246	528	479
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.1	27.1	23.9	37.6	25.0	21.5	38.4	29.8	30.0	38.6	28.5	28.7
Incr Delay (d2), s/veh	15.1	3.4	0.7	15.0	0.4	0.1	7.4	3.2	4.1	15.0	1.2	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	10.8	5.0	5.5	6.2	1.0	3.9	7.1	6.6	4.5	5.1	4.8
LnGrp Delay(d),s/veh	52.2	30.5	24.6	52.6	25.5	21.6	45.8	33.0	34.0	53.6	29.7	30.1
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1385			860			877			610	
Approach Delay, s/veh		32.7			31.2			37.6			36.0	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.1	26.8	15.0	33.3	13.2	26.8	16.0	32.4
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	12.1	25.6	14.4	31.3	11.3	26.4	15.7	30.0
Max Q Clear Time (g_c+I1), s	9.5	16.0	11.2	22.8	9.2	12.5	12.1	14.5
Green Ext Time (p_c), s	0.1	4.0	0.2	5.5	0.3	4.9	0.2	8.4

Intersection Summary	
HCM 2010 Ctrl Delay	34.0
HCM 2010 LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	29	31	30	1420	362	22
Future Volume (veh/h)	29	31	30	1420	362	22
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1652	1863	1810	1900
Adj Flow Rate, veh/h	31	33	32	1495	381	23
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	15	2	5	0
Cap, veh/h	102	91	790	2315	2249	1056
Arrive On Green	0.06	0.06	0.65	0.65	0.65	0.65
Sat Flow, veh/h	1810	1615	867	3632	3529	1615
Grp Volume(v), veh/h	31	33	32	1495	381	23
Grp Sat Flow(s),veh/h/ln	1810	1615	867	1770	1719	1615
Q Serve(g_s), s	0.5	0.5	0.4	7.0	1.2	0.1
Cycle Q Clear(g_c), s	0.5	0.5	1.6	7.0	1.2	0.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	102	91	790	2315	2249	1056
V/C Ratio(X)	0.30	0.36	0.04	0.65	0.17	0.02
Avail Cap(c_a), veh/h	1048	936	1039	3332	3236	1520
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	12.6	2.2	2.9	1.9	1.7
Incr Delay (d2), s/veh	1.7	2.4	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	0.1	3.2	0.5	0.1
LnGrp Delay(d),s/veh	14.2	15.0	2.2	3.2	1.9	1.7
LnGrp LOS	B	B	A	A	A	A
Approach Vol, veh/h	64			1527	404	
Approach Delay, s/veh	14.6			3.1	1.9	
Approach LOS	B			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		22.1		5.6		22.1		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		26.0		16.0		26.0		
Max Q Clear Time (g_c+I1), s		9.0		2.5		3.2		
Green Ext Time (p_c), s		9.1		0.1		10.6		

Intersection Summary	
HCM 2010 Ctrl Delay	3.3
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	450	129	370	408	95	145	331	175	93	750	310
Future Volume (veh/h)	200	450	129	370	408	95	145	331	175	93	750	310
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1837	1900	1881	1827	1863	1810	1863	1845	1759	1827	1810
Adj Flow Rate, veh/h	217	489	140	402	443	103	158	360	190	101	815	337
Adj No. of Lanes	2	2	0	2	2	1	2	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	4	2	5	2	3	8	4	5
Cap, veh/h	323	775	220	457	1135	509	314	1176	735	150	1138	652
Arrive On Green	0.09	0.29	0.28	0.13	0.33	0.33	0.09	0.33	0.33	0.09	0.33	0.33
Sat Flow, veh/h	3408	2670	759	3476	3471	1559	3343	3539	1551	1675	3471	1504
Grp Volume(v), veh/h	217	318	311	402	443	103	158	360	190	101	815	337
Grp Sat Flow(s),veh/h/ln	1704	1745	1684	1738	1736	1559	1672	1770	1551	1675	1736	1504
Q Serve(g_s), s	6.3	16.2	16.4	11.6	10.1	4.9	4.6	7.7	7.5	6.0	21.1	16.8
Cycle Q Clear(g_c), s	6.3	16.2	16.4	11.6	10.1	4.9	4.6	7.7	7.5	6.0	21.1	16.8
Prop In Lane	1.00		0.45	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	323	506	489	457	1135	509	314	1176	735	150	1138	652
V/C Ratio(X)	0.67	0.63	0.64	0.88	0.39	0.20	0.50	0.31	0.26	0.67	0.72	0.52
Avail Cap(c_a), veh/h	434	588	568	477	1204	540	327	1234	761	164	1210	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.7	31.5	31.7	43.5	26.5	24.8	44.0	25.3	16.2	45.0	30.1	21.3
Incr Delay (d2), s/veh	2.4	2.2	2.4	16.7	0.3	0.3	1.2	0.2	0.3	9.3	2.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	8.1	7.9	6.6	4.8	2.1	2.2	3.8	3.3	3.1	10.4	7.1
LnGrp Delay(d),s/veh	47.1	33.6	34.0	60.2	26.8	25.0	45.2	25.6	16.5	54.3	32.3	22.2
LnGrp LOS	D	C	C	E	C	C	D	C	B	D	C	C
Approach Vol, veh/h		846			948			708			1253	
Approach Delay, s/veh		37.2			40.8			27.5			31.4	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.4	33.6	13.6	37.5	13.7	37.4	13.1	37.9
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	14.3	33.8	10.3	35.0	13.3	34.8	10.3	35.0
Max Q Clear Time (g_c+I1), s	13.6	18.4	6.6	23.1	8.3	12.1	8.0	9.7
Green Ext Time (p_c), s	0.1	7.9	0.2	9.0	0.3	9.8	0.0	15.8

Intersection Summary	
HCM 2010 Ctrl Delay	34.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	460	224	179	835	71	307	246	85	74	308	115
Future Volume (veh/h)	128	460	224	179	835	71	307	246	85	74	308	115
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1792	1845	1863	1900	1845	1836	1900	1863	1788	1900
Adj Flow Rate, veh/h	136	489	238	190	888	76	327	262	90	79	328	122
Adj No. of Lanes	1	2	1	1	2	1	2	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	3	6	3	2	0	3	3	3	2	6	6
Cap, veh/h	172	1117	482	217	1211	552	407	616	206	171	531	194
Arrive On Green	0.10	0.32	0.32	0.12	0.34	0.34	0.12	0.24	0.24	0.10	0.22	0.22
Sat Flow, veh/h	1723	3505	1514	1757	3539	1612	3408	2558	857	1774	2435	889
Grp Volume(v), veh/h	136	489	238	190	888	76	327	176	176	79	227	223
Grp Sat Flow(s),veh/h/ln	1723	1752	1514	1757	1770	1612	1704	1744	1670	1774	1698	1625
Q Serve(g_s), s	5.8	8.3	9.6	8.0	16.6	2.5	7.0	6.4	6.7	3.2	9.1	9.4
Cycle Q Clear(g_c), s	5.8	8.3	9.6	8.0	16.6	2.5	7.0	6.4	6.7	3.2	9.1	9.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.51	1.00		0.55
Lane Grp Cap(c), veh/h	172	1117	482	217	1211	552	407	420	403	171	371	355
V/C Ratio(X)	0.79	0.44	0.49	0.88	0.73	0.14	0.80	0.42	0.44	0.46	0.61	0.63
Avail Cap(c_a), veh/h	185	1395	602	217	1465	667	407	581	556	212	566	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.1	20.3	20.8	32.5	21.8	17.1	32.3	24.2	24.3	32.2	26.6	26.7
Incr Delay (d2), s/veh	19.0	0.3	0.8	30.6	1.5	0.1	11.1	0.8	0.9	1.9	2.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	4.0	4.1	5.7	8.3	1.1	3.9	3.2	3.2	1.6	4.4	4.4
LnGrp Delay(d),s/veh	52.2	20.6	21.5	63.1	23.3	17.2	43.4	25.0	25.2	34.1	28.6	28.9
LnGrp LOS	D	C	C	E	C	B	D	C	C	C	C	C
Approach Vol, veh/h		863			1154			679			529	
Approach Delay, s/veh		25.8			29.5			33.9			29.5	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	22.8	13.0	28.6	12.7	21.0	11.2	30.4
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	9.0	25.1	9.3	30.0	9.0	25.1	8.1	31.2
Max Q Clear Time (g_c+I1), s	5.2	8.7	10.0	11.6	9.0	11.4	7.8	18.6
Green Ext Time (p_c), s	0.1	3.9	0.0	8.4	0.0	3.6	0.0	6.8

Intersection Summary	
HCM 2010 Ctrl Delay	29.4
HCM 2010 LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	31	49	26	349	1078	49
Future Volume (veh/h)	31	49	26	349	1078	49
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1696	1583	1597	1845	1845	1810
Adj Flow Rate, veh/h	36	56	30	401	1239	56
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	12	20	19	3	3	5
Cap, veh/h	121	101	428	2138	2138	937
Arrive On Green	0.08	0.08	0.61	0.61	0.61	0.61
Sat Flow, veh/h	1616	1346	363	3597	3597	1537
Grp Volume(v), veh/h	36	56	30	401	1239	56
Grp Sat Flow(s),veh/h/ln	1616	1346	363	1752	1752	1537
Q Serve(g_s), s	0.5	1.0	1.4	1.3	5.4	0.4
Cycle Q Clear(g_c), s	0.5	1.0	6.8	1.3	5.4	0.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	121	101	428	2138	2138	937
V/C Ratio(X)	0.30	0.55	0.07	0.19	0.58	0.06
Avail Cap(c_a), veh/h	1018	848	506	2897	2897	1270
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.1	11.3	5.0	2.2	3.0	2.0
Incr Delay (d2), s/veh	1.3	4.7	0.1	0.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.5	0.1	0.6	2.5	0.2
LnGrp Delay(d),s/veh	12.5	16.0	5.1	2.2	3.2	2.0
LnGrp LOS	B	B	A	A	A	A
Approach Vol, veh/h	92			431	1295	
Approach Delay, s/veh	14.6			2.4	3.2	
Approach LOS	B			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		19.5		5.9		19.5		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		21.0		16.0		21.0		
Max Q Clear Time (g_c+I1), s		8.8		3.0		7.4		
Green Ext Time (p_c), s		6.7		0.2		7.2		

Intersection Summary	
HCM 2010 Ctrl Delay	3.6
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	400	106	247	610	187	307	1052	452	154	517	321
Future Volume (veh/h)	213	400	106	247	610	187	307	1052	452	154	517	321
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1863	1845	1881	1881	1881	1845	1881	1863
Adj Flow Rate, veh/h	217	408	108	252	622	191	313	1073	461	157	528	328
Adj No. of Lanes	2	2	0	2	2	1	2	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	2	3	1	1	1	3	1	2
Cap, veh/h	341	768	201	341	974	427	386	1276	717	187	1259	706
Arrive On Green	0.10	0.28	0.28	0.10	0.28	0.28	0.11	0.36	0.36	0.11	0.35	0.35
Sat Flow, veh/h	3476	2789	730	3476	3539	1549	3476	3574	1569	1757	3574	1564
Grp Volume(v), veh/h	217	260	256	252	622	191	313	1073	461	157	528	328
Grp Sat Flow(s),veh/h/ln	1738	1787	1732	1738	1770	1549	1738	1787	1569	1757	1787	1564
Q Serve(g_s), s	6.1	12.5	12.8	7.2	15.7	10.4	9.0	28.1	23.1	8.9	11.4	14.8
Cycle Q Clear(g_c), s	6.1	12.5	12.8	7.2	15.7	10.4	9.0	28.1	23.1	8.9	11.4	14.8
Prop In Lane	1.00		0.42	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	341	492	477	341	974	427	386	1276	717	187	1259	706
V/C Ratio(X)	0.64	0.53	0.54	0.74	0.64	0.45	0.81	0.84	0.64	0.84	0.42	0.46
Avail Cap(c_a), veh/h	386	590	572	352	1134	496	488	1307	731	212	1259	706
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.1	31.3	31.4	44.6	32.4	30.5	44.2	30.1	21.4	44.6	25.0	19.4
Incr Delay (d2), s/veh	2.9	1.3	1.3	7.8	1.2	1.0	7.9	5.2	2.2	22.5	0.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	6.4	6.3	3.8	7.9	4.6	4.7	14.8	10.4	5.5	5.7	6.5
LnGrp Delay(d),s/veh	47.0	32.5	32.7	52.4	33.6	31.5	52.1	35.3	23.6	67.1	25.4	20.1
LnGrp LOS	D	C	C	D	C	C	D	D	C	E	C	C
Approach Vol, veh/h		733			1065			1847			1013	
Approach Delay, s/veh		36.9			37.7			35.2			30.1	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	32.6	15.0	40.4	13.7	32.6	14.5	40.9
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	10.3	33.6	14.3	35.2	11.3	32.6	12.3	37.2
Max Q Clear Time (g_c+I1), s	9.2	14.8	11.0	16.8	8.1	17.7	10.9	30.1
Green Ext Time (p_c), s	0.1	9.9	0.4	15.8	0.2	8.5	0.1	6.2

Intersection Summary	
HCM 2010 Ctrl Delay	34.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	905	242	189	598	56	283	361	217	153	274	171
Future Volume (veh/h)	203	905	242	189	598	56	283	361	217	153	274	171
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1881	1881	1881	1881	1881	1881	1881	1900	1881	1858	1900
Adj Flow Rate, veh/h	207	923	247	193	610	57	289	368	221	156	280	174
Adj No. of Lanes	1	2	1	1	2	1	2	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	1	1	1	1	1	1	1	1	1	3	3
Cap, veh/h	245	1159	510	231	1125	501	370	538	317	192	532	320
Arrive On Green	0.14	0.32	0.32	0.13	0.31	0.31	0.11	0.25	0.25	0.11	0.25	0.25
Sat Flow, veh/h	1774	3574	1574	1792	3574	1591	3476	2132	1256	1792	2106	1266
Grp Volume(v), veh/h	207	923	247	193	610	57	289	307	282	156	233	221
Grp Sat Flow(s),veh/h/ln	1774	1787	1574	1792	1787	1591	1738	1787	1601	1792	1766	1606
Q Serve(g_s), s	10.1	20.8	11.1	9.3	12.5	2.2	7.2	13.7	14.1	7.5	10.1	10.5
Cycle Q Clear(g_c), s	10.1	20.8	11.1	9.3	12.5	2.2	7.2	13.7	14.1	7.5	10.1	10.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		0.79
Lane Grp Cap(c), veh/h	245	1159	510	231	1125	501	370	451	404	192	446	406
V/C Ratio(X)	0.84	0.80	0.48	0.84	0.54	0.11	0.78	0.68	0.70	0.81	0.52	0.54
Avail Cap(c_a), veh/h	313	1258	554	294	1214	540	437	516	462	249	534	485
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.1	27.2	23.9	37.6	25.0	21.5	38.5	29.8	30.0	38.6	28.4	28.6
Incr Delay (d2), s/veh	15.2	3.4	0.7	15.1	0.4	0.1	7.6	3.4	4.2	14.5	1.1	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	10.8	4.9	5.6	6.2	1.0	3.8	7.2	6.7	4.5	5.1	4.8
LnGrp Delay(d),s/veh	52.3	30.6	24.6	52.7	25.4	21.6	46.0	33.2	34.2	53.1	29.6	30.0
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1377			860			878			610	
Approach Delay, s/veh		32.8			31.3			37.8			35.7	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.1	26.9	15.1	33.2	13.1	26.9	15.9	32.4
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	12.3	25.5	14.5	31.1	11.1	26.7	15.6	30.0
Max Q Clear Time (g_c+I1), s	9.5	16.1	11.3	22.8	9.2	12.5	12.1	14.5
Green Ext Time (p_c), s	0.1	3.9	0.2	5.4	0.3	4.9	0.2	8.3

Intersection Summary	
HCM 2010 Ctrl Delay	34.1
HCM 2010 LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	33	39	36	1419	360	22
Future Volume (veh/h)	33	39	36	1419	360	22
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1652	1863	1810	1900
Adj Flow Rate, veh/h	35	41	38	1494	379	23
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	15	2	5	0
Cap, veh/h	115	103	784	2302	2236	1050
Arrive On Green	0.06	0.06	0.65	0.65	0.65	0.65
Sat Flow, veh/h	1810	1615	868	3632	3529	1615
Grp Volume(v), veh/h	35	41	38	1494	379	23
Grp Sat Flow(s),veh/h/ln	1810	1615	868	1770	1719	1615
Q Serve(g_s), s	0.5	0.7	0.5	7.1	1.2	0.1
Cycle Q Clear(g_c), s	0.5	0.7	1.7	7.1	1.2	0.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	115	103	784	2302	2236	1050
V/C Ratio(X)	0.30	0.40	0.05	0.65	0.17	0.02
Avail Cap(c_a), veh/h	1034	923	1026	3288	3194	1500
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	12.6	2.3	3.0	1.9	1.7
Incr Delay (d2), s/veh	1.5	2.5	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.4	0.1	3.4	0.5	0.1
LnGrp Delay(d),s/veh	14.0	15.1	2.3	3.3	2.0	1.7
LnGrp LOS	B	B	A	A	A	A
Approach Vol, veh/h	76			1532	402	
Approach Delay, s/veh	14.6			3.2	1.9	
Approach LOS	B			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		22.2		5.8		22.2		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		26.0		16.0		26.0		
Max Q Clear Time (g_c+I1), s		9.1		2.7		3.2		
Green Ext Time (p_c), s		9.1		0.2		10.6		

Intersection Summary	
HCM 2010 Ctrl Delay	3.4
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	218	492	140	402	446	103	158	360	191	101	816	338
Future Volume (veh/h)	218	492	140	402	446	103	158	360	191	101	816	338
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1810	1881	1827	1863	1810	1863	1845	1759	1827	1810
Adj Flow Rate, veh/h	237	535	152	437	485	112	172	391	208	110	887	367
Adj No. of Lanes	2	2	1	3	2	1	3	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	5	1	4	2	5	2	3	8	4	5
Cap, veh/h	334	1016	428	533	1032	463	473	1237	722	303	1199	685
Arrive On Green	0.10	0.29	0.28	0.11	0.30	0.30	0.10	0.35	0.35	0.09	0.35	0.35
Sat Flow, veh/h	3408	3505	1507	5052	3471	1556	4860	3539	1552	3250	3471	1506
Grp Volume(v), veh/h	237	535	152	437	485	112	172	391	208	110	887	367
Grp Sat Flow(s),veh/h/ln	1704	1752	1507	1684	1736	1556	1620	1770	1552	1625	1736	1506
Q Serve(g_s), s	6.7	12.6	7.9	8.4	11.3	5.4	3.3	8.0	8.2	3.1	22.2	17.4
Cycle Q Clear(g_c), s	6.7	12.6	7.9	8.4	11.3	5.4	3.3	8.0	8.2	3.1	22.2	17.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	334	1016	428	533	1032	463	473	1237	722	303	1199	685
V/C Ratio(X)	0.71	0.53	0.36	0.82	0.47	0.24	0.36	0.32	0.29	0.36	0.74	0.54
Avail Cap(c_a), veh/h	483	1277	540	614	1195	536	492	1290	745	329	1265	714
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.2	29.4	28.2	43.3	28.3	26.3	41.7	23.5	16.4	42.0	28.4	19.6
Incr Delay (d2), s/veh	2.8	0.6	0.7	7.7	0.5	0.4	0.5	0.2	0.3	0.7	2.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	6.2	3.4	4.3	5.5	2.4	1.5	3.9	3.6	1.4	11.0	7.4
LnGrp Delay(d),s/veh	46.0	30.0	28.9	51.0	28.8	26.7	42.2	23.7	16.7	42.8	30.9	20.6
LnGrp LOS	D	C	C	D	C	C	D	C	B	D	C	C
Approach Vol, veh/h		924			1034			771			1364	
Approach Delay, s/veh		33.9			37.9			25.9			29.1	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.4	32.6	13.6	38.1	13.7	33.4	13.2	38.5
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	12.3	35.4	10.3	35.4	14.3	33.4	10.3	35.4
Max Q Clear Time (g_c+I1), s	10.4	14.6	5.3	24.2	8.7	13.3	5.1	10.2
Green Ext Time (p_c), s	0.4	10.1	0.2	9.0	0.4	10.0	0.1	17.1

Intersection Summary	
HCM 2010 Ctrl Delay	31.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	139	503	244	194	914	77	335	268	91	80	333	126
Future Volume (veh/h)	139	503	244	194	914	77	335	268	91	80	333	126
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1845	1792	1845	1863	1900	1845	1836	1900	1863	1788	1900
Adj Flow Rate, veh/h	148	535	260	206	972	82	356	285	97	85	354	134
Adj No. of Lanes	2	2	1	2	2	1	2	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	3	6	3	2	0	3	3	3	2	6	6
Cap, veh/h	323	1197	517	338	1219	555	434	655	218	170	541	202
Arrive On Green	0.10	0.34	0.34	0.10	0.34	0.34	0.13	0.26	0.26	0.10	0.22	0.22
Sat Flow, veh/h	3343	3505	1514	3408	3539	1612	3408	2563	853	1774	2420	901
Grp Volume(v), veh/h	148	535	260	206	972	82	356	192	190	85	247	241
Grp Sat Flow(s),veh/h/ln	1672	1752	1514	1704	1770	1612	1704	1744	1672	1774	1698	1623
Q Serve(g_s), s	3.3	9.5	10.9	4.6	19.8	2.8	8.1	7.3	7.6	3.6	10.5	10.8
Cycle Q Clear(g_c), s	3.3	9.5	10.9	4.6	19.8	2.8	8.1	7.3	7.6	3.6	10.5	10.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.51	1.00		0.56
Lane Grp Cap(c), veh/h	323	1197	517	338	1219	555	434	445	427	170	380	363
V/C Ratio(X)	0.46	0.45	0.50	0.61	0.80	0.15	0.82	0.43	0.45	0.50	0.65	0.66
Avail Cap(c_a), veh/h	335	1318	569	342	1331	606	444	557	534	220	532	509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	20.4	20.9	34.5	23.6	18.1	33.9	24.8	25.0	34.3	28.1	28.2
Incr Delay (d2), s/veh	1.0	0.3	0.8	3.1	3.2	0.1	11.4	0.8	0.9	2.3	2.3	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	4.6	4.6	2.3	10.1	1.3	4.5	3.6	3.6	1.9	5.2	5.1
LnGrp Delay(d),s/veh	35.1	20.7	21.6	37.5	26.9	18.2	45.3	25.6	25.8	36.5	30.4	30.8
LnGrp LOS	D	C	C	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		943			1260			738			573	
Approach Delay, s/veh		23.2			28.1			35.2			31.5	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.3	25.0	11.6	31.9	13.9	22.4	11.4	32.1
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	9.9	25.5	8.0	30.0	10.4	25.0	8.0	30.0
Max Q Clear Time (g_c+I1), s	5.6	9.6	6.6	12.9	10.1	12.8	5.3	21.8
Green Ext Time (p_c), s	0.1	4.2	0.1	8.9	0.1	3.7	0.1	5.4

Intersection Summary	
HCM 2010 Ctrl Delay	28.8
HCM 2010 LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	30	49	19	382	1179	48
Future Volume (veh/h)	30	49	19	382	1179	48
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1696	1583	1597	1845	1845	1810
Adj Flow Rate, veh/h	34	56	22	439	1355	55
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	12	20	19	3	3	5
Cap, veh/h	118	99	399	2182	2182	957
Arrive On Green	0.07	0.07	0.62	0.62	0.62	0.62
Sat Flow, veh/h	1616	1346	326	3597	3597	1537
Grp Volume(v), veh/h	34	56	22	439	1355	55
Grp Sat Flow(s),veh/h/ln	1616	1346	326	1752	1752	1537
Q Serve(g_s), s	0.5	1.1	1.2	1.4	6.3	0.4
Cycle Q Clear(g_c), s	0.5	1.1	7.4	1.4	6.3	0.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	118	99	399	2182	2182	957
V/C Ratio(X)	0.29	0.57	0.06	0.20	0.62	0.06
Avail Cap(c_a), veh/h	983	819	456	2798	2798	1227
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.5	11.8	5.3	2.1	3.1	1.9
Incr Delay (d2), s/veh	1.3	5.0	0.1	0.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.5	0.1	0.7	2.9	0.2
LnGrp Delay(d),s/veh	12.9	16.8	5.4	2.2	3.3	2.0
LnGrp LOS	B	B	A	A	A	A
Approach Vol, veh/h	90			461	1410	
Approach Delay, s/veh	15.3			2.3	3.3	
Approach LOS	B			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		20.4		5.9		20.4		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		21.0		16.0		21.0		
Max Q Clear Time (g_c+I1), s		9.4		3.1		8.3		
Green Ext Time (p_c), s		6.9		0.2		7.4		

Intersection Summary	
HCM 2010 Ctrl Delay	3.6
HCM 2010 LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	14	20	393	53	113	1058		
Future Volume (veh/h)	14	20	393	53	113	1058		
Number	7	14	6	16	5	2		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1532	1583	1845	1792	1696	1863		
Adj Flow Rate, veh/h	15	22	427	58	123	1150		
Adj No. of Lanes	1	1	2	1	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	24	20	3	6	12	2		
Cap, veh/h	94	240	1933	840	184	1377		
Arrive On Green	0.06	0.06	0.55	0.55	0.11	0.74		
Sat Flow, veh/h	1459	1346	3597	1524	1616	1863		
Grp Volume(v), veh/h	15	22	427	58	123	1150		
Grp Sat Flow(s),veh/h/ln	1459	1346	1752	1524	1616	1863		
Q Serve(g_s), s	0.5	0.7	3.1	0.9	3.7	21.2		
Cycle Q Clear(g_c), s	0.5	0.7	3.1	0.9	3.7	21.2		
Prop In Lane	1.00	1.00		1.00	1.00			
Lane Grp Cap(c), veh/h	94	240	1933	840	184	1377		
V/C Ratio(X)	0.16	0.09	0.22	0.07	0.67	0.84		
Avail Cap(c_a), veh/h	609	715	2882	1253	449	2187		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	22.3	17.3	5.8	5.3	21.4	4.5		
Incr Delay (d2), s/veh	0.8	0.2	0.1	0.0	4.1	1.9		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.2	0.6	1.5	0.4	1.9	11.0		
LnGrp Delay(d),s/veh	23.1	17.4	5.8	5.3	25.5	6.4		
LnGrp LOS	C	B	A	A	C	A		
Approach Vol, veh/h	37		485			1273		
Approach Delay, s/veh	19.7		5.8			8.3		
Approach LOS	B		A			A		

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		42.9		7.4	9.4	33.5		
Change Period (Y+Rc), s		5.7		* 4.2	3.7	5.7		
Max Green Setting (Gmax), s		59.1		* 21	14.0	41.4		
Max Q Clear Time (g_c+I1), s		23.2		2.7	5.7	5.1		
Green Ext Time (p_c), s		14.0		0.1	0.2	14.1		

Intersection Summary	
HCM 2010 Ctrl Delay	7.8
HCM 2010 LOS	A

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	438	115	268	666	204	335	1146	492	168	563	350
Future Volume (veh/h)	232	438	115	268	666	204	335	1146	492	168	563	350
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1863	1845	1881	1881	1881	1845	1881	1863
Adj Flow Rate, veh/h	237	447	117	273	680	208	342	1169	502	171	574	357
Adj No. of Lanes	2	2	1	3	2	1	3	2	1	2	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	2	3	1	1	1	3	1	2
Cap, veh/h	334	1010	442	486	1001	438	487	1307	728	326	1304	723
Arrive On Green	0.10	0.28	0.28	0.10	0.28	0.28	0.10	0.37	0.37	0.10	0.36	0.36
Sat Flow, veh/h	3476	3574	1563	5052	3539	1550	5052	3574	1570	3408	3574	1565
Grp Volume(v), veh/h	237	447	117	273	680	208	342	1169	502	171	574	357
Grp Sat Flow(s),veh/h/ln	1738	1787	1563	1684	1770	1550	1684	1787	1570	1704	1787	1565
Q Serve(g_s), s	6.9	10.6	6.0	5.4	17.7	11.5	6.8	32.0	26.3	5.0	12.6	16.5
Cycle Q Clear(g_c), s	6.9	10.6	6.0	5.4	17.7	11.5	6.8	32.0	26.3	5.0	12.6	16.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	334	1010	442	486	1001	438	487	1307	728	326	1304	723
V/C Ratio(X)	0.71	0.44	0.26	0.56	0.68	0.47	0.70	0.89	0.69	0.52	0.44	0.49
Avail Cap(c_a), veh/h	378	1184	518	501	1139	499	550	1322	735	338	1304	723
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.5	30.5	28.9	44.8	33.1	30.9	45.5	31.1	22.1	44.7	24.9	19.5
Incr Delay (d2), s/veh	5.2	0.4	0.5	1.3	1.7	1.1	3.5	8.4	3.0	1.4	0.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	5.3	2.6	2.6	8.8	5.1	3.3	17.3	11.9	2.4	6.3	7.3
LnGrp Delay(d),s/veh	50.7	31.0	29.3	46.2	34.7	32.0	48.9	39.4	25.1	46.1	25.3	20.3
LnGrp LOS	D	C	C	D	C	C	D	D	C	D	C	C
Approach Vol, veh/h		801			1161			2013			1102	
Approach Delay, s/veh		36.6			36.9			37.5			26.9	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	33.9	13.7	42.5	13.7	34.0	13.6	42.6
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	10.3	34.4	11.3	37.4	11.3	33.4	10.3	38.4
Max Q Clear Time (g_c+I1), s	7.4	12.6	8.8	18.5	8.9	19.7	7.0	34.0
Green Ext Time (p_c), s	0.3	11.8	0.3	16.8	0.2	8.7	0.2	3.9

Intersection Summary	
HCM 2010 Ctrl Delay	34.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	221	990	264	206	656	61	308	392	236	167	297	187
Future Volume (veh/h)	221	990	264	206	656	61	308	392	236	167	297	187
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1881	1881	1881	1881	1881	1881	1881	1900	1881	1859	1900
Adj Flow Rate, veh/h	226	1010	269	210	669	62	314	400	241	170	303	191
Adj No. of Lanes	2	2	1	2	2	1	2	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	1	1	1	1	1	1	1	1	1	3	3
Cap, veh/h	319	1204	531	322	1204	536	377	564	335	200	562	344
Arrive On Green	0.09	0.34	0.34	0.09	0.34	0.34	0.11	0.27	0.27	0.11	0.27	0.27
Sat Flow, veh/h	3442	3574	1575	3476	3574	1592	3476	2127	1263	1792	2090	1281
Grp Volume(v), veh/h	226	1010	269	210	669	62	314	335	306	170	255	239
Grp Sat Flow(s),veh/h/ln	1721	1787	1575	1738	1787	1592	1738	1787	1603	1792	1766	1605
Q Serve(g_s), s	5.5	22.4	11.7	5.0	13.1	2.3	7.6	14.6	14.9	8.0	10.6	11.0
Cycle Q Clear(g_c), s	5.5	22.4	11.7	5.0	13.1	2.3	7.6	14.6	14.9	8.0	10.6	11.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.79	1.00		0.80
Lane Grp Cap(c), veh/h	319	1204	531	322	1204	536	377	474	425	200	474	431
V/C Ratio(X)	0.71	0.84	0.51	0.65	0.56	0.12	0.83	0.71	0.72	0.85	0.54	0.55
Avail Cap(c_a), veh/h	321	1249	550	324	1249	556	377	537	482	200	537	488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	26.3	22.8	37.6	23.2	19.6	37.5	28.5	28.6	37.4	26.8	27.0
Incr Delay (d2), s/veh	7.0	5.1	0.8	4.6	0.5	0.1	14.8	4.0	4.8	27.4	1.1	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	11.9	5.2	2.6	6.5	1.0	4.4	7.7	7.1	5.5	5.3	5.0
LnGrp Delay(d),s/veh	44.8	31.4	23.5	42.2	23.7	19.7	52.3	32.5	33.5	64.8	28.0	28.3
LnGrp LOS	D	C	C	D	C	B	D	C	C	E	C	C
Approach Vol, veh/h		1505			941			955			664	
Approach Delay, s/veh		32.0			27.6			39.3			37.5	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	27.4	11.6	33.5	13.0	27.7	11.7	33.5
Change Period (Y+Rc), s	3.7	4.6	3.7	4.6	3.7	4.6	3.7	4.6
Max Green Setting (Gmax), s	9.6	25.8	8.0	30.0	9.3	26.1	8.0	30.0
Max Q Clear Time (g_c+I1), s	10.0	16.9	7.0	24.4	9.6	13.0	7.5	15.1
Green Ext Time (p_c), s	0.0	4.1	0.1	4.2	0.0	5.2	0.1	8.9

Intersection Summary	
HCM 2010 Ctrl Delay	33.6
HCM 2010 LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	31	34	32	1552	396	24
Future Volume (veh/h)	31	34	32	1552	396	24
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1652	1863	1810	1900
Adj Flow Rate, veh/h	33	36	34	1634	417	25
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	15	2	5	0
Cap, veh/h	104	93	769	2437	2367	1112
Arrive On Green	0.06	0.06	0.69	0.69	0.69	0.69
Sat Flow, veh/h	1810	1615	837	3632	3529	1615
Grp Volume(v), veh/h	33	36	34	1634	417	25
Grp Sat Flow(s),veh/h/ln	1810	1615	837	1770	1719	1615
Q Serve(g_s), s	0.6	0.7	0.5	8.4	1.4	0.2
Cycle Q Clear(g_c), s	0.6	0.7	1.8	8.4	1.4	0.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	104	93	769	2437	2367	1112
V/C Ratio(X)	0.32	0.39	0.04	0.67	0.18	0.02
Avail Cap(c_a), veh/h	919	820	1016	3483	3384	1589
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.2	14.3	2.1	2.8	1.7	1.6
Incr Delay (d2), s/veh	1.7	2.6	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.4	0.1	4.0	0.6	0.1
LnGrp Delay(d),s/veh	16.0	16.9	2.1	3.2	1.8	1.6
LnGrp LOS	B	B	A	A	A	A
Approach Vol, veh/h	69			1668	442	
Approach Delay, s/veh	16.5			3.1	1.8	
Approach LOS	B			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		25.7		5.8		25.7		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		31.0		16.0		31.0		
Max Q Clear Time (g_c+I1), s		10.4		2.7		3.4		
Green Ext Time (p_c), s		11.3		0.1		13.1		

Intersection Summary	
HCM 2010 Ctrl Delay	3.3
HCM 2010 LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	48	114	1446	8	13	426		
Future Volume (veh/h)	48	114	1446	8	13	426		
Number	7	14	6	16	5	2		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1810	1845	1881	1387	1508	1881		
Adj Flow Rate, veh/h	52	124	1572	9	14	463		
Adj No. of Lanes	1	1	2	1	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	5	3	1	37	26	1		
Cap, veh/h	238	255	2086	688	35	1274		
Arrive On Green	0.14	0.14	0.58	0.58	0.02	0.68		
Sat Flow, veh/h	1723	1568	3668	1179	1436	1881		
Grp Volume(v), veh/h	52	124	1572	9	14	463		
Grp Sat Flow(s),veh/h/ln	1723	1568	1787	1179	1436	1881		
Q Serve(g_s), s	1.4	3.9	17.5	0.2	0.5	5.7		
Cycle Q Clear(g_c), s	1.4	3.9	17.5	0.2	0.5	5.7		
Prop In Lane	1.00	1.00		1.00	1.00			
Lane Grp Cap(c), veh/h	238	255	2086	688	35	1274		
V/C Ratio(X)	0.22	0.49	0.75	0.01	0.40	0.36		
Avail Cap(c_a), veh/h	675	653	2559	844	187	1722		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	20.5	20.4	8.3	4.7	25.8	3.7		
Incr Delay (d2), s/veh	0.5	1.4	1.1	0.0	7.1	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.7	3.5	8.8	0.1	0.3	2.9		
LnGrp Delay(d),s/veh	21.0	21.8	9.4	4.7	32.8	3.9		
LnGrp LOS	C	C	A	A	C	A		
Approach Vol, veh/h	176		1581			477		
Approach Delay, s/veh	21.6		9.4			4.8		
Approach LOS	C		A			A		

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		42.0		11.6	5.0	37.0		
Change Period (Y+Rc), s		5.7		* 4.2	3.7	5.7		
Max Green Setting (Gmax), s		49.1		* 21	7.0	38.4		
Max Q Clear Time (g_c+I1), s		7.7		5.9	2.5	19.5		
Green Ext Time (p_c), s		17.8		0.6	0.0	11.8		

Intersection Summary	
HCM 2010 Ctrl Delay	9.4
HCM 2010 LOS	A

Notes

MOVEMENT SUMMARY

Site: Olmsted-68

1. Olmsted Road - Highway 68
Existing Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	43	3.0	0.294	11.4	LOS B	0.8	21.4	0.61	0.63	30.5
8	T1	27	3.0	0.294	11.4	LOS B	0.8	21.4	0.61	0.63	30.6
18	R2	80	3.0	0.294	11.4	LOS B	0.8	21.4	0.61	0.63	30.0
Approach		151	3.0	0.294	11.4	LOS B	0.8	21.4	0.61	0.63	30.2
East: Highway 68											
1	L2	101	3.0	0.626	13.1	LOS B	4.3	109.0	0.52	0.37	30.0
6	T1	801	3.0	0.626	13.1	LOS B	4.3	109.0	0.52	0.37	30.2
16	R2	280	3.0	0.626	13.1	LOS B	4.3	109.0	0.52	0.37	29.6
Approach		1183	3.0	0.626	13.1	LOS B	4.3	109.0	0.52	0.37	30.0
North: Olmsted Road											
7	L2	108	3.0	0.345	11.6	LOS B	1.0	26.8	0.60	0.62	29.9
4	T1	23	3.0	0.345	11.6	LOS B	1.0	26.8	0.60	0.62	30.0
14	R2	61	3.0	0.345	11.6	LOS B	1.0	26.8	0.60	0.62	29.4
Approach		191	3.0	0.345	11.6	LOS B	1.0	26.8	0.60	0.62	29.8
West: Highway 68											
5	L2	75	3.0	0.565	12.2	LOS B	3.5	89.0	0.56	0.49	30.3
2	T1	868	3.0	0.565	12.2	LOS B	3.5	89.0	0.56	0.49	30.6
12	R2	33	3.0	0.565	12.2	LOS B	3.5	89.0	0.56	0.49	30.0
Approach		976	3.0	0.565	12.2	LOS B	3.5	89.0	0.56	0.49	30.6
All Vehicles		2501	3.0	0.626	12.5	LOS B	4.3	109.0	0.55	0.45	30.2

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmsted-68

1. Olmsted Road - Highway 68
Existing Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	29	3.0	0.435	14.2	LOS B	1.4	37.0	0.65	0.69	29.6
8	T1	20	3.0	0.435	14.2	LOS B	1.4	37.0	0.65	0.69	29.7
18	R2	180	3.0	0.435	14.2	LOS B	1.4	37.0	0.65	0.69	29.1
Approach		229	3.0	0.435	14.2	LOS B	1.4	37.0	0.65	0.69	29.2
East: Highway 68											
1	L2	54	3.0	0.645	13.3	LOS B	4.8	121.7	0.48	0.31	30.0
6	T1	1075	3.0	0.645	13.3	LOS B	4.8	121.7	0.48	0.31	30.2
16	R2	135	3.0	0.645	13.3	LOS B	4.8	121.7	0.48	0.31	29.6
Approach		1264	3.0	0.645	13.3	LOS B	4.8	121.7	0.48	0.31	30.1
North: Olmsted Road											
7	L2	246	3.0	0.870	44.5	LOS E	5.6	142.2	0.89	1.16	20.8
4	T1	17	3.0	0.870	44.5	LOS E	5.6	142.2	0.89	1.16	20.9
14	R2	151	3.0	0.870	44.5	LOS E	5.6	142.2	0.89	1.16	20.6
Approach		414	3.0	0.870	44.5	LOS E	5.6	142.2	0.89	1.16	20.7
West: Highway 68											
5	L2	61	3.0	0.497	11.5	LOS B	2.7	67.9	0.58	0.56	30.7
2	T1	711	3.0	0.497	11.5	LOS B	2.7	67.9	0.58	0.56	30.9
12	R2	15	3.0	0.497	11.5	LOS B	2.7	67.9	0.58	0.56	30.3
Approach		787	3.0	0.497	11.5	LOS B	2.7	67.9	0.58	0.56	30.9
All Vehicles		2695	3.0	0.870	17.6	LOS C	5.6	142.2	0.59	0.55	28.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmstead-Garden

2. Olmsted Road - Garden Road
Existing Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	376	3.0	0.402	7.6	LOS A	2.1	54.4	0.13	0.04	31.0
8	T1	55	3.0	0.402	7.6	LOS A	2.1	54.4	0.13	0.04	31.2
Approach		432	3.0	0.402	7.6	LOS A	2.1	54.4	0.13	0.04	31.1
North: Olmsted Road											
4	T1	29	3.0	0.041	5.2	LOS A	0.1	3.4	0.42	0.32	34.0
14	R2	1	3.0	0.041	5.2	LOS A	0.1	3.4	0.42	0.32	33.2
Approach		30	3.0	0.041	5.2	LOS A	0.1	3.4	0.42	0.32	33.9
West: Garden Road											
5	L2	21	3.0	0.150	4.7	LOS A	0.6	14.6	0.12	0.04	33.9
12	R2	139	3.0	0.150	4.7	LOS A	0.6	14.6	0.12	0.04	33.2
Approach		160	3.0	0.150	4.7	LOS A	0.6	14.6	0.12	0.04	33.3
All Vehicles		622	3.0	0.402	6.7	LOS A	2.1	54.4	0.14	0.05	31.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmstead-Garden

2. Olmsted Road - Garden Road
Existing Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	126	3.0	0.200	5.2	LOS A	0.8	20.6	0.12	0.04	32.6
8	T1	87	3.0	0.200	5.2	LOS A	0.8	20.6	0.12	0.04	32.7
Approach		213	3.0	0.200	5.2	LOS A	0.8	20.6	0.12	0.04	32.7
North: Olmsted Road											
4	T1	109	3.0	0.127	4.9	LOS A	0.5	11.9	0.26	0.15	34.2
14	R2	14	3.0	0.127	4.9	LOS A	0.5	11.9	0.26	0.15	33.4
Approach		123	3.0	0.127	4.9	LOS A	0.5	11.9	0.26	0.15	34.1
West: Garden Road											
5	L2	28	3.0	0.347	7.3	LOS A	1.6	41.3	0.30	0.18	32.7
12	R2	312	3.0	0.347	7.3	LOS A	1.6	41.3	0.30	0.18	32.1
Approach		340	3.0	0.347	7.3	LOS A	1.6	41.3	0.30	0.18	32.1
All Vehicles		676	3.0	0.347	6.2	LOS A	1.6	41.3	0.24	0.13	32.6

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 218-68

12. Highway 218 - Highway 68
Existing Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Monterra Road											
3	L2	9	3.0	0.048	11.4	LOS B	0.1	2.9	0.70	0.70	30.0
8	T1	2	3.0	0.048	11.4	LOS B	0.1	2.9	0.70	0.70	30.1
18	R2	5	3.0	0.048	11.4	LOS B	0.1	2.9	0.70	0.70	29.5
Approach		16	3.0	0.048	11.4	LOS B	0.1	2.9	0.70	0.70	29.9
East: Highway 68											
1	L2	1	3.0	0.402	7.9	LOS A	1.6	39.8	0.24	0.14	32.5
6	T1	817	3.0	0.402	7.9	LOS A	1.6	39.8	0.23	0.14	32.7
16	R2	308	3.0	0.299	6.5	LOS A	1.0	24.3	0.19	0.10	32.5
Approach		1126	3.0	0.402	7.5	LOS A	1.6	39.8	0.22	0.13	32.6
North: Highway 218											
7	L2	648	3.0	0.555	16.2	LOS C	2.3	59.1	0.65	0.71	27.6
4	T1	9	3.0	0.555	15.9	LOS C	2.2	57.0	0.64	0.70	27.8
14	R2	339	3.0	0.209	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		996	3.0	0.555	10.7	LOS B	2.3	59.1	0.43	0.47	30.0
West: Highway 68											
5	L2	89	3.0	0.737	22.9	LOS C	4.4	113.9	0.74	0.86	26.5
2	T1	898	3.0	0.737	22.5	LOS C	4.4	113.9	0.73	0.84	26.8
12	R2	3	3.0	0.737	22.3	LOS C	4.3	109.7	0.72	0.83	26.5
Approach		990	3.0	0.737	22.6	LOS C	4.4	113.9	0.73	0.84	26.8
All Vehicles		3128	3.0	0.737	13.3	LOS B	4.4	113.9	0.45	0.47	29.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 218-68

12. Highway 218 - Highway 68
Existing Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Monterra Road											
3	L2	4	3.0	0.101	9.8	LOS A	0.2	6.4	0.63	0.63	31.5
8	T1	25	3.0	0.101	9.8	LOS A	0.2	6.4	0.63	0.63	31.6
18	R2	14	3.0	0.101	9.8	LOS A	0.2	6.4	0.63	0.63	30.9
Approach		43	3.0	0.101	9.8	LOS A	0.2	6.4	0.63	0.63	31.4
East: Highway 68											
1	L2	2	3.0	0.603	13.3	LOS B	3.2	83.1	0.53	0.53	30.2
6	T1	1053	3.0	0.603	13.2	LOS B	3.2	83.1	0.52	0.51	30.3
16	R2	778	3.0	0.880	29.9	LOS D	10.2	261.4	0.86	0.96	24.2
Approach		1834	3.0	0.880	20.3	LOS C	10.2	261.4	0.67	0.70	27.4
North: Highway 218											
7	L2	293	3.0	0.299	11.8	LOS B	0.9	22.8	0.63	0.65	29.2
4	T1	4	3.0	0.299	11.5	LOS B	0.9	21.9	0.62	0.63	29.4
14	R2	117	3.0	0.072	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		415	3.0	0.299	8.5	LOS A	0.9	22.8	0.45	0.46	30.8
West: Highway 68											
5	L2	274	3.0	0.576	12.5	LOS B	2.9	74.8	0.51	0.50	29.6
2	T1	734	3.0	0.576	12.4	LOS B	2.9	74.8	0.50	0.48	30.4
12	R2	2	3.0	0.576	12.3	LOS B	2.8	70.9	0.49	0.47	30.0
Approach		1010	3.0	0.576	12.4	LOS B	2.9	74.8	0.50	0.48	30.2
All Vehicles		3302	3.0	0.880	16.2	LOS C	10.2	261.4	0.59	0.61	28.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: York-68

14. York Road / Highway 68
Existing Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	936	3.0	0.779	20.8	LOS C	8.5	218.0	0.79	0.74	27.5
16	R2	428	3.0	0.779	20.8	LOS C	8.5	218.0	0.79	0.74	26.8
Approach		1364	3.0	0.779	20.8	LOS C	8.5	218.0	0.79	0.74	27.3
North: York Road											
7	L2	91	3.0	0.342	11.5	LOS B	1.0	26.6	0.59	0.61	30.1
14	R2	100	3.0	0.342	11.5	LOS B	1.0	26.6	0.59	0.61	29.6
Approach		191	3.0	0.342	11.5	LOS B	1.0	26.6	0.59	0.61	29.9
West: Highway 68											
5	L2	218	3.0	0.521	10.1	LOS B	3.1	80.5	0.36	0.21	30.8
2	T1	823	3.0	0.521	10.1	LOS B	3.1	80.5	0.36	0.21	31.4
Approach		1041	3.0	0.521	10.1	LOS B	3.1	80.5	0.36	0.21	31.3
All Vehicles		2597	3.0	0.779	15.8	LOS C	8.5	218.0	0.60	0.52	29.0

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: York-68

14. York Road / Highway 68
Existing Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	1013	3.0	0.572	11.1	LOS B	3.8	97.2	0.38	0.22	31.2
16	R2	138	3.0	0.572	11.1	LOS B	3.8	97.2	0.38	0.22	30.4
Approach		1151	3.0	0.572	11.1	LOS B	3.8	97.2	0.38	0.22	31.1
North: York Road											
7	L2	375	3.0	0.950	55.5	LOS F	9.2	235.4	0.93	1.38	18.8
14	R2	127	3.0	0.950	55.5	LOS F	9.2	235.4	0.93	1.38	18.6
Approach		502	3.0	0.950	55.5	LOS F	9.2	235.4	0.93	1.38	18.8
West: Highway 68											
5	L2	85	3.0	0.620	15.5	LOS C	4.1	105.7	0.69	0.75	29.0
2	T1	840	3.0	0.620	15.5	LOS C	4.1	105.7	0.69	0.75	29.3
Approach		925	3.0	0.620	15.5	LOS C	4.1	105.7	0.69	0.75	29.3
All Vehicles		2578	3.0	0.950	21.3	LOS C	9.2	235.4	0.60	0.64	27.0

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: CdT-68

17. Corral de Tierra Road - Highway 68
Existing Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Corral de Tierra Road											
3	L2	162	3.0	0.805	31.9	LOS D	4.7	121.1	0.82	0.99	23.7
8	T1	1	3.0	0.805	31.9	LOS D	4.7	121.1	0.82	0.99	23.8
18	R2	285	3.0	0.805	31.9	LOS D	4.7	121.1	0.82	0.99	23.4
Approach		448	3.0	0.805	31.9	LOS D	4.7	121.1	0.82	0.99	23.5
East: Higwhay 68											
1	L2	167	3.0	0.706	16.2	LOS C	6.2	159.5	0.63	0.50	28.7
6	T1	1136	3.0	0.706	16.2	LOS C	6.2	159.5	0.63	0.50	29.0
16	R2	5	3.0	0.706	16.2	LOS C	6.2	159.5	0.63	0.50	28.5
Approach		1309	3.0	0.706	16.2	LOS C	6.2	159.5	0.63	0.50	28.9
North: Corral de Tierra Road											
7	L2	1	3.0	0.009	9.6	LOS A	0.0	0.5	0.65	0.64	31.2
4	T1	1	3.0	0.009	9.6	LOS A	0.0	0.5	0.65	0.64	31.3
14	R2	1	3.0	0.009	9.6	LOS A	0.0	0.5	0.65	0.64	30.6
Approach		3	3.0	0.009	9.6	LOS A	0.0	0.5	0.65	0.64	31.0
West: Highway 68											
5	L2	1	3.0	0.536	11.0	LOS B	3.1	78.7	0.48	0.36	31.1
2	T1	939	3.0	0.536	11.0	LOS B	3.1	78.7	0.48	0.36	31.3
12	R2	47	3.0	0.536	11.0	LOS B	3.1	78.7	0.48	0.36	30.5
Approach		987	3.0	0.536	11.0	LOS B	3.1	78.7	0.48	0.36	31.2
All Vehicles		2747	3.0	0.805	16.9	LOS C	6.2	159.5	0.61	0.53	28.6

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: CdT-68

17. Corral de Tierra Road - Highway 68
Existing Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Corral de Tierra Road											
3	L2	83	3.0	0.485	16.7	LOS C	1.7	42.4	0.71	0.76	28.3
8	T1	1	3.0	0.485	16.7	LOS C	1.7	42.4	0.71	0.76	28.4
18	R2	150	3.0	0.485	16.7	LOS C	1.7	42.4	0.71	0.76	27.9
Approach		234	3.0	0.485	16.7	LOS C	1.7	42.4	0.71	0.76	28.0
East: Higwhay 68											
1	L2	208	3.0	0.602	11.9	LOS B	4.2	107.3	0.41	0.24	30.2
6	T1	988	3.0	0.602	11.9	LOS B	4.2	107.3	0.41	0.24	30.6
16	R2	9	3.0	0.602	11.9	LOS B	4.2	107.3	0.41	0.24	30.2
Approach		1204	3.0	0.602	11.9	LOS B	4.2	107.3	0.41	0.24	30.6
North: Corral de Tierra Road											
7	L2	9	3.0	0.032	8.7	LOS A	0.1	2.0	0.61	0.61	31.0
4	T1	1	3.0	0.032	8.7	LOS A	0.1	2.0	0.61	0.61	31.2
14	R2	4	3.0	0.032	8.7	LOS A	0.1	2.0	0.61	0.61	30.5
Approach		14	3.0	0.032	8.7	LOS A	0.1	2.0	0.61	0.61	30.9
West: Highway 68											
5	L2	5	3.0	0.690	16.2	LOS C	5.8	149.2	0.67	0.60	29.0
2	T1	1127	3.0	0.690	16.2	LOS C	5.8	149.2	0.67	0.60	29.1
12	R2	78	3.0	0.690	16.2	LOS C	5.8	149.2	0.67	0.60	28.5
Approach		1211	3.0	0.690	16.2	LOS C	5.8	149.2	0.67	0.60	29.1
All Vehicles		2663	3.0	0.690	14.2	LOS B	5.8	149.2	0.55	0.45	29.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: SanBen-68

18. San Benancio Road - Highway 68
Existing Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: San Benancio Road											
3	L2	166	3.0	0.849	39.8	LOS E	5.3	134.7	0.87	1.10	21.9
8	T1	1	3.0	0.849	39.8	LOS E	5.3	134.7	0.87	1.10	22.0
18	R2	260	3.0	0.849	39.8	LOS E	5.3	134.7	0.87	1.10	21.6
Approach		427	3.0	0.849	39.8	LOS E	5.3	134.7	0.87	1.10	21.7
East: Highway 68											
1	L2	163	3.0	0.689	15.5	LOS C	5.8	147.8	0.62	0.49	28.9
6	T1	1107	3.0	0.689	15.5	LOS C	5.8	147.8	0.62	0.49	29.2
16	R2	1	3.0	0.689	15.5	LOS C	5.8	147.8	0.62	0.49	28.8
Approach		1271	3.0	0.689	15.5	LOS C	5.8	147.8	0.62	0.49	29.2
North: San Benancio Road											
7	L2	1	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	31.2
4	T1	1	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	31.4
14	R2	1	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	30.7
Approach		3	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	31.1
West: Highway 68											
5	L2	1	3.0	0.616	12.6	LOS B	3.3	85.1	0.43	0.33	30.5
2	T1	1079	3.0	0.616	12.6	LOS B	3.3	85.1	0.42	0.32	30.6
12	R2	114	3.0	0.616	12.5	LOS B	3.1	80.4	0.41	0.31	29.9
Approach		1195	3.0	0.616	12.6	LOS B	3.3	85.1	0.42	0.32	30.5
All Vehicles		2896	3.0	0.849	17.9	LOS C	5.8	147.8	0.57	0.51	28.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: SanBen-68

18. San Benancio Road - Highway 68
Existing Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: San Benancio Road											
3	L2	59	3.0	0.305	12.5	LOS B	0.9	22.2	0.65	0.67	29.8
8	T1	1	3.0	0.305	12.5	LOS B	0.9	22.2	0.65	0.67	29.9
18	R2	84	3.0	0.305	12.5	LOS B	0.9	22.2	0.65	0.67	29.3
Approach		143	3.0	0.305	12.5	LOS B	0.9	22.2	0.65	0.67	29.5
East: Highway 68											
1	L2	161	3.0	0.642	12.8	LOS B	5.0	128.9	0.37	0.19	30.0
6	T1	1159	3.0	0.642	12.8	LOS B	5.0	128.9	0.37	0.19	30.3
16	R2	1	3.0	0.642	12.8	LOS B	5.0	128.9	0.37	0.19	29.8
Approach		1321	3.0	0.642	12.8	LOS B	5.0	128.9	0.37	0.19	30.3
North: San Benancio Road											
7	L2	1	3.0	0.008	9.0	LOS A	0.0	0.5	0.63	0.60	31.4
4	T1	1	3.0	0.008	9.0	LOS A	0.0	0.5	0.63	0.60	31.5
14	R2	1	3.0	0.008	9.0	LOS A	0.0	0.5	0.63	0.60	30.9
Approach		3	3.0	0.008	9.0	LOS A	0.0	0.5	0.63	0.60	31.3
West: Highway 68											
5	L2	3	3.0	0.645	13.4	LOS B	3.8	96.4	0.45	0.35	30.1
2	T1	1170	3.0	0.645	13.4	LOS B	3.8	96.4	0.44	0.34	30.2
12	R2	79	3.0	0.645	13.3	LOS B	3.6	91.1	0.43	0.33	29.6
Approach		1252	3.0	0.645	13.4	LOS B	3.8	96.4	0.44	0.34	30.2
All Vehicles		2720	3.0	0.645	13.0	LOS B	5.0	128.9	0.42	0.29	30.2

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Torero-68

19. Torero Drive - Highway 68
Existing Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	860	36.0	0.586	14.5	LOS B	2.3	75.0	0.36	0.24	29.2
16	R2	1	3.0	0.586	14.5	LOS B	2.3	75.0	0.36	0.24	29.1
Approach		861	36.0	0.586	14.5	LOS B	2.3	75.0	0.36	0.24	29.2
North: Torero Drive											
7	L2	13	3.0	0.027	7.8	LOS A	0.1	1.7	0.57	0.57	30.7
14	R2	396	3.0	0.818	37.0	LOS E	4.6	116.5	0.86	1.06	22.5
Approach		409	3.0	0.818	36.1	LOS E	4.6	116.5	0.85	1.04	22.7
West: Highway 68											
5	L2	121	3.0	0.620	11.7	LOS B	5.0	127.6	0.15	0.04	30.5
2	T1	1221	3.0	0.620	11.7	LOS B	5.0	127.6	0.15	0.04	30.8
Approach		1341	3.0	0.620	11.7	LOS B	5.0	127.6	0.15	0.04	30.8
All Vehicles		2611	13.9	0.818	16.4	LOS C	5.0	127.6	0.33	0.26	28.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Torero-68

19. Torero Drive - Highway 68
Existing Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	1286	3.0	0.669	13.9	LOS B	5.4	137.8	0.46	0.27	30.1
16	R2	60	3.0	0.669	13.9	LOS B	5.4	137.8	0.46	0.27	29.4
Approach		1346	3.0	0.669	13.9	LOS B	5.4	137.8	0.46	0.27	30.0
North: Torero Drive											
7	L2	13	3.0	0.030	8.7	LOS A	0.1	1.8	0.61	0.61	30.4
14	R2	55	3.0	0.128	10.1	LOS B	0.3	8.1	0.64	0.64	31.0
Approach		68	3.0	0.128	9.9	LOS A	0.3	8.1	0.63	0.63	30.9
West: Highway 68											
5	L2	85	3.0	0.595	11.1	LOS B	4.5	116.0	0.14	0.04	30.9
2	T1	1204	3.0	0.595	11.1	LOS B	4.5	116.0	0.14	0.04	31.1
Approach		1289	3.0	0.595	11.1	LOS B	4.5	116.0	0.14	0.04	31.1
All Vehicles		2703	3.0	0.669	12.4	LOS B	5.4	137.8	0.31	0.17	30.6

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: JCR-68

11. Josselyn Canyon Road - Highway 68
Existing Conditions
AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Josselyn Canyon Road											
3	L2	212	3.0	0.509	16.1	LOS C	1.8	47.2	0.68	0.73	27.9
18	R2	60	3.0	0.509	16.1	LOS C	1.8	47.2	0.68	0.73	27.5
Approach		272	3.0	0.509	16.1	LOS C	1.8	47.2	0.68	0.73	27.8
East: Highway 68											
1	L2	46	3.0	0.539	11.4	LOS B	3.1	79.2	0.53	0.43	30.8
6	T1	904	3.0	0.539	11.4	LOS B	3.1	79.2	0.53	0.43	31.0
Approach		950	3.0	0.539	11.4	LOS B	3.1	79.2	0.53	0.43	31.0
West: Highway 68											
2	T1	1000	3.0	0.535	10.0	LOS B	3.5	88.7	0.26	0.11	31.7
12	R2	121	3.0	0.535	10.0	LOS B	3.5	88.7	0.26	0.11	30.9
Approach		1121	3.0	0.535	10.0	LOS B	3.5	88.7	0.26	0.11	31.6
All Vehicles		2342	3.0	0.539	11.3	LOS B	3.5	88.7	0.42	0.32	30.9

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: JCR-68

11. Josselyn Canyon Road - Highway 68
Existing Conditions
PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Josselyn Canyon Road											
3	L2	76	3.0	0.171	7.7	LOS A	0.4	11.5	0.48	0.48	31.3
18	R2	32	3.0	0.171	7.7	LOS A	0.4	11.5	0.48	0.48	30.7
Approach		108	3.0	0.171	7.7	LOS A	0.4	11.5	0.48	0.48	31.1
East: Highway 68											
1	L2	62	3.0	0.701	14.9	LOS B	6.2	157.5	0.47	0.26	29.4
6	T1	1360	3.0	0.701	14.9	LOS B	6.2	157.5	0.47	0.26	29.6
Approach		1422	3.0	0.701	14.9	LOS B	6.2	157.5	0.47	0.26	29.6
West: Highway 68											
2	T1	768	3.0	0.693	13.7	LOS B	6.1	156.6	0.40	0.21	30.1
12	R2	88	3.0	0.139	4.8	LOS A	0.5	13.3	0.18	0.08	33.3
Approach		857	3.0	0.693	12.8	LOS B	6.1	156.6	0.38	0.19	30.4
All Vehicles		2386	3.0	0.701	13.8	LOS B	6.2	157.5	0.44	0.25	29.9

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Pasadera-68

15. Pasadera Drive - Highway 68
Existing Conditions
AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Boots Road											
3	L2	72	3.0	0.178	8.7	LOS A	0.5	11.9	0.53	0.53	30.9
8	T1	2	3.0	0.178	8.7	LOS A	0.5	11.9	0.53	0.53	31.0
18	R2	26	3.0	0.178	8.7	LOS A	0.5	11.9	0.53	0.53	30.3
Approach		100	3.0	0.178	8.7	LOS A	0.5	11.9	0.53	0.53	30.7
East: Highway 68											
1	L2	20	3.0	0.636	13.0	LOS B	4.6	118.0	0.48	0.31	30.2
6	T1	1205	3.0	0.636	13.0	LOS B	4.6	118.0	0.48	0.31	30.4
16	R2	22	3.0	0.636	13.0	LOS B	4.6	118.0	0.48	0.31	29.7
Approach		1247	3.0	0.636	13.0	LOS B	4.6	118.0	0.48	0.31	30.4
North: Pasadera Drive											
7	L2	34	3.0	0.230	12.0	LOS B	0.6	15.4	0.67	0.67	30.1
4	T1	1	3.0	0.230	12.0	LOS B	0.6	15.4	0.67	0.67	30.3
14	R2	64	3.0	0.230	12.0	LOS B	0.6	15.4	0.67	0.67	29.6
Approach		99	3.0	0.230	12.0	LOS B	0.6	15.4	0.67	0.67	29.8
West: Highway 68											
5	L2	36	3.0	0.443	8.4	LOS A	2.4	62.4	0.24	0.11	32.1
2	T1	858	3.0	0.443	8.4	LOS A	2.4	62.4	0.24	0.11	32.3
12	R2	26	3.0	0.443	8.4	LOS A	2.4	62.4	0.24	0.11	31.6
Approach		920	3.0	0.443	8.4	LOS A	2.4	62.4	0.24	0.11	32.3
All Vehicles		2365	3.0	0.636	11.0	LOS B	4.6	118.0	0.40	0.26	31.1

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Pasadera-68

15. Pasadera Drive - Highway 68
Existing Conditions
PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Boots Road											
3	L2	45	3.0	0.120	9.3	LOS A	0.3	7.7	0.60	0.60	30.5
8	T1	3	3.0	0.120	9.3	LOS A	0.3	7.7	0.60	0.60	30.6
18	R2	9	3.0	0.120	9.3	LOS A	0.3	7.7	0.60	0.60	30.0
Approach		57	3.0	0.120	9.3	LOS A	0.3	7.7	0.60	0.60	30.4
East: Highway 68											
1	L2	9	3.0	0.537	10.5	LOS B	3.3	83.9	0.39	0.24	31.3
6	T1	1024	3.0	0.537	10.5	LOS B	3.3	83.9	0.39	0.24	31.5
16	R2	25	3.0	0.537	10.5	LOS B	3.3	83.9	0.39	0.24	30.7
Approach		1058	3.0	0.537	10.5	LOS B	3.3	83.9	0.39	0.24	31.4
North: Pasadera Drive											
7	L2	21	3.0	0.134	8.9	LOS A	0.3	8.6	0.57	0.57	31.5
4	T1	2	3.0	0.134	8.9	LOS A	0.3	8.6	0.57	0.57	31.6
14	R2	45	3.0	0.134	8.9	LOS A	0.3	8.6	0.57	0.57	31.0
Approach		67	3.0	0.134	8.9	LOS A	0.3	8.6	0.57	0.57	31.1
West: Highway 68											
5	L2	57	3.0	0.577	10.8	LOS B	4.1	105.5	0.23	0.09	31.1
2	T1	1092	3.0	0.577	10.8	LOS B	4.1	105.5	0.23	0.09	31.3
12	R2	77	3.0	0.577	10.8	LOS B	4.1	105.5	0.23	0.09	30.6
Approach		1226	3.0	0.577	10.8	LOS B	4.1	105.5	0.23	0.09	31.2
All Vehicles		2408	3.0	0.577	10.6	LOS B	4.1	105.5	0.32	0.18	31.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Laureles-68

16. Laureles Grade Road - Highway 68
Existing Conditions
AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Laureles Grade Road											
3	L2	200	3.0	0.312	9.7	LOS A	0.9	23.7	0.52	0.53	30.0
18	R2	273	3.0	0.426	11.8	LOS B	1.5	37.6	0.56	0.59	30.3
Approach		473	3.0	0.426	10.9	LOS B	1.5	37.6	0.54	0.56	30.2
East: Highway 68											
1	L2	250	3.0	0.781	20.7	LOS C	8.7	222.9	0.78	0.71	27.0
6	T1	1145	3.0	0.781	20.7	LOS C	8.7	222.9	0.78	0.71	27.4
Approach		1395	3.0	0.781	20.7	LOS C	8.7	222.9	0.78	0.71	27.3
West: Highway 68											
2	T1	746	3.0	0.440	9.7	LOS A	2.1	54.0	0.50	0.42	31.8
12	R2	168	3.0	0.104	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		914	3.0	0.440	7.9	LOS A	2.1	54.0	0.41	0.34	32.5
All Vehicles		2782	3.0	0.781	14.8	LOS B	8.7	222.9	0.61	0.56	29.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Laureles-68

16. Laureles Grade Road - Highway 68
Existing Conditions
PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Laureles Grade Road											
3	L2	210	3.0	0.354	11.2	LOS B	1.1	28.2	0.57	0.59	29.4
18	R2	355	3.0	0.600	17.8	LOS C	2.5	65.1	0.67	0.74	28.0
Approach		565	3.0	0.600	15.3	LOS C	2.5	65.1	0.63	0.68	28.5
East: Highway 68											
1	L2	211	3.0	0.600	13.0	LOS B	4.0	102.6	0.57	0.49	29.6
6	T1	850	3.0	0.600	13.0	LOS B	4.0	102.6	0.57	0.49	30.2
Approach		1061	3.0	0.600	13.0	LOS B	4.0	102.6	0.57	0.49	30.1
West: Highway 68											
2	T1	855	3.0	0.484	10.3	LOS B	2.5	64.3	0.49	0.39	31.6
12	R2	149	3.0	0.092	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		1004	3.0	0.484	8.7	LOS A	2.5	64.3	0.42	0.33	32.2
All Vehicles		2630	3.0	0.600	11.9	LOS B	4.0	102.6	0.53	0.47	30.5

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmsted-68

1. Olmsted Road - Highway 68
Existing Plus Proposed Project Short-Term Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	43	3.0	0.293	11.3	LOS B	0.8	21.3	0.61	0.63	30.5
8	T1	27	3.0	0.293	11.3	LOS B	0.8	21.3	0.61	0.63	30.6
18	R2	80	3.0	0.293	11.3	LOS B	0.8	21.3	0.61	0.63	30.0
Approach		151	3.0	0.293	11.3	LOS B	0.8	21.3	0.61	0.63	30.2
East: Highway 68											
1	L2	101	3.0	0.623	13.0	LOS B	4.2	107.9	0.52	0.37	30.0
6	T1	801	3.0	0.623	13.0	LOS B	4.2	107.9	0.52	0.37	30.2
16	R2	276	3.0	0.623	13.0	LOS B	4.2	107.9	0.52	0.37	29.7
Approach		1178	3.0	0.623	13.0	LOS B	4.2	107.9	0.52	0.37	30.1
North: Olmsted Road											
7	L2	107	3.0	0.343	11.6	LOS B	1.0	26.6	0.59	0.62	29.9
4	T1	23	3.0	0.343	11.6	LOS B	1.0	26.6	0.59	0.62	30.1
14	R2	61	3.0	0.343	11.6	LOS B	1.0	26.6	0.59	0.62	29.5
Approach		190	3.0	0.343	11.6	LOS B	1.0	26.6	0.59	0.62	29.8
West: Highway 68											
5	L2	73	3.0	0.563	12.2	LOS B	3.4	88.3	0.56	0.49	30.4
2	T1	868	3.0	0.563	12.2	LOS B	3.4	88.3	0.56	0.49	30.6
12	R2	33	3.0	0.563	12.2	LOS B	3.4	88.3	0.56	0.49	30.0
Approach		974	3.0	0.563	12.2	LOS B	3.4	88.3	0.56	0.49	30.6
All Vehicles		2493	3.0	0.623	12.5	LOS B	4.2	107.9	0.55	0.45	30.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmsted-68

1. Olmsted Road - Highway 68
Existing Plus Proposed Project Short-Term Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	29	3.0	0.434	14.1	LOS B	1.4	36.9	0.65	0.69	29.6
8	T1	20	3.0	0.434	14.1	LOS B	1.4	36.9	0.65	0.69	29.8
18	R2	180	3.0	0.434	14.1	LOS B	1.4	36.9	0.65	0.69	29.2
Approach		229	3.0	0.434	14.1	LOS B	1.4	36.9	0.65	0.69	29.3
East: Highway 68											
1	L2	54	3.0	0.641	13.2	LOS B	4.7	120.6	0.48	0.30	30.1
6	T1	1075	3.0	0.641	13.2	LOS B	4.7	120.6	0.48	0.30	30.3
16	R2	130	3.0	0.641	13.2	LOS B	4.7	120.6	0.48	0.30	29.6
Approach		1260	3.0	0.641	13.2	LOS B	4.7	120.6	0.48	0.30	30.2
North: Olmsted Road											
7	L2	243	3.0	0.859	42.8	LOS E	5.3	135.4	0.89	1.13	21.1
4	T1	17	3.0	0.859	42.8	LOS E	5.3	135.4	0.89	1.13	21.2
14	R2	148	3.0	0.859	42.8	LOS E	5.3	135.4	0.89	1.13	20.9
Approach		409	3.0	0.859	42.8	LOS E	5.3	135.4	0.89	1.13	21.1
West: Highway 68											
5	L2	59	3.0	0.495	11.4	LOS B	2.6	67.3	0.58	0.55	30.7
2	T1	711	3.0	0.495	11.4	LOS B	2.6	67.3	0.58	0.55	31.0
12	R2	15	3.0	0.495	11.4	LOS B	2.6	67.3	0.58	0.55	30.4
Approach		785	3.0	0.495	11.4	LOS B	2.6	67.3	0.58	0.55	30.9
All Vehicles		2683	3.0	0.859	17.3	LOS C	5.3	135.4	0.58	0.54	28.4

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmstead-Garden

2. Olmsted Road - Garden Road
Existing Plus Proposed Project Short-Term Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	376	3.0	0.397	7.6	LOS A	2.1	53.3	0.14	0.05	31.0
8	T1	21	3.0	0.397	7.6	LOS A	2.1	53.3	0.14	0.05	31.2
18	R2	28	3.0	0.397	7.6	LOS A	2.1	53.3	0.14	0.05	30.5
Approach		425	3.0	0.397	7.6	LOS A	2.1	53.3	0.14	0.05	31.0
East: Garden Road											
1	L2	15	3.0	0.030	5.3	LOS A	0.1	2.5	0.43	0.33	32.4
6	T1	1	3.0	0.030	5.3	LOS A	0.1	2.5	0.43	0.33	32.5
16	R2	5	3.0	0.030	5.3	LOS A	0.1	2.5	0.43	0.33	31.8
Approach		22	3.0	0.030	5.3	LOS A	0.1	2.5	0.43	0.33	32.2
North: Olmsted Road											
7	L2	4	3.0	0.027	5.2	LOS A	0.1	2.2	0.43	0.32	33.4
4	T1	13	3.0	0.027	5.2	LOS A	0.1	2.2	0.43	0.32	33.5
14	R2	2	3.0	0.027	5.2	LOS A	0.1	2.2	0.43	0.32	32.8
Approach		20	3.0	0.027	5.2	LOS A	0.1	2.2	0.43	0.32	33.4
West: Garden Road											
5	L2	10	3.0	0.151	4.7	LOS A	0.6	14.7	0.12	0.04	34.0
2	T1	11	3.0	0.151	4.7	LOS A	0.6	14.7	0.12	0.04	34.2
12	R2	139	3.0	0.151	4.7	LOS A	0.6	14.7	0.12	0.04	33.4
Approach		160	3.0	0.151	4.7	LOS A	0.6	14.7	0.12	0.04	33.5
All Vehicles		626	3.0	0.397	6.7	LOS A	2.1	53.3	0.16	0.07	31.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmstead-Garden

2. Olmsted Road - Garden Road
Existing Plus Proposed Project Short-Term Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	126	3.0	0.196	5.2	LOS A	0.8	20.0	0.14	0.06	32.6
8	T1	37	3.0	0.196	5.2	LOS A	0.8	20.0	0.14	0.06	32.7
18	R2	43	3.0	0.196	5.2	LOS A	0.8	20.0	0.14	0.06	32.0
Approach		207	3.0	0.196	5.2	LOS A	0.8	20.0	0.14	0.06	32.5
East: Garden Road											
1	L2	54	3.0	0.087	4.7	LOS A	0.3	7.7	0.30	0.19	32.7
6	T1	14	3.0	0.087	4.7	LOS A	0.3	7.7	0.30	0.19	32.8
16	R2	11	3.0	0.087	4.7	LOS A	0.3	7.7	0.30	0.19	32.1
Approach		79	3.0	0.087	4.7	LOS A	0.3	7.7	0.30	0.19	32.6
North: Olmsted Road											
7	L2	11	3.0	0.080	4.8	LOS A	0.3	7.1	0.31	0.20	33.8
4	T1	47	3.0	0.080	4.8	LOS A	0.3	7.1	0.31	0.20	33.9
14	R2	14	3.0	0.080	4.8	LOS A	0.3	7.1	0.31	0.20	33.1
Approach		72	3.0	0.080	4.8	LOS A	0.3	7.1	0.31	0.20	33.7
West: Garden Road											
5	L2	14	3.0	0.349	7.4	LOS A	1.6	41.6	0.31	0.19	32.7
2	T1	14	3.0	0.349	7.4	LOS A	1.6	41.6	0.31	0.19	32.9
12	R2	313	3.0	0.349	7.4	LOS A	1.6	41.6	0.31	0.19	32.1
Approach		341	3.0	0.349	7.4	LOS A	1.6	41.6	0.31	0.19	32.2
All Vehicles		699	3.0	0.349	6.2	LOS A	1.6	41.6	0.26	0.15	32.5

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 218-68

12. Highway 218 - Highway 68
Existing Plus Proposed Project Short-Term Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Monterra Road											
3	L2	9	3.0	0.048	11.4	LOS B	0.1	2.9	0.70	0.70	30.0
8	T1	2	3.0	0.048	11.4	LOS B	0.1	2.9	0.70	0.70	30.1
18	R2	5	3.0	0.048	11.4	LOS B	0.1	2.9	0.70	0.70	29.5
Approach		16	3.0	0.048	11.4	LOS B	0.1	2.9	0.70	0.70	29.9
East: Highway 68											
1	L2	1	3.0	0.401	7.9	LOS A	1.5	39.6	0.24	0.14	32.5
6	T1	815	3.0	0.401	7.9	LOS A	1.5	39.6	0.23	0.14	32.7
16	R2	310	3.0	0.302	6.5	LOS A	1.0	24.6	0.19	0.10	32.5
Approach		1126	3.0	0.401	7.5	LOS A	1.5	39.6	0.22	0.13	32.6
North: Highway 218											
7	L2	649	3.0	0.555	16.2	LOS C	2.3	59.1	0.65	0.71	27.6
4	T1	9	3.0	0.555	15.9	LOS C	2.2	57.0	0.64	0.70	27.9
14	R2	337	3.0	0.207	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		995	3.0	0.555	10.7	LOS B	2.3	59.1	0.43	0.47	30.0
West: Highway 68											
5	L2	89	3.0	0.737	22.9	LOS C	4.4	113.7	0.74	0.86	26.5
2	T1	897	3.0	0.737	22.5	LOS C	4.4	113.7	0.73	0.84	26.8
12	R2	3	3.0	0.737	22.3	LOS C	4.3	109.6	0.72	0.83	26.5
Approach		989	3.0	0.737	22.6	LOS C	4.4	113.7	0.73	0.84	26.8
All Vehicles		3126	3.0	0.737	13.3	LOS B	4.4	113.7	0.45	0.47	29.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 218-68

12. Highway 218 - Highway 68
Existing Plus Proposed Project Short-Term Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Monterra Road											
3	L2	4	3.0	0.101	9.8	LOS A	0.2	6.4	0.63	0.63	31.5
8	T1	25	3.0	0.101	9.8	LOS A	0.2	6.4	0.63	0.63	31.6
18	R2	14	3.0	0.101	9.8	LOS A	0.2	6.4	0.63	0.63	30.9
Approach		43	3.0	0.101	9.8	LOS A	0.2	6.4	0.63	0.63	31.4
East: Highway 68											
1	L2	2	3.0	0.601	13.2	LOS B	3.2	82.4	0.53	0.52	30.2
6	T1	1051	3.0	0.601	13.1	LOS B	3.2	82.4	0.52	0.51	30.4
16	R2	780	3.0	0.881	30.0	LOS D	10.3	263.6	0.86	0.97	24.2
Approach		1834	3.0	0.881	20.3	LOS C	10.3	263.6	0.67	0.70	27.4
North: Highway 218											
7	L2	297	3.0	0.302	11.8	LOS B	0.9	23.0	0.63	0.65	29.2
4	T1	4	3.0	0.302	11.6	LOS B	0.9	22.2	0.62	0.64	29.4
14	R2	115	3.0	0.071	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		416	3.0	0.302	8.6	LOS A	0.9	23.0	0.46	0.47	30.8
West: Highway 68											
5	L2	272	3.0	0.575	12.5	LOS B	2.9	74.4	0.51	0.50	29.6
2	T1	732	3.0	0.575	12.4	LOS B	2.9	74.4	0.50	0.48	30.4
12	R2	2	3.0	0.575	12.3	LOS B	2.8	70.6	0.49	0.47	30.0
Approach		1005	3.0	0.575	12.4	LOS B	2.9	74.4	0.50	0.49	30.2
All Vehicles		3299	3.0	0.881	16.3	LOS C	10.3	263.6	0.59	0.61	28.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: York-68

14. York Road / Highway 68
Existing Plus Proposed Project Short-Term Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	936	3.0	0.779	20.8	LOS C	8.5	218.0	0.79	0.74	27.5
16	R2	428	3.0	0.779	20.8	LOS C	8.5	218.0	0.79	0.74	26.8
Approach		1364	3.0	0.779	20.8	LOS C	8.5	218.0	0.79	0.74	27.3
North: York Road											
7	L2	91	3.0	0.342	11.5	LOS B	1.0	26.6	0.59	0.61	30.1
14	R2	100	3.0	0.342	11.5	LOS B	1.0	26.6	0.59	0.61	29.6
Approach		191	3.0	0.342	11.5	LOS B	1.0	26.6	0.59	0.61	29.9
West: Highway 68											
5	L2	218	3.0	0.521	10.1	LOS B	3.1	80.5	0.36	0.21	30.8
2	T1	823	3.0	0.521	10.1	LOS B	3.1	80.5	0.36	0.21	31.4
Approach		1041	3.0	0.521	10.1	LOS B	3.1	80.5	0.36	0.21	31.3
All Vehicles		2597	3.0	0.779	15.8	LOS C	8.5	218.0	0.60	0.52	29.0

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: York-68

14. York Road / Highway 68
Existing Plus Proposed Project Short-Term Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	1013	3.0	0.572	11.1	LOS B	3.8	97.2	0.38	0.22	31.2
16	R2	138	3.0	0.572	11.1	LOS B	3.8	97.2	0.38	0.22	30.4
Approach		1151	3.0	0.572	11.1	LOS B	3.8	97.2	0.38	0.22	31.1
North: York Road											
7	L2	375	3.0	0.950	55.5	LOS F	9.2	235.4	0.93	1.38	18.8
14	R2	127	3.0	0.950	55.5	LOS F	9.2	235.4	0.93	1.38	18.6
Approach		502	3.0	0.950	55.5	LOS F	9.2	235.4	0.93	1.38	18.8
West: Highway 68											
5	L2	85	3.0	0.621	15.5	LOS C	4.1	106.0	0.69	0.76	29.0
2	T1	841	3.0	0.621	15.5	LOS C	4.1	106.0	0.69	0.76	29.3
Approach		926	3.0	0.621	15.5	LOS C	4.1	106.0	0.69	0.76	29.3
All Vehicles		2579	3.0	0.950	21.3	LOS C	9.2	235.4	0.60	0.64	27.0

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: CdT-68

17. Corral de Tierra Road - Highway 68
Existing Plus Proposed Project Short-Term Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Corral de Tierra Road											
3	L2	162	3.0	0.805	31.9	LOS D	4.7	121.1	0.82	0.99	23.7
8	T1	1	3.0	0.805	31.9	LOS D	4.7	121.1	0.82	0.99	23.8
18	R2	285	3.0	0.805	31.9	LOS D	4.7	121.1	0.82	0.99	23.4
Approach		448	3.0	0.805	31.9	LOS D	4.7	121.1	0.82	0.99	23.5
East: Higwhay 68											
1	L2	167	3.0	0.706	16.2	LOS C	6.2	159.5	0.63	0.50	28.7
6	T1	1136	3.0	0.706	16.2	LOS C	6.2	159.5	0.63	0.50	29.0
16	R2	5	3.0	0.706	16.2	LOS C	6.2	159.5	0.63	0.50	28.5
Approach		1309	3.0	0.706	16.2	LOS C	6.2	159.5	0.63	0.50	28.9
North: Corral de Tierra Road											
7	L2	1	3.0	0.009	9.6	LOS A	0.0	0.5	0.65	0.64	31.2
4	T1	1	3.0	0.009	9.6	LOS A	0.0	0.5	0.65	0.64	31.3
14	R2	1	3.0	0.009	9.6	LOS A	0.0	0.5	0.65	0.64	30.6
Approach		3	3.0	0.009	9.6	LOS A	0.0	0.5	0.65	0.64	31.0
West: Highway 68											
5	L2	1	3.0	0.536	11.0	LOS B	3.1	78.7	0.48	0.36	31.1
2	T1	939	3.0	0.536	11.0	LOS B	3.1	78.7	0.48	0.36	31.3
12	R2	47	3.0	0.536	11.0	LOS B	3.1	78.7	0.48	0.36	30.5
Approach		987	3.0	0.536	11.0	LOS B	3.1	78.7	0.48	0.36	31.2
All Vehicles		2747	3.0	0.805	16.9	LOS C	6.2	159.5	0.61	0.53	28.6

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: CdT-68

17. Corral de Tierra Road - Highway 68
Existing Plus Proposed Project Short-Term Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Corral de Tierra Road											
3	L2	83	3.0	0.485	16.8	LOS C	1.7	42.5	0.71	0.76	28.3
8	T1	1	3.0	0.485	16.8	LOS C	1.7	42.5	0.71	0.76	28.4
18	R2	150	3.0	0.485	16.8	LOS C	1.7	42.5	0.71	0.76	27.9
Approach		234	3.0	0.485	16.8	LOS C	1.7	42.5	0.71	0.76	28.0
East: Higwhay 68											
1	L2	208	3.0	0.602	11.9	LOS B	4.2	107.3	0.41	0.24	30.2
6	T1	988	3.0	0.602	11.9	LOS B	4.2	107.3	0.41	0.24	30.6
16	R2	9	3.0	0.602	11.9	LOS B	4.2	107.3	0.41	0.24	30.2
Approach		1204	3.0	0.602	11.9	LOS B	4.2	107.3	0.41	0.24	30.6
North: Corral de Tierra Road											
7	L2	9	3.0	0.032	8.7	LOS A	0.1	2.0	0.61	0.61	31.0
4	T1	1	3.0	0.032	8.7	LOS A	0.1	2.0	0.61	0.61	31.2
14	R2	4	3.0	0.032	8.7	LOS A	0.1	2.0	0.61	0.61	30.5
Approach		14	3.0	0.032	8.7	LOS A	0.1	2.0	0.61	0.61	30.9
West: Highway 68											
5	L2	5	3.0	0.691	16.2	LOS C	5.8	149.6	0.67	0.60	29.0
2	T1	1128	3.0	0.691	16.2	LOS C	5.8	149.6	0.67	0.60	29.1
12	R2	78	3.0	0.691	16.2	LOS C	5.8	149.6	0.67	0.60	28.5
Approach		1212	3.0	0.691	16.2	LOS C	5.8	149.6	0.67	0.60	29.1
All Vehicles		2664	3.0	0.691	14.3	LOS B	5.8	149.6	0.55	0.45	29.6

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: SanBen-68

18. San Benancio Road - Highway 68
Existing Plus Proposed Project Short-Term Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: San Benancio Road											
3	L2	166	3.0	0.849	39.8	LOS E	5.3	134.7	0.87	1.10	21.9
8	T1	1	3.0	0.849	39.8	LOS E	5.3	134.7	0.87	1.10	22.0
18	R2	260	3.0	0.849	39.8	LOS E	5.3	134.7	0.87	1.10	21.6
Approach		427	3.0	0.849	39.8	LOS E	5.3	134.7	0.87	1.10	21.7
East: Highway 68											
1	L2	163	3.0	0.689	15.5	LOS C	5.8	147.8	0.62	0.49	28.9
6	T1	1107	3.0	0.689	15.5	LOS C	5.8	147.8	0.62	0.49	29.2
16	R2	1	3.0	0.689	15.5	LOS C	5.8	147.8	0.62	0.49	28.8
Approach		1271	3.0	0.689	15.5	LOS C	5.8	147.8	0.62	0.49	29.2
North: San Benancio Road											
7	L2	1	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	31.2
4	T1	1	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	31.4
14	R2	1	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	30.7
Approach		3	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	31.1
West: Highway 68											
5	L2	1	3.0	0.616	12.6	LOS B	3.3	85.1	0.43	0.33	30.5
2	T1	1079	3.0	0.616	12.6	LOS B	3.3	85.1	0.42	0.32	30.6
12	R2	114	3.0	0.616	12.5	LOS B	3.1	80.4	0.41	0.31	29.9
Approach		1195	3.0	0.616	12.6	LOS B	3.3	85.1	0.42	0.32	30.5
All Vehicles		2896	3.0	0.849	17.9	LOS C	5.8	147.8	0.57	0.51	28.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: SanBen-68

18. San Benancio Road - Highway 68
Existing Plus Proposed Project Short-Term Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: San Benancio Road											
3	L2	59	3.0	0.305	12.5	LOS B	0.9	22.2	0.65	0.68	29.8
8	T1	1	3.0	0.305	12.5	LOS B	0.9	22.2	0.65	0.68	29.9
18	R2	84	3.0	0.305	12.5	LOS B	0.9	22.2	0.65	0.68	29.3
Approach		143	3.0	0.305	12.5	LOS B	0.9	22.2	0.65	0.68	29.5
East: Highway 68											
1	L2	161	3.0	0.642	12.8	LOS B	5.0	128.9	0.37	0.19	30.0
6	T1	1159	3.0	0.642	12.8	LOS B	5.0	128.9	0.37	0.19	30.3
16	R2	1	3.0	0.642	12.8	LOS B	5.0	128.9	0.37	0.19	29.8
Approach		1321	3.0	0.642	12.8	LOS B	5.0	128.9	0.37	0.19	30.3
North: San Benancio Road											
7	L2	1	3.0	0.008	9.0	LOS A	0.0	0.5	0.63	0.60	31.4
4	T1	1	3.0	0.008	9.0	LOS A	0.0	0.5	0.63	0.60	31.5
14	R2	1	3.0	0.008	9.0	LOS A	0.0	0.5	0.63	0.60	30.9
Approach		3	3.0	0.008	9.0	LOS A	0.0	0.5	0.63	0.60	31.3
West: Highway 68											
5	L2	3	3.0	0.645	13.4	LOS B	3.8	96.6	0.45	0.35	30.1
2	T1	1171	3.0	0.645	13.4	LOS B	3.8	96.6	0.44	0.34	30.2
12	R2	79	3.0	0.645	13.4	LOS B	3.6	91.3	0.43	0.33	29.6
Approach		1253	3.0	0.645	13.4	LOS B	3.8	96.6	0.44	0.34	30.2
All Vehicles		2721	3.0	0.645	13.0	LOS B	5.0	128.9	0.42	0.29	30.2

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Torero-68

19. Torero Drive - Highway 68
Existing Plus Proposed Project Short-Term Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	859	36.0	0.586	14.5	LOS B	2.3	74.9	0.36	0.24	29.2
16	R2	1	3.0	0.586	14.5	LOS B	2.3	74.9	0.36	0.24	29.1
Approach		860	36.0	0.586	14.5	LOS B	2.3	74.9	0.36	0.24	29.2
North: Torero Drive											
7	L2	13	3.0	0.027	7.8	LOS A	0.1	1.7	0.56	0.56	30.7
14	R2	396	3.0	0.817	36.9	LOS E	4.5	116.2	0.86	1.05	22.6
Approach		409	3.0	0.817	35.9	LOS E	4.5	116.2	0.85	1.04	22.8
West: Highway 68											
5	L2	121	3.0	0.620	11.7	LOS B	5.0	127.6	0.15	0.04	30.5
2	T1	1221	3.0	0.620	11.7	LOS B	5.0	127.6	0.15	0.04	30.8
Approach		1341	3.0	0.620	11.7	LOS B	5.0	127.6	0.15	0.04	30.8
All Vehicles		2610	13.9	0.817	16.4	LOS C	5.0	127.6	0.33	0.26	28.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Torero-68

19. Torero Drive - Highway 68
Existing Plus Proposed Project Short-Term Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	1286	3.0	0.669	13.9	LOS B	5.4	137.8	0.46	0.27	30.1
16	R2	60	3.0	0.669	13.9	LOS B	5.4	137.8	0.46	0.27	29.4
Approach		1346	3.0	0.669	13.9	LOS B	5.4	137.8	0.46	0.27	30.0
North: Torero Drive											
7	L2	13	3.0	0.030	8.7	LOS A	0.1	1.8	0.61	0.61	30.4
14	R2	55	3.0	0.128	10.1	LOS B	0.3	8.1	0.64	0.64	31.0
Approach		68	3.0	0.128	9.9	LOS A	0.3	8.1	0.63	0.63	30.9
West: Highway 68											
5	L2	85	3.0	0.596	11.1	LOS B	4.5	116.2	0.14	0.04	30.9
2	T1	1205	3.0	0.596	11.1	LOS B	4.5	116.2	0.14	0.04	31.1
Approach		1290	3.0	0.596	11.1	LOS B	4.5	116.2	0.14	0.04	31.1
All Vehicles		2704	3.0	0.669	12.4	LOS B	5.4	137.8	0.31	0.17	30.6

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: JCR-68

11. Josselyn Canyon Road - Highway 68
Existing Plus Proposed Project Short-Term Conditions
AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Josselyn Canyon Road											
3	L2	212	3.0	0.509	16.0	LOS C	1.8	47.2	0.68	0.73	28.0
18	R2	60	3.0	0.509	16.0	LOS C	1.8	47.2	0.68	0.73	27.5
Approach		272	3.0	0.509	16.0	LOS C	1.8	47.2	0.68	0.73	27.9
East: Highway 68											
1	L2	46	3.0	0.539	11.4	LOS B	3.1	79.2	0.53	0.43	30.8
6	T1	904	3.0	0.539	11.4	LOS B	3.1	79.2	0.53	0.43	31.0
Approach		950	3.0	0.539	11.4	LOS B	3.1	79.2	0.53	0.43	31.0
West: Highway 68											
2	T1	998	3.0	0.534	10.0	LOS A	3.5	88.4	0.26	0.11	31.7
12	R2	121	3.0	0.534	10.0	LOS A	3.5	88.4	0.26	0.11	30.9
Approach		1118	3.0	0.534	10.0	LOS A	3.5	88.4	0.26	0.11	31.6
All Vehicles		2340	3.0	0.539	11.3	LOS B	3.5	88.4	0.41	0.32	30.9

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: JCR-68

11. Josselyn Canyon Road - Highway 68
Existing Plus Proposed Project Short-Term Conditions
PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Josselyn Canyon Road											
3	L2	76	3.0	0.170	7.7	LOS A	0.4	11.4	0.48	0.48	31.3
18	R2	32	3.0	0.170	7.7	LOS A	0.4	11.4	0.48	0.48	30.8
Approach		108	3.0	0.170	7.7	LOS A	0.4	11.4	0.48	0.48	31.1
East: Highway 68											
1	L2	62	3.0	0.699	14.8	LOS B	6.1	156.5	0.47	0.26	29.4
6	T1	1357	3.0	0.699	14.8	LOS B	6.1	156.5	0.47	0.26	29.6
Approach		1418	3.0	0.699	14.8	LOS B	6.1	156.5	0.47	0.26	29.6
West: Highway 68											
2	T1	766	3.0	0.691	13.7	LOS B	6.1	155.5	0.40	0.21	30.1
12	R2	88	3.0	0.139	4.8	LOS A	0.5	13.3	0.18	0.08	33.3
Approach		854	3.0	0.691	12.8	LOS B	6.1	155.5	0.38	0.19	30.4
All Vehicles		2380	3.0	0.699	13.8	LOS B	6.1	156.5	0.43	0.25	30.0

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Pasadera-68

15. Pasadera Drive - Highway 68
Existing Plus Proposed Project Short-Term Conditions
AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Boots Road											
3	L2	72	3.0	0.178	8.7	LOS A	0.5	11.9	0.53	0.53	30.9
8	T1	2	3.0	0.178	8.7	LOS A	0.5	11.9	0.53	0.53	31.0
18	R2	26	3.0	0.178	8.7	LOS A	0.5	11.9	0.53	0.53	30.3
Approach		100	3.0	0.178	8.7	LOS A	0.5	11.9	0.53	0.53	30.7
East: Highway 68											
1	L2	20	3.0	0.636	13.0	LOS B	4.6	118.0	0.48	0.31	30.2
6	T1	1205	3.0	0.636	13.0	LOS B	4.6	118.0	0.48	0.31	30.4
16	R2	22	3.0	0.636	13.0	LOS B	4.6	118.0	0.48	0.31	29.7
Approach		1247	3.0	0.636	13.0	LOS B	4.6	118.0	0.48	0.31	30.4
North: Pasadera Drive											
7	L2	34	3.0	0.230	12.0	LOS B	0.6	15.4	0.67	0.67	30.1
4	T1	1	3.0	0.230	12.0	LOS B	0.6	15.4	0.67	0.67	30.3
14	R2	64	3.0	0.230	12.0	LOS B	0.6	15.4	0.67	0.67	29.6
Approach		99	3.0	0.230	12.0	LOS B	0.6	15.4	0.67	0.67	29.8
West: Highway 68											
5	L2	36	3.0	0.443	8.4	LOS A	2.4	62.4	0.24	0.11	32.1
2	T1	858	3.0	0.443	8.4	LOS A	2.4	62.4	0.24	0.11	32.3
12	R2	26	3.0	0.443	8.4	LOS A	2.4	62.4	0.24	0.11	31.6
Approach		920	3.0	0.443	8.4	LOS A	2.4	62.4	0.24	0.11	32.3
All Vehicles		2365	3.0	0.636	11.0	LOS B	4.6	118.0	0.40	0.26	31.1

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Pasadera-68

15. Pasadera Drive - Highway 68
Existing Plus Proposed Project Short-Term Conditions
PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Boots Road											
3	L2	45	3.0	0.120	9.3	LOS A	0.3	7.7	0.60	0.60	30.5
8	T1	3	3.0	0.120	9.3	LOS A	0.3	7.7	0.60	0.60	30.6
18	R2	9	3.0	0.120	9.3	LOS A	0.3	7.7	0.60	0.60	30.0
Approach		57	3.0	0.120	9.3	LOS A	0.3	7.7	0.60	0.60	30.4
East: Highway 68											
1	L2	9	3.0	0.537	10.5	LOS B	3.3	83.9	0.39	0.24	31.3
6	T1	1024	3.0	0.537	10.5	LOS B	3.3	83.9	0.39	0.24	31.5
16	R2	25	3.0	0.537	10.5	LOS B	3.3	83.9	0.39	0.24	30.7
Approach		1058	3.0	0.537	10.5	LOS B	3.3	83.9	0.39	0.24	31.4
North: Pasadera Drive											
7	L2	21	3.0	0.134	8.9	LOS A	0.3	8.6	0.57	0.57	31.5
4	T1	2	3.0	0.134	8.9	LOS A	0.3	8.6	0.57	0.57	31.6
14	R2	45	3.0	0.134	8.9	LOS A	0.3	8.6	0.57	0.57	31.0
Approach		67	3.0	0.134	8.9	LOS A	0.3	8.6	0.57	0.57	31.1
West: Highway 68											
5	L2	57	3.0	0.578	10.8	LOS B	4.1	105.7	0.23	0.09	31.1
2	T1	1093	3.0	0.578	10.8	LOS B	4.1	105.7	0.23	0.09	31.3
12	R2	77	3.0	0.578	10.8	LOS B	4.1	105.7	0.23	0.09	30.6
Approach		1227	3.0	0.578	10.8	LOS B	4.1	105.7	0.23	0.09	31.2
All Vehicles		2409	3.0	0.578	10.6	LOS B	4.1	105.7	0.32	0.18	31.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Laureles-68

16. Laureles Grade Road - Highway 68
Existing Plus Proposed Project Short-Term Conditions
AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Laureles Grade Road											
3	L2	200	3.0	0.312	9.7	LOS A	0.9	23.7	0.52	0.53	30.0
18	R2	273	3.0	0.426	11.8	LOS B	1.5	37.6	0.56	0.59	30.3
Approach		473	3.0	0.426	10.9	LOS B	1.5	37.6	0.54	0.56	30.2
East: Highway 68											
1	L2	250	3.0	0.781	20.7	LOS C	8.7	222.9	0.78	0.71	27.0
6	T1	1145	3.0	0.781	20.7	LOS C	8.7	222.9	0.78	0.71	27.4
Approach		1395	3.0	0.781	20.7	LOS C	8.7	222.9	0.78	0.71	27.3
West: Highway 68											
2	T1	746	3.0	0.440	9.7	LOS A	2.1	54.0	0.50	0.42	31.8
12	R2	168	3.0	0.104	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		914	3.0	0.440	7.9	LOS A	2.1	54.0	0.41	0.34	32.5
All Vehicles		2782	3.0	0.781	14.8	LOS B	8.7	222.9	0.61	0.56	29.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Laureles-68

16. Laureles Grade Road - Highway 68
Existing Plus Proposed Project Short-Term Conditions
PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Laureles Grade Road											
3	L2	210	3.0	0.355	11.2	LOS B	1.1	28.2	0.57	0.59	29.4
18	R2	355	3.0	0.601	17.8	LOS C	2.5	65.2	0.67	0.74	28.0
Approach		565	3.0	0.601	15.4	LOS C	2.5	65.2	0.63	0.69	28.5
East: Highway 68											
1	L2	211	3.0	0.600	13.0	LOS B	4.0	102.6	0.57	0.49	29.6
6	T1	850	3.0	0.600	13.0	LOS B	4.0	102.6	0.57	0.49	30.2
Approach		1061	3.0	0.600	13.0	LOS B	4.0	102.6	0.57	0.49	30.1
West: Highway 68											
2	T1	857	3.0	0.485	10.3	LOS B	2.5	64.5	0.49	0.39	31.6
12	R2	149	3.0	0.092	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		1005	3.0	0.485	8.8	LOS A	2.5	64.5	0.42	0.33	32.2
All Vehicles		2632	3.0	0.601	11.9	LOS B	4.0	102.6	0.53	0.47	30.5

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmsted-68

1. Olmsted Road - Highway 68
Existing Plus Alt 1 Project Short-Term Conditions AM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	43	3.0	0.293	11.3	LOS B	0.8	21.3	0.61	0.63	30.5
8	T1	26	3.0	0.293	11.3	LOS B	0.8	21.3	0.61	0.63	30.6
18	R2	82	3.0	0.293	11.3	LOS B	0.8	21.3	0.61	0.63	30.0
Approach		151	3.0	0.293	11.3	LOS B	0.8	21.3	0.61	0.63	30.2
East: Highway 68											
1	L2	101	3.0	0.620	12.9	LOS B	4.2	107.6	0.51	0.36	30.1
6	T1	802	3.0	0.620	12.9	LOS B	4.2	107.6	0.51	0.36	30.3
16	R2	275	3.0	0.620	12.9	LOS B	4.2	107.6	0.51	0.36	29.7
Approach		1178	3.0	0.620	12.9	LOS B	4.2	107.6	0.51	0.36	30.1
North: Olmsted Road											
7	L2	104	3.0	0.335	11.4	LOS B	1.0	25.8	0.59	0.61	30.0
4	T1	23	3.0	0.335	11.4	LOS B	1.0	25.8	0.59	0.61	30.1
14	R2	59	3.0	0.335	11.4	LOS B	1.0	25.8	0.59	0.61	29.5
Approach		186	3.0	0.335	11.4	LOS B	1.0	25.8	0.59	0.61	29.9
West: Highway 68											
5	L2	71	3.0	0.562	12.2	LOS B	3.4	88.0	0.56	0.48	30.4
2	T1	872	3.0	0.562	12.2	LOS B	3.4	88.0	0.56	0.48	30.6
12	R2	33	3.0	0.562	12.2	LOS B	3.4	88.0	0.56	0.48	30.0
Approach		975	3.0	0.562	12.2	LOS B	3.4	88.0	0.56	0.48	30.6
All Vehicles		2490	3.0	0.620	12.4	LOS B	4.2	107.6	0.54	0.44	30.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmsted-68

1. Olmsted Road - Highway 68
Existing Plus Alt 1 Project Short-Term Conditions PM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	29	3.0	0.434	14.1	LOS B	1.4	36.9	0.65	0.69	29.6
8	T1	18	3.0	0.434	14.1	LOS B	1.4	36.9	0.65	0.69	29.8
18	R2	182	3.0	0.434	14.1	LOS B	1.4	36.9	0.65	0.69	29.2
Approach		229	3.0	0.434	14.1	LOS B	1.4	36.9	0.65	0.69	29.3
East: Highway 68											
1	L2	55	3.0	0.642	13.2	LOS B	4.7	121.2	0.47	0.30	30.1
6	T1	1077	3.0	0.642	13.2	LOS B	4.7	121.2	0.47	0.30	30.2
16	R2	132	3.0	0.642	13.2	LOS B	4.7	121.2	0.47	0.30	29.6
Approach		1264	3.0	0.642	13.2	LOS B	4.7	121.2	0.47	0.30	30.2
North: Olmsted Road											
7	L2	242	3.0	0.856	42.5	LOS E	5.2	133.8	0.89	1.13	21.2
4	T1	16	3.0	0.856	42.5	LOS E	5.2	133.8	0.89	1.13	21.3
14	R2	148	3.0	0.856	42.5	LOS E	5.2	133.8	0.89	1.13	21.0
Approach		407	3.0	0.856	42.5	LOS E	5.2	133.8	0.89	1.13	21.1
West: Highway 68											
5	L2	58	3.0	0.494	11.4	LOS B	2.6	67.1	0.57	0.55	30.7
2	T1	712	3.0	0.494	11.4	LOS B	2.6	67.1	0.57	0.55	31.0
12	R2	15	3.0	0.494	11.4	LOS B	2.6	67.1	0.57	0.55	30.4
Approach		785	3.0	0.494	11.4	LOS B	2.6	67.1	0.57	0.55	30.9
All Vehicles		2685	3.0	0.856	17.2	LOS C	5.2	133.8	0.58	0.53	28.5

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmstead-Garden

2. Olmsted Road - Garden Road
Existing Plus Alt 1 Project Short-Term Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	376	3.0	0.393	7.5	LOS A	2.0	52.4	0.14	0.05	31.0
8	T1	16	3.0	0.393	7.5	LOS A	2.0	52.4	0.14	0.05	31.2
18	R2	28	3.0	0.393	7.5	LOS A	2.0	52.4	0.14	0.05	30.5
Approach		421	3.0	0.393	7.5	LOS A	2.0	52.4	0.14	0.05	31.0
East: Garden Road											
1	L2	15	3.0	0.030	5.3	LOS A	0.1	2.5	0.43	0.33	32.4
6	T1	1	3.0	0.030	5.3	LOS A	0.1	2.5	0.43	0.33	32.5
16	R2	5	3.0	0.030	5.3	LOS A	0.1	2.5	0.43	0.33	31.8
Approach		22	3.0	0.030	5.3	LOS A	0.1	2.5	0.43	0.33	32.3
North: Olmsted Road											
7	L2	4	3.0	0.019	5.1	LOS A	0.1	1.6	0.42	0.30	33.2
4	T1	9	3.0	0.019	5.1	LOS A	0.1	1.6	0.42	0.30	33.4
14	R2	1	3.0	0.019	5.1	LOS A	0.1	1.6	0.42	0.30	32.6
Approach		14	3.0	0.019	5.1	LOS A	0.1	1.6	0.42	0.30	33.3
West: Garden Road											
5	L2	9	3.0	0.149	4.7	LOS A	0.6	14.5	0.11	0.04	34.0
2	T1	11	3.0	0.149	4.7	LOS A	0.6	14.5	0.11	0.04	34.2
12	R2	139	3.0	0.149	4.7	LOS A	0.6	14.5	0.11	0.04	33.4
Approach		159	3.0	0.149	4.7	LOS A	0.6	14.5	0.11	0.04	33.5
All Vehicles		615	3.0	0.393	6.6	LOS A	2.0	52.4	0.15	0.06	31.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmstead-Garden

2. Olmsted Road - Garden Road
Existing Plus Alt 1 Project Short-Term Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	126	3.0	0.195	5.2	LOS A	0.8	19.9	0.14	0.05	32.6
8	T1	36	3.0	0.195	5.2	LOS A	0.8	19.9	0.14	0.05	32.7
18	R2	43	3.0	0.195	5.2	LOS A	0.8	19.9	0.14	0.05	32.0
Approach		205	3.0	0.195	5.2	LOS A	0.8	19.9	0.14	0.05	32.5
East: Garden Road											
1	L2	54	3.0	0.087	4.7	LOS A	0.3	7.7	0.30	0.19	32.7
6	T1	14	3.0	0.087	4.7	LOS A	0.3	7.7	0.30	0.19	32.8
16	R2	11	3.0	0.087	4.7	LOS A	0.3	7.7	0.30	0.19	32.1
Approach		79	3.0	0.087	4.7	LOS A	0.3	7.7	0.30	0.19	32.6
North: Olmsted Road											
7	L2	11	3.0	0.076	4.7	LOS A	0.3	6.7	0.31	0.20	33.8
4	T1	45	3.0	0.076	4.7	LOS A	0.3	6.7	0.31	0.20	33.9
14	R2	13	3.0	0.076	4.7	LOS A	0.3	6.7	0.31	0.20	33.1
Approach		68	3.0	0.076	4.7	LOS A	0.3	6.7	0.31	0.20	33.7
West: Garden Road											
5	L2	13	3.0	0.346	7.3	LOS A	1.6	41.1	0.31	0.18	32.8
2	T1	14	3.0	0.346	7.3	LOS A	1.6	41.1	0.31	0.18	32.9
12	R2	312	3.0	0.346	7.3	LOS A	1.6	41.1	0.31	0.18	32.2
Approach		339	3.0	0.346	7.3	LOS A	1.6	41.1	0.31	0.18	32.2
All Vehicles		692	3.0	0.346	6.1	LOS A	1.6	41.1	0.26	0.15	32.5

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 218-68

12. Highway 218 - Highway 68
Existing Plus Alt 1 Project Short-Term Conditions AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Monterra Road											
3	L2	9	3.0	0.048	11.5	LOS B	0.1	3.0	0.70	0.70	30.0
8	T1	2	3.0	0.048	11.5	LOS B	0.1	3.0	0.70	0.70	30.1
18	R2	5	3.0	0.048	11.5	LOS B	0.1	3.0	0.70	0.70	29.5
Approach		16	3.0	0.048	11.5	LOS B	0.1	3.0	0.70	0.70	29.9
East: Highway 68											
1	L2	1	3.0	0.400	7.9	LOS A	1.5	39.5	0.24	0.15	32.5
6	T1	812	3.0	0.400	7.9	LOS A	1.5	39.5	0.24	0.14	32.7
16	R2	312	3.0	0.304	6.6	LOS A	1.0	24.9	0.19	0.11	32.4
Approach		1125	3.0	0.400	7.5	LOS A	1.5	39.5	0.22	0.13	32.6
North: Highway 218											
7	L2	650	3.0	0.554	16.1	LOS C	2.3	59.1	0.65	0.71	27.7
4	T1	9	3.0	0.554	15.8	LOS C	2.2	57.0	0.64	0.70	27.9
14	R2	340	3.0	0.209	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		999	3.0	0.554	10.6	LOS B	2.3	59.1	0.43	0.47	30.0
West: Highway 68											
5	L2	92	3.0	0.739	23.0	LOS C	4.5	114.5	0.75	0.86	26.5
2	T1	896	3.0	0.739	22.7	LOS C	4.5	114.5	0.73	0.84	26.8
12	R2	3	3.0	0.739	22.4	LOS C	4.3	110.4	0.73	0.83	26.4
Approach		991	3.0	0.739	22.7	LOS C	4.5	114.5	0.74	0.85	26.8
All Vehicles		3132	3.0	0.739	13.3	LOS B	4.5	114.5	0.45	0.47	29.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 218-68

12. Highway 218 - Highway 68
Existing Plus Alt 1 Project Short-Term Conditions PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Monterra Road											
3	L2	4	3.0	0.101	9.8	LOS A	0.2	6.4	0.63	0.63	31.5
8	T1	25	3.0	0.101	9.8	LOS A	0.2	6.4	0.63	0.63	31.6
18	R2	14	3.0	0.101	9.8	LOS A	0.2	6.4	0.63	0.63	30.9
Approach		43	3.0	0.101	9.8	LOS A	0.2	6.4	0.63	0.63	31.4
East: Highway 68											
1	L2	5	3.0	0.604	13.3	LOS B	3.3	83.4	0.54	0.53	30.2
6	T1	1050	3.0	0.604	13.2	LOS B	3.3	83.4	0.52	0.52	30.3
16	R2	778	3.0	0.881	30.1	LOS D	10.3	262.9	0.86	0.97	24.1
Approach		1834	3.0	0.881	20.4	LOS C	10.3	262.9	0.67	0.71	27.4
North: Highway 218											
7	L2	298	3.0	0.304	11.9	LOS B	0.9	23.2	0.63	0.65	29.1
4	T1	4	3.0	0.304	11.6	LOS B	0.9	22.3	0.62	0.64	29.4
14	R2	121	3.0	0.074	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		423	3.0	0.304	8.5	LOS A	0.9	23.2	0.45	0.46	30.8
West: Highway 68											
5	L2	276	3.0	0.577	12.6	LOS B	2.9	75.1	0.52	0.51	29.6
2	T1	728	3.0	0.577	12.5	LOS B	2.9	75.1	0.50	0.49	30.3
12	R2	2	3.0	0.577	12.4	LOS B	2.8	71.2	0.49	0.48	29.9
Approach		1007	3.0	0.577	12.5	LOS B	2.9	75.1	0.51	0.49	30.1
All Vehicles		3307	3.0	0.881	16.3	LOS C	10.3	262.9	0.59	0.61	28.6

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: York-68

14. York Road / Highway 68
Existing Plus Alt 1 Project Short-Term Conditions AM Peak Hour Round-about

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	935	3.0	0.778	20.8	LOS C	8.5	217.4	0.78	0.74	27.5
16	R2	428	3.0	0.778	20.8	LOS C	8.5	217.4	0.78	0.74	26.9
Approach		1363	3.0	0.778	20.8	LOS C	8.5	217.4	0.78	0.74	27.3
North: York Road											
7	L2	91	3.0	0.342	11.5	LOS B	1.0	26.6	0.59	0.61	30.1
14	R2	100	3.0	0.342	11.5	LOS B	1.0	26.6	0.59	0.61	29.6
Approach		191	3.0	0.342	11.5	LOS B	1.0	26.6	0.59	0.61	29.9
West: Highway 68											
5	L2	218	3.0	0.521	10.1	LOS B	3.1	80.5	0.36	0.21	30.8
2	T1	823	3.0	0.521	10.1	LOS B	3.1	80.5	0.36	0.21	31.4
Approach		1041	3.0	0.521	10.1	LOS B	3.1	80.5	0.36	0.21	31.3
All Vehicles		2596	3.0	0.778	15.8	LOS C	8.5	217.4	0.60	0.52	29.0

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: York-68

14. York Road / Highway 68
Existing Plus Alt 1 Project Short-Term Conditions PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	1013	3.0	0.572	11.1	LOS B	3.8	97.2	0.38	0.22	31.2
16	R2	138	3.0	0.572	11.1	LOS B	3.8	97.2	0.38	0.22	30.4
Approach		1151	3.0	0.572	11.1	LOS B	3.8	97.2	0.38	0.22	31.1
North: York Road											
7	L2	375	3.0	0.950	55.5	LOS F	9.2	235.4	0.93	1.38	18.8
14	R2	127	3.0	0.950	55.5	LOS F	9.2	235.4	0.93	1.38	18.6
Approach		502	3.0	0.950	55.5	LOS F	9.2	235.4	0.93	1.38	18.8
West: Highway 68											
5	L2	85	3.0	0.620	15.5	LOS C	4.1	105.5	0.69	0.75	29.0
2	T1	839	3.0	0.620	15.5	LOS C	4.1	105.5	0.69	0.75	29.3
Approach		924	3.0	0.620	15.5	LOS C	4.1	105.5	0.69	0.75	29.3
All Vehicles		2577	3.0	0.950	21.3	LOS C	9.2	235.4	0.60	0.64	27.0

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: CdT-68

17. Corral de Tierra Road - Highway 68
Existing Plus Alt 1 Project Short-Term Conditions AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Corral de Tierra Road											
3	L2	162	3.0	0.805	31.9	LOS D	4.7	121.1	0.82	0.99	23.7
8	T1	1	3.0	0.805	31.9	LOS D	4.7	121.1	0.82	0.99	23.8
18	R2	285	3.0	0.805	31.9	LOS D	4.7	121.1	0.82	0.99	23.4
Approach		448	3.0	0.805	31.9	LOS D	4.7	121.1	0.82	0.99	23.5
East: Higwhay 68											
1	L2	167	3.0	0.706	16.2	LOS C	6.2	159.1	0.63	0.50	28.7
6	T1	1135	3.0	0.706	16.2	LOS C	6.2	159.1	0.63	0.50	29.0
16	R2	5	3.0	0.706	16.2	LOS C	6.2	159.1	0.63	0.50	28.5
Approach		1308	3.0	0.706	16.2	LOS C	6.2	159.1	0.63	0.50	29.0
North: Corral de Tierra Road											
7	L2	1	3.0	0.009	9.6	LOS A	0.0	0.5	0.65	0.64	31.2
4	T1	1	3.0	0.009	9.6	LOS A	0.0	0.5	0.65	0.64	31.3
14	R2	1	3.0	0.009	9.6	LOS A	0.0	0.5	0.65	0.64	30.6
Approach		3	3.0	0.009	9.6	LOS A	0.0	0.5	0.65	0.64	31.0
West: Highway 68											
5	L2	1	3.0	0.536	11.0	LOS B	3.1	78.7	0.48	0.36	31.1
2	T1	939	3.0	0.536	11.0	LOS B	3.1	78.7	0.48	0.36	31.3
12	R2	47	3.0	0.536	11.0	LOS B	3.1	78.7	0.48	0.36	30.5
Approach		987	3.0	0.536	11.0	LOS B	3.1	78.7	0.48	0.36	31.2
All Vehicles		2746	3.0	0.805	16.9	LOS C	6.2	159.1	0.61	0.53	28.6

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: CdT-68

17. Corral de Tierra Road - Highway 68
Existing Plus Alt 1 Project Short-Term Conditions PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Corral de Tierra Road											
3	L2	83	3.0	0.485	16.7	LOS C	1.7	42.4	0.71	0.76	28.3
8	T1	1	3.0	0.485	16.7	LOS C	1.7	42.4	0.71	0.76	28.4
18	R2	150	3.0	0.485	16.7	LOS C	1.7	42.4	0.71	0.76	27.9
Approach		234	3.0	0.485	16.7	LOS C	1.7	42.4	0.71	0.76	28.0
East: Higwhay 68											
1	L2	208	3.0	0.602	11.9	LOS B	4.2	107.3	0.41	0.24	30.2
6	T1	988	3.0	0.602	11.9	LOS B	4.2	107.3	0.41	0.24	30.6
16	R2	9	3.0	0.602	11.9	LOS B	4.2	107.3	0.41	0.24	30.2
Approach		1204	3.0	0.602	11.9	LOS B	4.2	107.3	0.41	0.24	30.6
North: Corral de Tierra Road											
7	L2	9	3.0	0.032	8.7	LOS A	0.1	2.0	0.61	0.61	31.0
4	T1	1	3.0	0.032	8.7	LOS A	0.1	2.0	0.61	0.61	31.2
14	R2	4	3.0	0.032	8.7	LOS A	0.1	2.0	0.61	0.61	30.5
Approach		14	3.0	0.032	8.7	LOS A	0.1	2.0	0.61	0.61	30.9
West: Highway 68											
5	L2	5	3.0	0.690	16.1	LOS C	5.8	148.8	0.67	0.60	29.1
2	T1	1126	3.0	0.690	16.1	LOS C	5.8	148.8	0.67	0.60	29.2
12	R2	78	3.0	0.690	16.1	LOS C	5.8	148.8	0.67	0.60	28.5
Approach		1210	3.0	0.690	16.1	LOS C	5.8	148.8	0.67	0.60	29.1
All Vehicles		2662	3.0	0.690	14.2	LOS B	5.8	148.8	0.55	0.45	29.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: SanBen-68

18. San Benancio Road - Highway 68
Existing Plus Alt 1 Project Short-Term Conditions AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: San Benancio Road											
3	L2	166	3.0	0.849	39.8	LOS E	5.3	134.7	0.87	1.10	21.9
8	T1	1	3.0	0.849	39.8	LOS E	5.3	134.7	0.87	1.10	22.0
18	R2	260	3.0	0.849	39.8	LOS E	5.3	134.7	0.87	1.10	21.6
Approach		427	3.0	0.849	39.8	LOS E	5.3	134.7	0.87	1.10	21.7
East: Highway 68											
1	L2	163	3.0	0.688	15.5	LOS C	5.8	147.4	0.62	0.49	28.9
6	T1	1105	3.0	0.688	15.5	LOS C	5.8	147.4	0.62	0.49	29.3
16	R2	1	3.0	0.688	15.5	LOS C	5.8	147.4	0.62	0.49	28.8
Approach		1270	3.0	0.688	15.5	LOS C	5.8	147.4	0.62	0.49	29.2
North: San Benancio Road											
7	L2	1	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	31.2
4	T1	1	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	31.4
14	R2	1	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	30.7
Approach		3	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	31.1
West: Highway 68											
5	L2	1	3.0	0.616	12.6	LOS B	3.3	85.1	0.43	0.33	30.5
2	T1	1079	3.0	0.616	12.6	LOS B	3.3	85.1	0.42	0.32	30.6
12	R2	114	3.0	0.616	12.5	LOS B	3.1	80.4	0.41	0.31	29.9
Approach		1195	3.0	0.616	12.6	LOS B	3.3	85.1	0.42	0.32	30.5
All Vehicles		2895	3.0	0.849	17.9	LOS C	5.8	147.4	0.57	0.51	28.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: SanBen-68

18. San Benancio Road - Highway 68
Existing Plus Alt 1 Project Short-Term Conditions PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: San Benancio Road											
3	L2	59	3.0	0.305	12.5	LOS B	0.9	22.2	0.65	0.67	29.8
8	T1	1	3.0	0.305	12.5	LOS B	0.9	22.2	0.65	0.67	29.9
18	R2	84	3.0	0.305	12.5	LOS B	0.9	22.2	0.65	0.67	29.3
Approach		143	3.0	0.305	12.5	LOS B	0.9	22.2	0.65	0.67	29.5
East: Highway 68											
1	L2	161	3.0	0.642	12.8	LOS B	5.0	128.9	0.37	0.19	30.0
6	T1	1159	3.0	0.642	12.8	LOS B	5.0	128.9	0.37	0.19	30.3
16	R2	1	3.0	0.642	12.8	LOS B	5.0	128.9	0.37	0.19	29.8
Approach		1321	3.0	0.642	12.8	LOS B	5.0	128.9	0.37	0.19	30.3
North: San Benancio Road											
7	L2	1	3.0	0.008	9.0	LOS A	0.0	0.5	0.63	0.60	31.4
4	T1	1	3.0	0.008	9.0	LOS A	0.0	0.5	0.63	0.60	31.5
14	R2	1	3.0	0.008	9.0	LOS A	0.0	0.5	0.63	0.60	30.9
Approach		3	3.0	0.008	9.0	LOS A	0.0	0.5	0.63	0.60	31.3
West: Highway 68											
5	L2	3	3.0	0.644	13.4	LOS B	3.8	96.1	0.45	0.35	30.1
2	T1	1168	3.0	0.644	13.4	LOS B	3.8	96.1	0.44	0.34	30.3
12	R2	79	3.0	0.644	13.3	LOS B	3.5	90.8	0.43	0.33	29.6
Approach		1251	3.0	0.644	13.4	LOS B	3.8	96.1	0.44	0.34	30.2
All Vehicles		2718	3.0	0.644	13.0	LOS B	5.0	128.9	0.42	0.29	30.2

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Torero-68

19. Torero Drive - Highway 68
Existing Plus Alt 1 Project Short-Term Conditions AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	859	36.0	0.586	14.5	LOS B	2.3	74.9	0.36	0.24	29.2
16	R2	1	3.0	0.586	14.5	LOS B	2.3	74.9	0.36	0.24	29.1
Approach		860	36.0	0.586	14.5	LOS B	2.3	74.9	0.36	0.24	29.2
North: Torero Drive											
7	L2	13	3.0	0.027	7.8	LOS A	0.1	1.7	0.56	0.56	30.7
14	R2	396	3.0	0.817	36.9	LOS E	4.5	116.2	0.86	1.05	22.6
Approach		409	3.0	0.817	35.9	LOS E	4.5	116.2	0.85	1.04	22.8
West: Highway 68											
5	L2	121	3.0	0.620	11.7	LOS B	5.0	127.6	0.15	0.04	30.5
2	T1	1221	3.0	0.620	11.7	LOS B	5.0	127.6	0.15	0.04	30.8
Approach		1341	3.0	0.620	11.7	LOS B	5.0	127.6	0.15	0.04	30.8
All Vehicles		2610	13.9	0.817	16.4	LOS C	5.0	127.6	0.33	0.26	28.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Torero-68

19. Torero Drive - Highway 68
Existing Plus Alt 1 Project Short-Term Conditions PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	1286	3.0	0.669	13.9	LOS B	5.4	137.8	0.46	0.27	30.1
16	R2	60	3.0	0.669	13.9	LOS B	5.4	137.8	0.46	0.27	29.4
Approach		1346	3.0	0.669	13.9	LOS B	5.4	137.8	0.46	0.27	30.0
North: Torero Drive											
7	L2	13	3.0	0.030	8.7	LOS A	0.1	1.8	0.61	0.61	30.4
14	R2	55	3.0	0.128	10.1	LOS B	0.3	8.1	0.64	0.64	31.0
Approach		68	3.0	0.128	9.9	LOS A	0.3	8.1	0.63	0.63	30.9
West: Highway 68											
5	L2	85	3.0	0.595	11.1	LOS B	4.5	115.8	0.14	0.04	30.9
2	T1	1203	3.0	0.595	11.1	LOS B	4.5	115.8	0.14	0.04	31.1
Approach		1288	3.0	0.595	11.1	LOS B	4.5	115.8	0.14	0.04	31.1
All Vehicles		2702	3.0	0.669	12.4	LOS B	5.4	137.8	0.31	0.17	30.6

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: JCR-68

11. Josselyn Canyon Road - Highway 68
Existing Plus **Alt 1** Project Short-Term Conditions AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Josselyn Canyon Road											
3	L2	212	3.0	0.509	16.1	LOS C	1.8	47.2	0.68	0.73	27.9
18	R2	60	3.0	0.509	16.1	LOS C	1.8	47.2	0.68	0.73	27.5
Approach		272	3.0	0.509	16.1	LOS C	1.8	47.2	0.68	0.73	27.9
East: Highway 68											
1	L2	46	3.0	0.538	11.4	LOS B	3.1	79.0	0.53	0.43	30.8
6	T1	903	3.0	0.538	11.4	LOS B	3.1	79.0	0.53	0.43	31.0
Approach		949	3.0	0.538	11.4	LOS B	3.1	79.0	0.53	0.43	31.0
West: Highway 68											
2	T1	999	3.0	0.535	10.0	LOS A	3.5	88.5	0.26	0.11	31.7
12	R2	121	3.0	0.535	10.0	LOS A	3.5	88.5	0.26	0.11	30.9
Approach		1120	3.0	0.535	10.0	LOS A	3.5	88.5	0.26	0.11	31.6
All Vehicles		2340	3.0	0.538	11.3	LOS B	3.5	88.5	0.41	0.31	30.9

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: JCR-68

11. Josselyn Canyon Road - Highway 68
Existing Plus **Alt 1** Project Short-Term Conditions PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Josselyn Canyon Road											
3	L2	76	3.0	0.170	7.7	LOS A	0.4	11.4	0.48	0.48	31.3
18	R2	32	3.0	0.170	7.7	LOS A	0.4	11.4	0.48	0.48	30.8
Approach		108	3.0	0.170	7.7	LOS A	0.4	11.4	0.48	0.48	31.1
East: Highway 68											
1	L2	62	3.0	0.700	14.9	LOS B	6.1	157.2	0.47	0.26	29.4
6	T1	1359	3.0	0.700	14.9	LOS B	6.1	157.2	0.47	0.26	29.6
Approach		1421	3.0	0.700	14.9	LOS B	6.1	157.2	0.47	0.26	29.6
West: Highway 68											
2	T1	766	3.0	0.415	8.0	LOS A	2.2	55.7	0.25	0.12	32.6
12	R2	88	3.0	0.415	8.0	LOS A	2.2	55.7	0.25	0.12	31.8
Approach		854	3.0	0.415	8.0	LOS A	2.2	55.7	0.25	0.12	32.5
All Vehicles		2383	3.0	0.700	12.1	LOS B	6.1	157.2	0.39	0.22	30.6

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Pasadera-68

15. Pasadera Drive - Highway 68
Existing Plus **Alt 1** Project Short-Term Conditions AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Boots Road											
3	L2	72	3.0	0.178	8.7	LOS A	0.5	11.9	0.53	0.53	30.9
8	T1	2	3.0	0.178	8.7	LOS A	0.5	11.9	0.53	0.53	31.0
18	R2	26	3.0	0.178	8.7	LOS A	0.5	11.9	0.53	0.53	30.3
Approach		100	3.0	0.178	8.7	LOS A	0.5	11.9	0.53	0.53	30.7
East: Highway 68											
1	L2	20	3.0	0.636	13.0	LOS B	4.6	117.8	0.48	0.31	30.2
6	T1	1204	3.0	0.636	13.0	LOS B	4.6	117.8	0.48	0.31	30.4
16	R2	22	3.0	0.636	13.0	LOS B	4.6	117.8	0.48	0.31	29.7
Approach		1246	3.0	0.636	13.0	LOS B	4.6	117.8	0.48	0.31	30.4
North: Pasadera Drive											
7	L2	34	3.0	0.229	12.0	LOS B	0.6	15.4	0.67	0.67	30.1
4	T1	1	3.0	0.229	12.0	LOS B	0.6	15.4	0.67	0.67	30.3
14	R2	64	3.0	0.229	12.0	LOS B	0.6	15.4	0.67	0.67	29.6
Approach		99	3.0	0.229	12.0	LOS B	0.6	15.4	0.67	0.67	29.8
West: Highway 68											
5	L2	36	3.0	0.443	8.4	LOS A	2.4	62.4	0.24	0.11	32.1
2	T1	858	3.0	0.443	8.4	LOS A	2.4	62.4	0.24	0.11	32.3
12	R2	26	3.0	0.443	8.4	LOS A	2.4	62.4	0.24	0.11	31.6
Approach		920	3.0	0.443	8.4	LOS A	2.4	62.4	0.24	0.11	32.3
All Vehicles		2364	3.0	0.636	11.0	LOS B	4.6	117.8	0.39	0.26	31.1

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Pasadera-68

15. Pasadera Drive - Highway 68
Existing Plus **Alt 1** Project Short-Term Conditions PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Boots Road											
3	L2	45	3.0	0.120	9.3	LOS A	0.3	7.6	0.60	0.60	30.5
8	T1	3	3.0	0.120	9.3	LOS A	0.3	7.6	0.60	0.60	30.6
18	R2	9	3.0	0.120	9.3	LOS A	0.3	7.6	0.60	0.60	30.0
Approach		57	3.0	0.120	9.3	LOS A	0.3	7.6	0.60	0.60	30.4
East: Highway 68											
1	L2	9	3.0	0.537	10.5	LOS B	3.3	83.9	0.39	0.24	31.3
6	T1	1024	3.0	0.537	10.5	LOS B	3.3	83.9	0.39	0.24	31.5
16	R2	25	3.0	0.537	10.5	LOS B	3.3	83.9	0.39	0.24	30.7
Approach		1058	3.0	0.537	10.5	LOS B	3.3	83.9	0.39	0.24	31.4
North: Pasadera Drive											
7	L2	21	3.0	0.134	8.9	LOS A	0.3	8.6	0.57	0.57	31.5
4	T1	2	3.0	0.134	8.9	LOS A	0.3	8.6	0.57	0.57	31.6
14	R2	45	3.0	0.134	8.9	LOS A	0.3	8.6	0.57	0.57	31.0
Approach		67	3.0	0.134	8.9	LOS A	0.3	8.6	0.57	0.57	31.1
West: Highway 68											
5	L2	57	3.0	0.577	10.8	LOS B	4.1	105.3	0.23	0.09	31.1
2	T1	1091	3.0	0.577	10.8	LOS B	4.1	105.3	0.23	0.09	31.3
12	R2	77	3.0	0.577	10.8	LOS B	4.1	105.3	0.23	0.09	30.6
Approach		1225	3.0	0.577	10.8	LOS B	4.1	105.3	0.23	0.09	31.2
All Vehicles		2407	3.0	0.577	10.6	LOS B	4.1	105.3	0.32	0.18	31.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Laureles-68

16. Laureles Grade Road - Highway 68
Existing Plus **Alt 1** Project Short-Term Conditions AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Laureles Grade Road											
3	L2	200	3.0	0.312	9.7	LOS A	0.9	23.7	0.52	0.53	30.0
18	R2	273	3.0	0.426	11.8	LOS B	1.5	37.6	0.56	0.59	30.3
Approach		473	3.0	0.426	10.9	LOS B	1.5	37.6	0.54	0.56	30.2
East: Highway 68											
1	L2	250	3.0	0.780	20.6	LOS C	8.7	222.3	0.77	0.71	27.0
6	T1	1143	3.0	0.780	20.6	LOS C	8.7	222.3	0.77	0.71	27.4
Approach		1393	3.0	0.780	20.6	LOS C	8.7	222.3	0.77	0.71	27.3
West: Highway 68											
2	T1	746	3.0	0.440	9.7	LOS A	2.1	54.0	0.50	0.42	31.8
12	R2	168	3.0	0.104	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		914	3.0	0.440	7.9	LOS A	2.1	54.0	0.41	0.34	32.5
All Vehicles		2780	3.0	0.780	14.8	LOS B	8.7	222.3	0.61	0.56	29.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Laureles-68

16. Laureles Grade Road - Highway 68
Existing Plus **Alt 1** Project Short-Term Conditions PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Laureles Grade Road											
3	L2	210	3.0	0.354	11.1	LOS B	1.1	28.2	0.56	0.59	29.4
18	R2	355	3.0	0.600	17.8	LOS C	2.5	65.0	0.67	0.74	28.0
Approach		565	3.0	0.600	15.3	LOS C	2.5	65.0	0.63	0.68	28.5
East: Highway 68											
1	L2	211	3.0	0.600	13.0	LOS B	4.0	102.6	0.57	0.49	29.6
6	T1	850	3.0	0.600	13.0	LOS B	4.0	102.6	0.57	0.49	30.2
Approach		1061	3.0	0.600	13.0	LOS B	4.0	102.6	0.57	0.49	30.1
West: Highway 68											
2	T1	854	3.0	0.484	10.3	LOS B	2.5	64.2	0.49	0.39	31.6
12	R2	149	3.0	0.092	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		1003	3.0	0.484	8.7	LOS A	2.5	64.2	0.42	0.33	32.2
All Vehicles		2629	3.0	0.600	11.9	LOS B	4.0	102.6	0.53	0.47	30.5

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmsted-68

1. Olmsted Road - Highway 68
Background Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	46	3.0	0.325	12.4	LOS B	1.0	24.3	0.64	0.66	30.1
8	T1	28	3.0	0.325	12.4	LOS B	1.0	24.3	0.64	0.66	30.2
18	R2	87	3.0	0.325	12.4	LOS B	1.0	24.3	0.64	0.66	29.6
Approach		161	3.0	0.325	12.4	LOS B	1.0	24.3	0.64	0.66	29.8
East: Highway 68											
1	L2	101	3.0	0.671	14.7	LOS B	5.3	135.6	0.59	0.45	29.3
6	T1	841	3.0	0.671	14.7	LOS B	5.3	135.6	0.59	0.45	29.5
16	R2	304	3.0	0.671	14.7	LOS B	5.3	135.6	0.59	0.45	29.0
Approach		1247	3.0	0.671	14.7	LOS B	5.3	135.6	0.59	0.45	29.4
North: Olmsted Road											
7	L2	118	3.0	0.392	12.9	LOS B	1.2	32.0	0.63	0.66	29.4
4	T1	25	3.0	0.392	12.9	LOS B	1.2	32.0	0.63	0.66	29.5
14	R2	67	3.0	0.392	12.9	LOS B	1.2	32.0	0.63	0.66	29.0
Approach		211	3.0	0.392	12.9	LOS B	1.2	32.0	0.63	0.66	29.3
West: Highway 68											
5	L2	87	3.0	0.598	13.3	LOS B	4.0	101.9	0.60	0.54	29.9
2	T1	898	3.0	0.598	13.3	LOS B	4.0	101.9	0.60	0.54	30.2
12	R2	35	3.0	0.598	13.3	LOS B	4.0	101.9	0.60	0.54	29.6
Approach		1020	3.0	0.598	13.3	LOS B	4.0	101.9	0.60	0.54	30.1
All Vehicles		2638	3.0	0.671	13.9	LOS B	5.3	135.6	0.60	0.52	29.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmsted-68

1. Olmsted Road - Highway 68
Background Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	29	3.0	0.467	15.5	LOS C	1.6	40.7	0.68	0.73	29.1
8	T1	22	3.0	0.467	15.5	LOS C	1.6	40.7	0.68	0.73	29.2
18	R2	186	3.0	0.467	15.5	LOS C	1.6	40.7	0.68	0.73	28.6
Approach		237	3.0	0.467	15.5	LOS C	1.6	40.7	0.68	0.73	28.7
East: Highway 68											
1	L2	55	3.0	0.676	14.5	LOS B	5.2	133.6	0.54	0.36	29.6
6	T1	1103	3.0	0.676	14.5	LOS B	5.2	133.6	0.54	0.36	29.7
16	R2	151	3.0	0.676	14.5	LOS B	5.2	133.6	0.54	0.36	29.1
Approach		1310	3.0	0.676	14.5	LOS B	5.2	133.6	0.54	0.36	29.7
North: Olmsted Road											
7	L2	268	3.0	0.966	63.4	LOS F	9.3	237.6	0.96	1.48	17.7
4	T1	21	3.0	0.966	63.4	LOS F	9.3	237.6	0.96	1.48	17.8
14	R2	161	3.0	0.966	63.4	LOS F	9.3	237.6	0.96	1.48	17.6
Approach		450	3.0	0.966	63.4	LOS F	9.3	237.6	0.96	1.48	17.7
West: Highway 68											
5	L2	70	3.0	0.531	12.5	LOS B	3.0	76.9	0.61	0.62	30.2
2	T1	732	3.0	0.531	12.5	LOS B	3.0	76.9	0.61	0.62	30.5
12	R2	15	3.0	0.531	12.5	LOS B	3.0	76.9	0.61	0.62	29.9
Approach		816	3.0	0.531	12.5	LOS B	3.0	76.9	0.61	0.62	30.5
All Vehicles		2813	3.0	0.966	21.8	LOS C	9.3	237.6	0.64	0.64	26.9

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmstead-Garden

2. Olmsted Road - Garden Road
Background Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	396	3.0	0.437	8.2	LOS A	2.4	62.2	0.16	0.06	30.8
8	T1	71	3.0	0.437	8.2	LOS A	2.4	62.2	0.16	0.06	31.0
Approach		466	3.0	0.437	8.2	LOS A	2.4	62.2	0.16	0.06	30.9
North: Olmsted Road											
4	T1	37	3.0	0.052	5.5	LOS A	0.2	4.4	0.43	0.35	33.9
14	R2	1	3.0	0.052	5.5	LOS A	0.2	4.4	0.43	0.35	33.1
Approach		38	3.0	0.052	5.5	LOS A	0.2	4.4	0.43	0.35	33.8
West: Garden Road											
5	L2	27	3.0	0.166	4.9	LOS A	0.6	16.4	0.13	0.05	33.7
12	R2	148	3.0	0.166	4.9	LOS A	0.6	16.4	0.13	0.05	33.1
Approach		175	3.0	0.166	4.9	LOS A	0.6	16.4	0.13	0.05	33.2
All Vehicles		679	3.0	0.437	7.2	LOS A	2.4	62.2	0.17	0.07	31.6

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmstead-Garden

2. Olmsted Road - Garden Road
Background Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	134	3.0	0.231	5.6	LOS A	1.0	24.7	0.14	0.05	32.5
8	T1	111	3.0	0.231	5.6	LOS A	1.0	24.7	0.14	0.05	32.7
Approach		245	3.0	0.231	5.6	LOS A	1.0	24.7	0.14	0.05	32.6
North: Olmsted Road											
4	T1	139	3.0	0.165	5.3	LOS A	0.6	15.9	0.28	0.17	33.9
14	R2	18	3.0	0.165	5.3	LOS A	0.6	15.9	0.28	0.17	33.2
Approach		158	3.0	0.165	5.3	LOS A	0.6	15.9	0.28	0.17	33.8
West: Garden Road											
5	L2	36	3.0	0.385	8.1	LOS A	1.8	47.3	0.36	0.24	32.3
12	R2	330	3.0	0.385	8.1	LOS A	1.8	47.3	0.36	0.24	31.7
Approach		366	3.0	0.385	8.1	LOS A	1.8	47.3	0.36	0.24	31.8
All Vehicles		768	3.0	0.385	6.7	LOS A	1.8	47.3	0.27	0.17	32.4

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 218-68

12. Highway 218 - Highway 68
Background Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Monterra Road											
3	L2	11	3.0	0.127	14.1	LOS B	0.3	7.9	0.75	0.75	29.4
8	T1	21	3.0	0.127	14.1	LOS B	0.3	7.9	0.75	0.75	29.5
18	R2	8	3.0	0.127	14.1	LOS B	0.3	7.9	0.75	0.75	29.0
Approach		39	3.0	0.127	14.1	LOS B	0.3	7.9	0.75	0.75	29.4
East: Highway 68											
1	L2	7	3.0	0.440	8.7	LOS A	1.8	45.3	0.29	0.20	32.1
6	T1	867	3.0	0.440	8.6	LOS A	1.8	45.3	0.29	0.19	32.3
16	R2	326	3.0	0.324	6.9	LOS A	1.1	27.0	0.23	0.14	32.3
Approach		1200	3.0	0.440	8.2	LOS A	1.8	45.3	0.27	0.18	32.3
North: Highway 218											
7	L2	733	3.0	0.661	21.2	LOS C	3.1	80.1	0.72	0.82	26.1
4	T1	16	3.0	0.661	20.8	LOS C	3.0	77.5	0.71	0.80	26.3
14	R2	351	3.0	0.216	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		1100	3.0	0.661	14.4	LOS B	3.1	80.1	0.49	0.56	28.6
West: Highway 68											
5	L2	101	3.0	0.830	32.3	LOS D	5.9	151.6	0.82	1.01	23.9
2	T1	932	3.0	0.830	31.7	LOS D	5.9	151.6	0.81	0.99	24.2
12	R2	3	3.0	0.830	31.3	LOS D	5.7	146.8	0.80	0.98	23.9
Approach		1036	3.0	0.830	31.8	LOS D	5.9	151.6	0.81	1.00	24.2
All Vehicles		3375	3.0	0.830	17.5	LOS C	5.9	151.6	0.51	0.56	28.1

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 218-68

12. Highway 218 - Highway 68
Background Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Monterra Road											
3	L2	11	3.0	0.148	11.0	LOS B	0.4	9.5	0.66	0.66	30.8
8	T1	35	3.0	0.148	11.0	LOS B	0.4	9.5	0.66	0.66	30.9
18	R2	15	3.0	0.148	11.0	LOS B	0.4	9.5	0.66	0.66	30.3
Approach		61	3.0	0.148	11.0	LOS B	0.4	9.5	0.66	0.66	30.8
East: Highway 68											
1	L2	3	3.0	0.628	14.2	LOS B	3.5	90.8	0.57	0.58	29.8
6	T1	1077	3.0	0.628	14.1	LOS B	3.5	90.8	0.55	0.57	30.0
16	R2	790	3.0	0.904	33.3	LOS D	11.6	296.2	0.92	1.08	23.3
Approach		1871	3.0	0.904	22.2	LOS C	11.6	296.2	0.71	0.78	26.8
North: Highway 218											
7	L2	311	3.0	0.340	12.9	LOS B	1.0	26.8	0.65	0.68	28.8
4	T1	20	3.0	0.340	12.6	LOS B	1.0	25.9	0.64	0.67	29.2
14	R2	132	3.0	0.081	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		462	3.0	0.340	9.2	LOS A	1.0	26.8	0.47	0.49	30.6
West: Highway 68											
5	L2	280	3.0	0.617	13.9	LOS B	3.4	86.9	0.56	0.58	29.1
2	T1	767	3.0	0.617	13.8	LOS B	3.4	86.9	0.55	0.56	29.8
12	R2	8	3.0	0.617	13.7	LOS B	3.2	82.6	0.54	0.55	29.4
Approach		1055	3.0	0.617	13.8	LOS B	3.4	86.9	0.55	0.56	29.6
All Vehicles		3449	3.0	0.904	17.7	LOS C	11.6	296.2	0.63	0.67	28.1

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: York-68

14. York Road / Highway 68
Background Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	1011	3.0	0.837	25.7	LOS D	11.0	282.7	0.89	0.91	25.9
16	R2	429	3.0	0.837	25.7	LOS D	11.0	282.7	0.89	0.91	25.3
Approach		1440	3.0	0.837	25.7	LOS D	11.0	282.7	0.89	0.91	25.8
North: York Road											
7	L2	92	3.0	0.370	12.6	LOS B	1.1	29.3	0.63	0.66	29.7
14	R2	103	3.0	0.370	12.6	LOS B	1.1	29.3	0.63	0.66	29.2
Approach		196	3.0	0.370	12.6	LOS B	1.1	29.3	0.63	0.66	29.4
West: Highway 68											
5	L2	236	3.0	0.574	11.2	LOS B	3.8	97.0	0.39	0.23	30.3
2	T1	910	3.0	0.574	11.2	LOS B	3.8	97.0	0.39	0.23	30.9
Approach		1146	3.0	0.574	11.2	LOS B	3.8	97.0	0.39	0.23	30.8
All Vehicles		2782	3.0	0.837	18.8	LOS C	11.0	282.7	0.67	0.61	27.9

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: York-68

14. York Road / Highway 68
Background Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	1046	3.0	0.590	11.6	LOS B	4.0	103.2	0.39	0.23	31.0
16	R2	138	3.0	0.590	11.6	LOS B	4.0	103.2	0.39	0.23	30.3
Approach		1184	3.0	0.590	11.6	LOS B	4.0	103.2	0.39	0.23	30.9
North: York Road											
7	L2	379	3.0	0.990	65.4	LOS F	11.9	304.5	0.97	1.59	17.4
14	R2	132	3.0	0.990	65.4	LOS F	11.9	304.5	0.97	1.59	17.2
Approach		511	3.0	0.990	65.4	LOS F	11.9	304.5	0.97	1.59	17.4
West: Highway 68											
5	L2	87	3.0	0.650	16.7	LOS C	4.6	117.5	0.72	0.79	28.6
2	T1	878	3.0	0.650	16.7	LOS C	4.6	117.5	0.72	0.79	28.9
Approach		965	3.0	0.650	16.7	LOS C	4.6	117.5	0.72	0.79	28.8
All Vehicles		2660	3.0	0.990	23.7	LOS C	11.9	304.5	0.62	0.70	26.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: CdT-68

17. Corral de Tierra Road - Highway 68
Background Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Corral de Tierra Road											
3	L2	162	3.0	0.853	39.2	LOS E	5.5	140.9	0.86	1.09	22.0
8	T1	1	3.0	0.853	39.2	LOS E	5.5	140.9	0.86	1.09	22.1
18	R2	285	3.0	0.853	39.2	LOS E	5.5	140.9	0.86	1.09	21.8
Approach		448	3.0	0.853	39.2	LOS E	5.5	140.9	0.86	1.09	21.9
East: Higwhay 68											
1	L2	167	3.0	0.829	23.7	LOS C	11.2	288.0	0.83	0.72	26.2
6	T1	1364	3.0	0.829	23.7	LOS C	11.2	288.0	0.83	0.72	26.4
16	R2	5	3.0	0.829	23.7	LOS C	11.2	288.0	0.83	0.72	26.0
Approach		1537	3.0	0.829	23.7	LOS C	11.2	288.0	0.83	0.72	26.4
North: Corral de Tierra Road											
7	L2	1	3.0	0.010	11.3	LOS B	0.0	0.6	0.71	0.71	30.4
4	T1	1	3.0	0.010	11.3	LOS B	0.0	0.6	0.71	0.71	30.6
14	R2	1	3.0	0.010	11.3	LOS B	0.0	0.6	0.71	0.71	29.9
Approach		3	3.0	0.010	11.3	LOS B	0.0	0.6	0.71	0.71	30.3
West: Highway 68											
5	L2	1	3.0	0.580	12.1	LOS B	3.6	91.4	0.52	0.39	30.7
2	T1	1021	3.0	0.580	12.1	LOS B	3.6	91.4	0.52	0.39	30.8
12	R2	47	3.0	0.580	12.1	LOS B	3.6	91.4	0.52	0.39	30.1
Approach		1068	3.0	0.580	12.1	LOS B	3.6	91.4	0.52	0.39	30.8
All Vehicles		3057	3.0	0.853	21.9	LOS C	11.2	288.0	0.73	0.66	26.9

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: CdT-68

17. Corral de Tierra Road - Highway 68
Background Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Corral de Tierra Road											
3	L2	83	3.0	0.506	17.9	LOS C	1.7	44.7	0.73	0.79	27.9
8	T1	1	3.0	0.506	17.9	LOS C	1.7	44.7	0.73	0.79	28.0
18	R2	151	3.0	0.506	17.9	LOS C	1.7	44.7	0.73	0.79	27.5
Approach		235	3.0	0.506	17.9	LOS C	1.7	44.7	0.73	0.79	27.6
East: Higwhay 68											
1	L2	210	3.0	0.629	12.6	LOS B	4.6	118.4	0.43	0.25	29.9
6	T1	1041	3.0	0.629	12.6	LOS B	4.6	118.4	0.43	0.25	30.3
16	R2	9	3.0	0.629	12.6	LOS B	4.6	118.4	0.43	0.25	29.9
Approach		1260	3.0	0.629	12.6	LOS B	4.6	118.4	0.43	0.25	30.3
North: Corral de Tierra Road											
7	L2	9	3.0	0.034	9.1	LOS A	0.1	2.1	0.63	0.63	30.9
4	T1	1	3.0	0.034	9.1	LOS A	0.1	2.1	0.63	0.63	31.0
14	R2	4	3.0	0.034	9.1	LOS A	0.1	2.1	0.63	0.63	30.4
Approach		14	3.0	0.034	9.1	LOS A	0.1	2.1	0.63	0.63	30.7
West: Highway 68											
5	L2	5	3.0	0.721	17.6	LOS C	6.6	169.6	0.71	0.65	28.5
2	T1	1178	3.0	0.721	17.6	LOS C	6.6	169.6	0.71	0.65	28.6
12	R2	78	3.0	0.721	17.6	LOS C	6.6	169.6	0.71	0.65	28.0
Approach		1262	3.0	0.721	17.6	LOS C	6.6	169.6	0.71	0.65	28.6
All Vehicles		2771	3.0	0.721	15.3	LOS C	6.6	169.6	0.58	0.48	29.2

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: SanBen-68

18. San Benancio Road - Highway 68
Background Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: San Benancio Road											
3	L2	184	3.0	0.946	58.3	LOS F	8.2	210.6	0.94	1.38	18.5
8	T1	1	3.0	0.946	58.3	LOS F	8.2	210.6	0.94	1.38	18.6
18	R2	263	3.0	0.946	58.3	LOS F	8.2	210.6	0.94	1.38	18.3
Approach		448	3.0	0.946	58.3	LOS F	8.2	210.6	0.94	1.38	18.4
East: Highway 68											
1	L2	165	3.0	0.814	22.8	LOS C	10.3	263.3	0.82	0.74	26.5
6	T1	1309	3.0	0.814	22.8	LOS C	10.3	263.3	0.82	0.74	26.7
16	R2	1	3.0	0.814	22.8	LOS C	10.3	263.3	0.82	0.74	26.3
Approach		1475	3.0	0.814	22.8	LOS C	10.3	263.3	0.82	0.74	26.7
North: San Benancio Road											
7	L2	1	3.0	0.010	11.0	LOS B	0.0	0.6	0.70	0.70	30.6
4	T1	1	3.0	0.010	11.0	LOS B	0.0	0.6	0.70	0.70	30.7
14	R2	1	3.0	0.010	11.0	LOS B	0.0	0.6	0.70	0.70	30.0
Approach		3	3.0	0.010	11.0	LOS B	0.0	0.6	0.70	0.70	30.4
West: Highway 68											
5	L2	1	3.0	0.661	14.0	LOS B	4.1	103.9	0.47	0.37	29.9
2	T1	1163	3.0	0.661	14.0	LOS B	4.1	103.9	0.46	0.36	30.0
12	R2	115	3.0	0.661	13.9	LOS B	3.8	98.2	0.45	0.35	29.3
Approach		1279	3.0	0.661	13.9	LOS B	4.1	103.9	0.46	0.36	30.0
All Vehicles		3205	3.0	0.946	24.2	LOS C	10.3	263.3	0.69	0.68	26.2

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: SanBen-68

18. San Benancio Road - Highway 68
Background Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: San Benancio Road											
3	L2	60	3.0	0.337	13.7	LOS B	1.0	25.1	0.68	0.71	29.4
8	T1	1	3.0	0.337	13.7	LOS B	1.0	25.1	0.68	0.71	29.5
18	R2	90	3.0	0.337	13.7	LOS B	1.0	25.1	0.68	0.71	28.9
Approach		151	3.0	0.337	13.7	LOS B	1.0	25.1	0.68	0.71	29.1
East: Highway 68											
1	L2	177	3.0	0.677	13.9	LOS B	5.7	147.0	0.41	0.21	29.5
6	T1	1212	3.0	0.677	13.9	LOS B	5.7	147.0	0.41	0.21	29.9
16	R2	2	3.0	0.677	13.9	LOS B	5.7	147.0	0.41	0.21	29.4
Approach		1391	3.0	0.677	13.9	LOS B	5.7	147.0	0.41	0.21	29.8
North: San Benancio Road											
7	L2	1	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	31.2
4	T1	1	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	31.3
14	R2	1	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	30.7
Approach		3	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	31.1
West: Highway 68											
5	L2	3	3.0	0.688	15.1	LOS C	4.6	118.0	0.51	0.42	29.5
2	T1	1237	3.0	0.688	15.0	LOS C	4.6	118.0	0.50	0.41	29.6
12	R2	80	3.0	0.688	15.0	LOS B	4.4	111.6	0.49	0.40	28.9
Approach		1321	3.0	0.688	15.0	LOS C	4.6	118.0	0.50	0.41	29.5
All Vehicles		2866	3.0	0.688	14.4	LOS B	5.7	147.0	0.47	0.33	29.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: JCR-68

11. Josselyn Canyon Road - Highway 68
Background Conditions
AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Josselyn Canyon Road											
3	L2	213	3.0	0.532	17.3	LOS C	2.0	50.1	0.70	0.76	27.6
18	R2	62	3.0	0.532	17.3	LOS C	2.0	50.1	0.70	0.76	27.1
Approach		275	3.0	0.532	17.3	LOS C	2.0	50.1	0.70	0.76	27.5
East: Highway 68											
1	L2	53	3.0	0.571	12.2	LOS B	3.5	90.8	0.55	0.46	30.4
6	T1	952	3.0	0.571	12.2	LOS B	3.5	90.8	0.55	0.46	30.6
Approach		1005	3.0	0.571	12.2	LOS B	3.5	90.8	0.55	0.46	30.6
West: Highway 68											
2	T1	1043	3.0	0.561	10.6	LOS B	3.8	96.7	0.29	0.14	31.4
12	R2	122	3.0	0.561	10.6	LOS B	3.8	96.7	0.29	0.14	30.7
Approach		1165	3.0	0.561	10.6	LOS B	3.8	96.7	0.29	0.14	31.3
All Vehicles		2446	3.0	0.571	12.0	LOS B	3.8	96.7	0.44	0.34	30.6

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: JCR-68

11. Josselyn Canyon Road - Highway 68
Background Conditions
PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Josselyn Canyon Road											
3	L2	77	3.0	0.187	8.1	LOS A	0.5	12.7	0.49	0.49	31.2
18	R2	39	3.0	0.187	8.1	LOS A	0.5	12.7	0.49	0.49	30.7
Approach		116	3.0	0.187	8.1	LOS A	0.5	12.7	0.49	0.49	31.0
East: Highway 68											
1	L2	71	3.0	0.718	15.6	LOS C	6.6	168.2	0.49	0.28	29.1
6	T1	1385	3.0	0.718	15.6	LOS C	6.6	168.2	0.49	0.28	29.3
Approach		1455	3.0	0.718	15.6	LOS C	6.6	168.2	0.49	0.28	29.3
West: Highway 68											
2	T1	789	3.0	0.430	8.3	LOS A	2.3	58.6	0.27	0.14	32.5
12	R2	88	3.0	0.430	8.3	LOS A	2.3	58.6	0.27	0.14	31.7
Approach		877	3.0	0.430	8.3	LOS A	2.3	58.6	0.27	0.14	32.4
All Vehicles		2449	3.0	0.718	12.7	LOS B	6.6	168.2	0.41	0.24	30.4

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Pasadera-68

15. Pasadera Drive - Highway 68
Background Conditions
AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Boots Road											
3	L2	75	3.0	0.205	9.6	LOS A	0.5	13.8	0.58	0.58	30.5
8	T1	4	3.0	0.205	9.6	LOS A	0.5	13.8	0.58	0.58	30.6
18	R2	28	3.0	0.205	9.6	LOS A	0.5	13.8	0.58	0.58	30.0
Approach		108	3.0	0.205	9.6	LOS A	0.5	13.8	0.58	0.58	30.4
East: Highway 68											
1	L2	25	3.0	0.692	15.0	LOS B	5.6	142.5	0.54	0.36	29.4
6	T1	1298	3.0	0.692	15.0	LOS B	5.6	142.5	0.54	0.36	29.6
16	R2	25	3.0	0.692	15.0	LOS B	5.6	142.5	0.54	0.36	28.9
Approach		1348	3.0	0.692	15.0	LOS B	5.6	142.5	0.54	0.36	29.6
North: Pasadera Drive											
7	L2	35	3.0	0.252	13.3	LOS B	0.7	17.2	0.70	0.71	29.6
4	T1	1	3.0	0.252	13.3	LOS B	0.7	17.2	0.70	0.71	29.7
14	R2	65	3.0	0.252	13.3	LOS B	0.7	17.2	0.70	0.71	29.1
Approach		101	3.0	0.252	13.3	LOS B	0.7	17.2	0.70	0.71	29.3
West: Highway 68											
5	L2	36	3.0	0.491	9.3	LOS A	2.9	74.2	0.28	0.14	31.8
2	T1	950	3.0	0.491	9.3	LOS A	2.9	74.2	0.28	0.14	32.0
12	R2	26	3.0	0.491	9.3	LOS A	2.9	74.2	0.28	0.14	31.2
Approach		1012	3.0	0.491	9.3	LOS A	2.9	74.2	0.28	0.14	31.9
All Vehicles		2568	3.0	0.692	12.4	LOS B	5.6	142.5	0.45	0.29	30.5

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Pasadera-68

15. Pasadera Drive - Highway 68
Background Conditions
PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Boots Road											
3	L2	48	3.0	0.139	10.0	LOS B	0.3	8.9	0.63	0.63	30.2
8	T1	4	3.0	0.139	10.0	LOS B	0.3	8.9	0.63	0.63	30.3
18	R2	10	3.0	0.139	10.0	LOS B	0.3	8.9	0.63	0.63	29.7
Approach		62	3.0	0.139	10.0	LOS B	0.3	8.9	0.63	0.63	30.1
East: Highway 68											
1	L2	12	3.0	0.571	11.4	LOS B	3.6	92.8	0.44	0.29	30.9
6	T1	1060	3.0	0.571	11.4	LOS B	3.6	92.8	0.44	0.29	31.1
16	R2	33	3.0	0.571	11.4	LOS B	3.6	92.8	0.44	0.29	30.3
Approach		1104	3.0	0.571	11.4	LOS B	3.6	92.8	0.44	0.29	31.0
North: Pasadera Drive											
7	L2	23	3.0	0.149	9.4	LOS A	0.4	9.7	0.59	0.59	31.3
4	T1	2	3.0	0.149	9.4	LOS A	0.4	9.7	0.59	0.59	31.4
14	R2	48	3.0	0.149	9.4	LOS A	0.4	9.7	0.59	0.59	30.7
Approach		73	3.0	0.149	9.4	LOS A	0.4	9.7	0.59	0.59	30.9
West: Highway 68											
5	L2	71	3.0	0.615	11.8	LOS B	4.7	121.1	0.27	0.11	30.6
2	T1	1152	3.0	0.615	11.8	LOS B	4.7	121.1	0.27	0.11	30.8
12	R2	77	3.0	0.615	11.8	LOS B	4.7	121.1	0.27	0.11	30.2
Approach		1300	3.0	0.615	11.8	LOS B	4.7	121.1	0.27	0.11	30.8
All Vehicles		2539	3.0	0.615	11.5	LOS B	4.7	121.1	0.36	0.22	30.9

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Laureles-68

16. Laureles Grade Road - Highway 68
Background Conditions
AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Laureles Grade Road											
3	L2	214	3.0	0.344	10.5	LOS B	1.1	27.2	0.54	0.56	29.6
18	R2	292	3.0	0.470	13.2	LOS B	1.7	43.6	0.59	0.63	29.8
Approach		507	3.0	0.470	12.0	LOS B	1.7	43.6	0.57	0.60	29.7
East: Highway 68											
1	L2	271	3.0	0.853	26.9	LOS D	12.2	313.4	0.92	0.91	25.1
6	T1	1230	3.0	0.853	26.9	LOS D	12.2	313.4	0.92	0.91	25.5
Approach		1501	3.0	0.853	26.9	LOS D	12.2	313.4	0.92	0.91	25.4
West: Highway 68											
2	T1	787	3.0	0.474	10.6	LOS B	2.4	61.5	0.53	0.47	31.5
12	R2	223	3.0	0.137	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		1010	3.0	0.474	8.2	LOS A	2.4	61.5	0.42	0.37	32.4
All Vehicles		3017	3.0	0.853	18.2	LOS C	12.2	313.4	0.69	0.67	28.1

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Laureles-68

16. Laureles Grade Road - Highway 68
Background Conditions
PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Laureles Grade Road											
3	L2	221	3.0	0.387	12.2	LOS B	1.2	31.8	0.60	0.63	29.0
18	R2	371	3.0	0.651	20.6	LOS C	2.9	74.5	0.72	0.80	27.1
Approach		591	3.0	0.651	17.4	LOS C	2.9	74.5	0.67	0.74	27.8
East: Highway 68											
1	L2	230	3.0	0.639	14.3	LOS B	4.7	120.4	0.62	0.55	29.1
6	T1	886	3.0	0.639	14.3	LOS B	4.7	120.4	0.62	0.55	29.6
Approach		1116	3.0	0.639	14.3	LOS B	4.7	120.4	0.62	0.55	29.5
West: Highway 68											
2	T1	909	3.0	0.525	11.3	LOS B	2.9	75.4	0.54	0.45	31.1
12	R2	159	3.0	0.098	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		1067	3.0	0.525	9.6	LOS A	2.9	75.4	0.46	0.39	31.8
All Vehicles		2775	3.0	0.651	13.2	LOS B	4.7	120.4	0.57	0.52	30.0

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Torero-68

19. Torero Drive - Highway 68
Background Conditions
AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	951	36.0	0.649	16.8	LOS C	2.8	88.9	0.39	0.26	28.4
16	R2	2	3.0	0.649	16.7	LOS C	2.8	88.9	0.39	0.26	28.3
Approach		953	35.9	0.649	16.8	LOS C	2.8	88.9	0.39	0.26	28.4
North: Torero Drive											
7	L2	13	3.0	0.029	8.5	LOS A	0.1	1.8	0.60	0.60	30.4
14	R2	484	3.0	0.298	0.0	LOS A	0.0	0.0	0.00	0.00	36.5
Approach		497	3.0	0.298	0.3	LOS A	0.1	1.8	0.02	0.02	36.3
West: Highway 68											
5	L2	121	3.0	0.662	12.9	LOS B	5.9	151.3	0.17	0.05	30.1
2	T1	1312	3.0	0.662	12.9	LOS B	5.9	151.3	0.17	0.05	30.3
Approach		1433	3.0	0.662	12.9	LOS B	5.9	151.3	0.17	0.05	30.3
All Vehicles		2883	13.9	0.662	12.0	LOS B	5.9	151.3	0.21	0.11	30.5

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Torero-68

19. Torero Drive - Highway 68
Background Conditions
PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	1338	36.0	0.908	37.0	LOS E	7.2	228.8	0.48	0.31	22.6
16	R2	60	3.0	0.908	36.7	LOS E	7.2	228.8	0.49	0.31	22.6
Approach		1398	34.6	0.908	37.0	LOS E	7.2	228.8	0.48	0.31	22.6
North: Torero Drive											
7	L2	13	3.0	0.042	12.5	LOS B	0.1	2.6	0.73	0.73	28.9
14	R2	55	3.0	0.034	0.0	LOS A	0.0	0.0	0.00	0.00	36.5
Approach		68	3.0	0.042	2.4	LOS A	0.1	2.6	0.14	0.14	34.7
West: Highway 68											
5	L2	85	3.0	0.630	12.0	LOS B	5.2	133.0	0.15	0.04	30.5
2	T1	1279	3.0	0.630	12.0	LOS B	5.2	133.0	0.15	0.04	30.7
Approach		1364	3.0	0.630	12.0	LOS B	5.2	133.0	0.15	0.04	30.7
All Vehicles		2830	18.6	0.908	24.1	LOS C	7.2	228.8	0.32	0.18	26.2

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmsted-68

1. Olmsted Road - Highway 68
Background Plus Proposed Project Short-Term Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	46	3.0	0.324	12.3	LOS B	0.9	24.3	0.64	0.66	30.1
8	T1	28	3.0	0.324	12.3	LOS B	0.9	24.3	0.64	0.66	30.2
18	R2	87	3.0	0.324	12.3	LOS B	0.9	24.3	0.64	0.66	29.6
Approach		161	3.0	0.324	12.3	LOS B	0.9	24.3	0.64	0.66	29.8
East: Highway 68											
1	L2	101	3.0	0.667	14.6	LOS B	5.2	133.0	0.58	0.45	29.4
6	T1	841	3.0	0.667	14.6	LOS B	5.2	133.0	0.58	0.45	29.6
16	R2	300	3.0	0.667	14.6	LOS B	5.2	133.0	0.58	0.45	29.1
Approach		1242	3.0	0.667	14.6	LOS B	5.2	133.0	0.58	0.45	29.5
North: Olmsted Road											
7	L2	117	3.0	0.390	12.8	LOS B	1.2	31.7	0.63	0.66	29.4
4	T1	25	3.0	0.390	12.8	LOS B	1.2	31.7	0.63	0.66	29.6
14	R2	67	3.0	0.390	12.8	LOS B	1.2	31.7	0.63	0.66	29.0
Approach		210	3.0	0.390	12.8	LOS B	1.2	31.7	0.63	0.66	29.3
West: Highway 68											
5	L2	85	3.0	0.596	13.2	LOS B	4.0	101.1	0.60	0.54	29.9
2	T1	898	3.0	0.596	13.2	LOS B	4.0	101.1	0.60	0.54	30.2
12	R2	35	3.0	0.596	13.2	LOS B	4.0	101.1	0.60	0.54	29.6
Approach		1017	3.0	0.596	13.2	LOS B	4.0	101.1	0.60	0.54	30.2
All Vehicles		2630	3.0	0.667	13.8	LOS B	5.2	133.0	0.60	0.51	29.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmsted-68

1. Olmsted Road - Highway 68
Background Plus Proposed Project Short-Term Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	29	3.0	0.465	15.4	LOS C	1.6	40.5	0.68	0.73	29.2
8	T1	22	3.0	0.465	15.4	LOS C	1.6	40.5	0.68	0.73	29.3
18	R2	186	3.0	0.465	15.4	LOS C	1.6	40.5	0.68	0.73	28.7
Approach		237	3.0	0.465	15.4	LOS C	1.6	40.5	0.68	0.73	28.8
East: Highway 68											
1	L2	55	3.0	0.672	14.3	LOS B	5.2	132.3	0.53	0.35	29.6
6	T1	1103	3.0	0.672	14.3	LOS B	5.2	132.3	0.53	0.35	29.8
16	R2	147	3.0	0.672	14.3	LOS B	5.2	132.3	0.53	0.35	29.2
Approach		1305	3.0	0.672	14.3	LOS B	5.2	132.3	0.53	0.35	29.7
North: Olmsted Road											
7	L2	264	3.0	0.950	59.7	LOS F	8.3	213.5	0.95	1.40	18.3
4	T1	21	3.0	0.950	59.7	LOS F	8.3	213.5	0.95	1.40	18.3
14	R2	158	3.0	0.950	59.7	LOS F	8.3	213.5	0.95	1.40	18.1
Approach		442	3.0	0.950	59.7	LOS F	8.3	213.5	0.95	1.40	18.2
West: Highway 68											
5	L2	67	3.0	0.527	12.4	LOS B	3.0	75.9	0.61	0.61	30.3
2	T1	732	3.0	0.527	12.4	LOS B	3.0	75.9	0.61	0.61	30.5
12	R2	15	3.0	0.527	12.4	LOS B	3.0	75.9	0.61	0.61	30.0
Approach		814	3.0	0.527	12.4	LOS B	3.0	75.9	0.61	0.61	30.5
All Vehicles		2799	3.0	0.950	21.0	LOS C	8.3	213.5	0.63	0.62	27.1

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmstead-Garden

2. Olmsted Road - Garden Road
Background Plus Proposed Project Short-Term Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	396	3.0	0.433	8.1	LOS A	2.4	61.0	0.17	0.07	30.8
8	T1	29	3.0	0.433	8.1	LOS A	2.4	61.0	0.17	0.07	31.0
18	R2	35	3.0	0.433	8.1	LOS A	2.4	61.0	0.17	0.07	30.3
Approach		460	3.0	0.433	8.1	LOS A	2.4	61.0	0.17	0.07	30.8
East: Garden Road											
1	L2	18	3.0	0.039	5.6	LOS A	0.1	3.2	0.45	0.36	32.3
6	T1	2	3.0	0.039	5.6	LOS A	0.1	3.2	0.45	0.36	32.4
16	R2	7	3.0	0.039	5.6	LOS A	0.1	3.2	0.45	0.36	31.7
Approach		27	3.0	0.039	5.6	LOS A	0.1	3.2	0.45	0.36	32.2
North: Olmsted Road											
7	L2	5	3.0	0.037	5.4	LOS A	0.1	3.0	0.44	0.34	33.3
4	T1	17	3.0	0.037	5.4	LOS A	0.1	3.0	0.44	0.34	33.5
14	R2	3	3.0	0.037	5.4	LOS A	0.1	3.0	0.44	0.34	32.7
Approach		26	3.0	0.037	5.4	LOS A	0.1	3.0	0.44	0.34	33.3
West: Garden Road											
5	L2	13	3.0	0.165	4.9	LOS A	0.6	16.3	0.14	0.06	33.9
2	T1	13	3.0	0.165	4.9	LOS A	0.6	16.3	0.14	0.06	34.0
12	R2	148	3.0	0.165	4.9	LOS A	0.6	16.3	0.14	0.06	33.3
Approach		174	3.0	0.165	4.9	LOS A	0.6	16.3	0.14	0.06	33.4
All Vehicles		687	3.0	0.433	7.1	LOS A	2.4	61.0	0.19	0.09	31.5

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmstead-Garden

2. Olmsted Road - Garden Road
Background Plus Proposed Project Short-Term Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	134	3.0	0.229	5.6	LOS A	0.9	24.3	0.17	0.07	32.5
8	T1	51	3.0	0.229	5.6	LOS A	0.9	24.3	0.17	0.07	32.6
18	R2	54	3.0	0.229	5.6	LOS A	0.9	24.3	0.17	0.07	31.9
Approach		239	3.0	0.229	5.6	LOS A	0.9	24.3	0.17	0.07	32.4
East: Garden Road											
1	L2	67	3.0	0.110	5.1	LOS A	0.4	9.9	0.33	0.22	32.5
6	T1	17	3.0	0.110	5.1	LOS A	0.4	9.9	0.33	0.22	32.6
16	R2	13	3.0	0.110	5.1	LOS A	0.4	9.9	0.33	0.22	31.9
Approach		98	3.0	0.110	5.1	LOS A	0.4	9.9	0.33	0.22	32.4
North: Olmsted Road											
7	L2	13	3.0	0.109	5.2	LOS A	0.4	9.8	0.34	0.24	33.6
4	T1	64	3.0	0.109	5.2	LOS A	0.4	9.8	0.34	0.24	33.7
14	R2	18	3.0	0.109	5.2	LOS A	0.4	9.8	0.34	0.24	33.0
Approach		96	3.0	0.109	5.2	LOS A	0.4	9.8	0.34	0.24	33.6
West: Garden Road											
5	L2	18	3.0	0.389	8.2	LOS A	1.9	47.8	0.37	0.25	32.3
2	T1	17	3.0	0.389	8.2	LOS A	1.9	47.8	0.37	0.25	32.5
12	R2	332	3.0	0.389	8.2	LOS A	1.9	47.8	0.37	0.25	31.8
Approach		367	3.0	0.389	8.2	LOS A	1.9	47.8	0.37	0.25	31.8
All Vehicles		800	3.0	0.389	6.7	LOS A	1.9	47.8	0.30	0.19	32.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 218-68

12. Highway 218 - Highway 68
Background Plus Proposed Project Short-Term Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Monterra Road											
3	L2	11	3.0	0.127	14.1	LOS B	0.3	7.9	0.75	0.75	29.4
8	T1	21	3.0	0.127	14.1	LOS B	0.3	7.9	0.75	0.75	29.5
18	R2	8	3.0	0.127	14.1	LOS B	0.3	7.9	0.75	0.75	29.0
Approach		39	3.0	0.127	14.1	LOS B	0.3	7.9	0.75	0.75	29.4
East: Highway 68											
1	L2	7	3.0	0.439	8.6	LOS A	1.8	45.1	0.29	0.20	32.2
6	T1	865	3.0	0.439	8.6	LOS A	1.8	45.1	0.29	0.19	32.3
16	R2	328	3.0	0.327	6.9	LOS A	1.1	27.3	0.23	0.14	32.3
Approach		1200	3.0	0.439	8.2	LOS A	1.8	45.1	0.27	0.18	32.3
North: Highway 218											
7	L2	734	3.0	0.661	21.1	LOS C	3.1	80.1	0.72	0.82	26.1
4	T1	16	3.0	0.661	20.7	LOS C	3.0	77.6	0.71	0.80	26.3
14	R2	349	3.0	0.215	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		1099	3.0	0.661	14.4	LOS B	3.1	80.1	0.49	0.56	28.6
West: Highway 68											
5	L2	101	3.0	0.830	32.2	LOS D	5.9	151.4	0.82	1.01	23.9
2	T1	930	3.0	0.830	31.7	LOS D	5.9	151.4	0.81	0.99	24.2
12	R2	3	3.0	0.830	31.3	LOS D	5.7	146.6	0.80	0.98	23.9
Approach		1035	3.0	0.830	31.8	LOS D	5.9	151.4	0.81	1.00	24.2
All Vehicles		3373	3.0	0.830	17.5	LOS C	5.9	151.4	0.51	0.56	28.1

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 218-68

12. Highway 218 - Highway 68
Background Plus Proposed Project Short-Term Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Monterra Road											
3	L2	11	3.0	0.148	11.0	LOS B	0.4	9.4	0.66	0.66	30.8
8	T1	35	3.0	0.148	11.0	LOS B	0.4	9.4	0.66	0.66	31.0
18	R2	15	3.0	0.148	11.0	LOS B	0.4	9.4	0.66	0.66	30.3
Approach		61	3.0	0.148	11.0	LOS B	0.4	9.4	0.66	0.66	30.8
East: Highway 68											
1	L2	3	3.0	0.626	14.1	LOS B	3.5	90.1	0.56	0.58	29.8
6	T1	1075	3.0	0.626	14.0	LOS B	3.5	90.1	0.55	0.56	30.0
16	R2	792	3.0	0.905	33.5	LOS D	11.7	298.8	0.92	1.08	23.3
Approach		1871	3.0	0.905	22.3	LOS C	11.7	298.8	0.71	0.78	26.8
North: Highway 218											
7	L2	314	3.0	0.343	12.9	LOS B	1.1	27.1	0.65	0.68	28.8
4	T1	20	3.0	0.343	12.6	LOS B	1.0	26.2	0.64	0.67	29.1
14	R2	129	3.0	0.080	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		463	3.0	0.343	9.3	LOS A	1.1	27.1	0.47	0.49	30.5
West: Highway 68											
5	L2	278	3.0	0.616	13.9	LOS B	3.4	86.5	0.56	0.58	29.1
2	T1	765	3.0	0.616	13.8	LOS B	3.4	86.5	0.55	0.56	29.8
12	R2	8	3.0	0.616	13.7	LOS B	3.2	82.2	0.54	0.55	29.4
Approach		1051	3.0	0.616	13.8	LOS B	3.4	86.5	0.55	0.57	29.6
All Vehicles		3446	3.0	0.905	17.7	LOS C	11.7	298.8	0.63	0.67	28.1

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: York-68

14. York Road / Highway 68
Background Plus Proposed Project Short-Term Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	1011	3.0	0.837	25.7	LOS D	11.0	282.7	0.89	0.91	25.9
16	R2	429	3.0	0.837	25.7	LOS D	11.0	282.7	0.89	0.91	25.3
Approach		1440	3.0	0.837	25.7	LOS D	11.0	282.7	0.89	0.91	25.8
North: York Road											
7	L2	92	3.0	0.370	12.6	LOS B	1.1	29.3	0.63	0.66	29.7
14	R2	103	3.0	0.370	12.6	LOS B	1.1	29.3	0.63	0.66	29.2
Approach		196	3.0	0.370	12.6	LOS B	1.1	29.3	0.63	0.66	29.4
West: Highway 68											
5	L2	236	3.0	0.574	11.2	LOS B	3.8	97.0	0.39	0.23	30.3
2	T1	910	3.0	0.574	11.2	LOS B	3.8	97.0	0.39	0.23	30.9
Approach		1146	3.0	0.574	11.2	LOS B	3.8	97.0	0.39	0.23	30.8
All Vehicles		2782	3.0	0.837	18.8	LOS C	11.0	282.7	0.67	0.61	27.9

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: York-68

14. York Road / Highway 68
Background Plus Proposed Project Short-Term Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	1046	3.0	0.590	11.6	LOS B	4.0	103.2	0.39	0.23	31.0
16	R2	138	3.0	0.590	11.6	LOS B	4.0	103.2	0.39	0.23	30.3
Approach		1184	3.0	0.590	11.6	LOS B	4.0	103.2	0.39	0.23	30.9
North: York Road											
7	L2	379	3.0	0.990	65.4	LOS F	11.9	304.5	0.97	1.59	17.4
14	R2	132	3.0	0.990	65.4	LOS F	11.9	304.5	0.97	1.59	17.2
Approach		511	3.0	0.990	65.4	LOS F	11.9	304.5	0.97	1.59	17.4
West: Highway 68											
5	L2	87	3.0	0.651	16.7	LOS C	4.6	117.8	0.72	0.79	28.6
2	T1	879	3.0	0.651	16.7	LOS C	4.6	117.8	0.72	0.79	28.9
Approach		966	3.0	0.651	16.7	LOS C	4.6	117.8	0.72	0.79	28.8
All Vehicles		2661	3.0	0.990	23.8	LOS C	11.9	304.5	0.62	0.70	26.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: CdT-68

17. Corral de Tierra Road - Highway 68
Background Plus Proposed Project Short-Term Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Corral de Tierra Road											
3	L2	162	3.0	0.853	39.2	LOS E	5.5	140.9	0.86	1.09	22.0
8	T1	1	3.0	0.853	39.2	LOS E	5.5	140.9	0.86	1.09	22.1
18	R2	285	3.0	0.853	39.2	LOS E	5.5	140.9	0.86	1.09	21.8
Approach		448	3.0	0.853	39.2	LOS E	5.5	140.9	0.86	1.09	21.9
East: Higwhay 68											
1	L2	167	3.0	0.829	23.7	LOS C	11.2	288.0	0.83	0.72	26.2
6	T1	1364	3.0	0.829	23.7	LOS C	11.2	288.0	0.83	0.72	26.4
16	R2	5	3.0	0.829	23.7	LOS C	11.2	288.0	0.83	0.72	26.0
Approach		1537	3.0	0.829	23.7	LOS C	11.2	288.0	0.83	0.72	26.4
North: Corral de Tierra Road											
7	L2	1	3.0	0.010	11.3	LOS B	0.0	0.6	0.71	0.71	30.4
4	T1	1	3.0	0.010	11.3	LOS B	0.0	0.6	0.71	0.71	30.6
14	R2	1	3.0	0.010	11.3	LOS B	0.0	0.6	0.71	0.71	29.9
Approach		3	3.0	0.010	11.3	LOS B	0.0	0.6	0.71	0.71	30.3
West: Highway 68											
5	L2	1	3.0	0.580	12.1	LOS B	3.6	91.4	0.52	0.39	30.7
2	T1	1021	3.0	0.580	12.1	LOS B	3.6	91.4	0.52	0.39	30.8
12	R2	47	3.0	0.580	12.1	LOS B	3.6	91.4	0.52	0.39	30.1
Approach		1068	3.0	0.580	12.1	LOS B	3.6	91.4	0.52	0.39	30.8
All Vehicles		3057	3.0	0.853	21.9	LOS C	11.2	288.0	0.73	0.66	26.9

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: CdT-68

17. Corral de Tierra Road - Highway 68
Background Plus Proposed Project Short-Term Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Corral de Tierra Road											
3	L2	83	3.0	0.506	18.0	LOS C	1.7	44.7	0.73	0.79	27.9
8	T1	1	3.0	0.506	18.0	LOS C	1.7	44.7	0.73	0.79	28.0
18	R2	151	3.0	0.506	18.0	LOS C	1.7	44.7	0.73	0.79	27.4
Approach		235	3.0	0.506	18.0	LOS C	1.7	44.7	0.73	0.79	27.6
East: Higwhay 68											
1	L2	210	3.0	0.629	12.6	LOS B	4.6	118.4	0.43	0.25	29.9
6	T1	1041	3.0	0.629	12.6	LOS B	4.6	118.4	0.43	0.25	30.3
16	R2	9	3.0	0.629	12.6	LOS B	4.6	118.4	0.43	0.25	29.9
Approach		1260	3.0	0.629	12.6	LOS B	4.6	118.4	0.43	0.25	30.3
North: Corral de Tierra Road											
7	L2	9	3.0	0.034	9.1	LOS A	0.1	2.1	0.63	0.63	30.9
4	T1	1	3.0	0.034	9.1	LOS A	0.1	2.1	0.63	0.63	31.0
14	R2	4	3.0	0.034	9.1	LOS A	0.1	2.1	0.63	0.63	30.4
Approach		14	3.0	0.034	9.1	LOS A	0.1	2.1	0.63	0.63	30.7
West: Highway 68											
5	L2	5	3.0	0.722	17.6	LOS C	6.6	170.0	0.71	0.65	28.5
2	T1	1179	3.0	0.722	17.6	LOS C	6.6	170.0	0.71	0.65	28.6
12	R2	78	3.0	0.722	17.6	LOS C	6.6	170.0	0.71	0.65	28.0
Approach		1263	3.0	0.722	17.6	LOS C	6.6	170.0	0.71	0.65	28.6
All Vehicles		2772	3.0	0.722	15.3	LOS C	6.6	170.0	0.58	0.48	29.2

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: SanBen-68

18. San Benancio Road - Highway 68
Background Plus Proposed Project Short-Term Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: San Benancio Road											
3	L2	184	3.0	0.946	58.3	LOS F	8.2	210.6	0.94	1.38	18.5
8	T1	1	3.0	0.946	58.3	LOS F	8.2	210.6	0.94	1.38	18.6
18	R2	263	3.0	0.946	58.3	LOS F	8.2	210.6	0.94	1.38	18.3
Approach		448	3.0	0.946	58.3	LOS F	8.2	210.6	0.94	1.38	18.4
East: Highway 68											
1	L2	165	3.0	0.814	22.8	LOS C	10.3	263.3	0.82	0.74	26.5
6	T1	1309	3.0	0.814	22.8	LOS C	10.3	263.3	0.82	0.74	26.7
16	R2	1	3.0	0.814	22.8	LOS C	10.3	263.3	0.82	0.74	26.3
Approach		1475	3.0	0.814	22.8	LOS C	10.3	263.3	0.82	0.74	26.7
North: San Benancio Road											
7	L2	1	3.0	0.010	11.0	LOS B	0.0	0.6	0.70	0.70	30.6
4	T1	1	3.0	0.010	11.0	LOS B	0.0	0.6	0.70	0.70	30.7
14	R2	1	3.0	0.010	11.0	LOS B	0.0	0.6	0.70	0.70	30.0
Approach		3	3.0	0.010	11.0	LOS B	0.0	0.6	0.70	0.70	30.4
West: Highway 68											
5	L2	1	3.0	0.661	14.0	LOS B	4.1	103.9	0.47	0.37	29.9
2	T1	1163	3.0	0.661	14.0	LOS B	4.1	103.9	0.46	0.36	30.0
12	R2	115	3.0	0.661	13.9	LOS B	3.8	98.2	0.45	0.35	29.3
Approach		1279	3.0	0.661	13.9	LOS B	4.1	103.9	0.46	0.36	30.0
All Vehicles		3205	3.0	0.946	24.2	LOS C	10.3	263.3	0.69	0.68	26.2

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: SanBen-68

18. San Benancio Road - Highway 68
Background Plus Proposed Project Short-Term Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: San Benancio Road											
3	L2	60	3.0	0.337	13.8	LOS B	1.0	25.2	0.68	0.71	29.3
8	T1	1	3.0	0.337	13.8	LOS B	1.0	25.2	0.68	0.71	29.5
18	R2	90	3.0	0.337	13.8	LOS B	1.0	25.2	0.68	0.71	28.9
Approach		151	3.0	0.337	13.8	LOS B	1.0	25.2	0.68	0.71	29.1
East: Highway 68											
1	L2	177	3.0	0.677	13.9	LOS B	5.7	147.0	0.41	0.21	29.5
6	T1	1212	3.0	0.677	13.9	LOS B	5.7	147.0	0.41	0.21	29.9
16	R2	2	3.0	0.677	13.9	LOS B	5.7	147.0	0.41	0.21	29.4
Approach		1391	3.0	0.677	13.9	LOS B	5.7	147.0	0.41	0.21	29.8
North: San Benancio Road											
7	L2	1	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	31.2
4	T1	1	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	31.3
14	R2	1	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	30.7
Approach		3	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	31.1
West: Highway 68											
5	L2	3	3.0	0.689	15.1	LOS C	4.6	118.3	0.51	0.42	29.5
2	T1	1238	3.0	0.689	15.1	LOS C	4.6	118.3	0.50	0.41	29.6
12	R2	80	3.0	0.689	15.0	LOS C	4.4	111.9	0.49	0.40	28.9
Approach		1322	3.0	0.689	15.1	LOS C	4.6	118.3	0.50	0.41	29.5
All Vehicles		2867	3.0	0.689	14.4	LOS B	5.7	147.0	0.47	0.33	29.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: JCR-68

11. Josselyn Canyon Road - Highway 68
Background Plus Proposed Project Short-Term Conditions
AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Josselyn Canyon Road											
3	L2	213	3.0	0.531	17.2	LOS C	2.0	50.0	0.70	0.76	27.6
18	R2	62	3.0	0.531	17.2	LOS C	2.0	50.0	0.70	0.76	27.2
Approach		275	3.0	0.531	17.2	LOS C	2.0	50.0	0.70	0.76	27.5
East: Highway 68											
1	L2	53	3.0	0.571	12.2	LOS B	3.5	90.8	0.55	0.46	30.4
6	T1	952	3.0	0.571	12.2	LOS B	3.5	90.8	0.55	0.46	30.6
Approach		1005	3.0	0.571	12.2	LOS B	3.5	90.8	0.55	0.46	30.6
West: Highway 68											
2	T1	1041	3.0	0.560	10.6	LOS B	3.8	96.3	0.29	0.14	31.4
12	R2	122	3.0	0.560	10.6	LOS B	3.8	96.3	0.29	0.14	30.7
Approach		1163	3.0	0.560	10.6	LOS B	3.8	96.3	0.29	0.14	31.4
All Vehicles		2443	3.0	0.571	12.0	LOS B	3.8	96.3	0.44	0.34	30.6

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: JCR-68

11. Josselyn Canyon Road - Highway 68
Background Plus Proposed Project Short-Term Conditions
PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Josselyn Canyon Road											
3	L2	77	3.0	0.187	8.0	LOS A	0.5	12.7	0.49	0.49	31.2
18	R2	39	3.0	0.187	8.0	LOS A	0.5	12.7	0.49	0.49	30.7
Approach		116	3.0	0.187	8.0	LOS A	0.5	12.7	0.49	0.49	31.0
East: Highway 68											
1	L2	71	3.0	0.718	15.6	LOS C	6.6	168.2	0.49	0.28	29.1
6	T1	1385	3.0	0.718	15.6	LOS C	6.6	168.2	0.49	0.28	29.3
Approach		1455	3.0	0.718	15.6	LOS C	6.6	168.2	0.49	0.28	29.3
West: Highway 68											
2	T1	787	3.0	0.429	8.3	LOS A	2.3	58.4	0.27	0.14	32.5
12	R2	88	3.0	0.429	8.3	LOS A	2.3	58.4	0.27	0.14	31.7
Approach		875	3.0	0.429	8.3	LOS A	2.3	58.4	0.27	0.14	32.4
All Vehicles		2447	3.0	0.718	12.6	LOS B	6.6	168.2	0.41	0.24	30.4

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Pasadera-68

15. Pasadera Drive - Highway 68
Background Plus Proposed Project Short-Term Conditions
AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Boots Road											
3	L2	75	3.0	0.205	9.6	LOS A	0.5	13.8	0.58	0.58	30.5
8	T1	4	3.0	0.205	9.6	LOS A	0.5	13.8	0.58	0.58	30.6
18	R2	28	3.0	0.205	9.6	LOS A	0.5	13.8	0.58	0.58	30.0
Approach		108	3.0	0.205	9.6	LOS A	0.5	13.8	0.58	0.58	30.4
East: Highway 68											
1	L2	25	3.0	0.692	15.0	LOS B	5.6	142.5	0.54	0.36	29.4
6	T1	1298	3.0	0.692	15.0	LOS B	5.6	142.5	0.54	0.36	29.6
16	R2	25	3.0	0.692	15.0	LOS B	5.6	142.5	0.54	0.36	28.9
Approach		1348	3.0	0.692	15.0	LOS B	5.6	142.5	0.54	0.36	29.6
North: Pasadera Drive											
7	L2	35	3.0	0.252	13.3	LOS B	0.7	17.2	0.70	0.71	29.6
4	T1	1	3.0	0.252	13.3	LOS B	0.7	17.2	0.70	0.71	29.7
14	R2	65	3.0	0.252	13.3	LOS B	0.7	17.2	0.70	0.71	29.1
Approach		101	3.0	0.252	13.3	LOS B	0.7	17.2	0.70	0.71	29.3
West: Highway 68											
5	L2	36	3.0	0.491	9.3	LOS A	2.9	74.2	0.28	0.14	31.8
2	T1	950	3.0	0.491	9.3	LOS A	2.9	74.2	0.28	0.14	32.0
12	R2	26	3.0	0.491	9.3	LOS A	2.9	74.2	0.28	0.14	31.2
Approach		1012	3.0	0.491	9.3	LOS A	2.9	74.2	0.28	0.14	31.9
All Vehicles		2568	3.0	0.692	12.4	LOS B	5.6	142.5	0.45	0.29	30.5

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Pasadera-68

15. Pasadera Drive - Highway 68
Background Plus Proposed Project Short-Term Conditions
PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Boots Road											
3	L2	48	3.0	0.139	10.1	LOS B	0.3	8.9	0.63	0.63	30.2
8	T1	4	3.0	0.139	10.1	LOS B	0.3	8.9	0.63	0.63	30.3
18	R2	10	3.0	0.139	10.1	LOS B	0.3	8.9	0.63	0.63	29.7
Approach		62	3.0	0.139	10.1	LOS B	0.3	8.9	0.63	0.63	30.1
East: Highway 68											
1	L2	12	3.0	0.571	11.4	LOS B	3.6	92.8	0.44	0.29	30.9
6	T1	1060	3.0	0.571	11.4	LOS B	3.6	92.8	0.44	0.29	31.1
16	R2	33	3.0	0.571	11.4	LOS B	3.6	92.8	0.44	0.29	30.3
Approach		1104	3.0	0.571	11.4	LOS B	3.6	92.8	0.44	0.29	31.0
North: Pasadera Drive											
7	L2	23	3.0	0.149	9.4	LOS A	0.4	9.7	0.59	0.59	31.3
4	T1	2	3.0	0.149	9.4	LOS A	0.4	9.7	0.59	0.59	31.4
14	R2	48	3.0	0.149	9.4	LOS A	0.4	9.7	0.59	0.59	30.7
Approach		73	3.0	0.149	9.4	LOS A	0.4	9.7	0.59	0.59	30.9
West: Highway 68											
5	L2	71	3.0	0.616	11.8	LOS B	4.7	121.3	0.27	0.11	30.6
2	T1	1153	3.0	0.616	11.8	LOS B	4.7	121.3	0.27	0.11	30.8
12	R2	77	3.0	0.616	11.8	LOS B	4.7	121.3	0.27	0.11	30.2
Approach		1301	3.0	0.616	11.8	LOS B	4.7	121.3	0.27	0.11	30.8
All Vehicles		2540	3.0	0.616	11.5	LOS B	4.7	121.3	0.36	0.22	30.9

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Laureles-68

16. Laureles Grade Road - Highway 68
Background Plus Proposed Project Short-Term Conditions
AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Laureles Grade Road											
3	L2	214	3.0	0.344	10.5	LOS B	1.1	27.2	0.54	0.56	29.6
18	R2	292	3.0	0.470	13.2	LOS B	1.7	43.6	0.59	0.63	29.8
Approach		507	3.0	0.470	12.0	LOS B	1.7	43.6	0.57	0.60	29.7
East: Highway 68											
1	L2	271	3.0	0.853	26.9	LOS D	12.2	313.4	0.92	0.91	25.1
6	T1	1230	3.0	0.853	26.9	LOS D	12.2	313.4	0.92	0.91	25.5
Approach		1501	3.0	0.853	26.9	LOS D	12.2	313.4	0.92	0.91	25.4
West: Highway 68											
2	T1	787	3.0	0.474	10.6	LOS B	2.4	61.5	0.53	0.47	31.5
12	R2	223	3.0	0.137	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		1010	3.0	0.474	8.2	LOS A	2.4	61.5	0.42	0.37	32.4
All Vehicles		3017	3.0	0.853	18.2	LOS C	12.2	313.4	0.69	0.67	28.1

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Laureles-68

16. Laureles Grade Road - Highway 68
Background Plus Proposed Project Short-Term Conditions
PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Laureles Grade Road											
3	L2	221	3.0	0.388	12.2	LOS B	1.2	31.8	0.60	0.63	29.0
18	R2	371	3.0	0.651	20.6	LOS C	2.9	74.6	0.72	0.80	27.1
Approach		591	3.0	0.651	17.5	LOS C	2.9	74.6	0.67	0.74	27.8
East: Highway 68											
1	L2	230	3.0	0.639	14.3	LOS B	4.7	120.4	0.62	0.55	29.1
6	T1	886	3.0	0.639	14.3	LOS B	4.7	120.4	0.62	0.55	29.6
Approach		1116	3.0	0.639	14.3	LOS B	4.7	120.4	0.62	0.55	29.5
West: Highway 68											
2	T1	910	3.0	0.526	11.3	LOS B	3.0	75.6	0.54	0.45	31.1
12	R2	159	3.0	0.098	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		1068	3.0	0.526	9.6	LOS A	3.0	75.6	0.46	0.39	31.8
All Vehicles		2776	3.0	0.651	13.2	LOS B	4.7	120.4	0.57	0.53	29.9

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Torero-68

19. Torero Drive - Highway 68
Background Plus Proposed Project Short-Term Conditions
AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	951	36.0	0.649	16.8	LOS C	2.8	88.9	0.39	0.26	28.4
16	R2	2	3.0	0.649	16.7	LOS C	2.8	88.9	0.39	0.26	28.3
Approach		953	35.9	0.649	16.8	LOS C	2.8	88.9	0.39	0.26	28.4
North: Torero Drive											
7	L2	13	3.0	0.029	8.5	LOS A	0.1	1.8	0.60	0.60	30.4
14	R2	484	3.0	0.298	0.0	LOS A	0.0	0.0	0.00	0.00	36.5
Approach		497	3.0	0.298	0.3	LOS A	0.1	1.8	0.02	0.02	36.3
West: Highway 68											
5	L2	121	3.0	0.662	12.9	LOS B	5.9	151.3	0.17	0.05	30.1
2	T1	1312	3.0	0.662	12.9	LOS B	5.9	151.3	0.17	0.05	30.3
Approach		1433	3.0	0.662	12.9	LOS B	5.9	151.3	0.17	0.05	30.3
All Vehicles		2883	13.9	0.662	12.0	LOS B	5.9	151.3	0.21	0.11	30.5

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Torero-68

19. Torero Drive - Highway 68
Background Plus Proposed Project Short-Term Conditions
PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	1338	36.0	0.908	37.0	LOS E	7.2	228.8	0.48	0.31	22.6
16	R2	60	3.0	0.908	36.7	LOS E	7.2	228.8	0.49	0.31	22.6
Approach		1398	34.6	0.908	37.0	LOS E	7.2	228.8	0.48	0.31	22.6
North: Torero Drive											
7	L2	13	3.0	0.042	12.5	LOS B	0.1	2.6	0.73	0.73	28.9
14	R2	55	3.0	0.034	0.0	LOS A	0.0	0.0	0.00	0.00	36.5
Approach		68	3.0	0.042	2.4	LOS A	0.1	2.6	0.14	0.14	34.7
West: Highway 68											
5	L2	85	3.0	0.631	12.0	LOS B	5.2	133.3	0.16	0.04	30.5
2	T1	1280	3.0	0.631	12.0	LOS B	5.2	133.3	0.16	0.04	30.7
Approach		1365	3.0	0.631	12.0	LOS B	5.2	133.3	0.16	0.04	30.7
All Vehicles		2832	18.6	0.908	24.1	LOS C	7.2	228.8	0.32	0.18	26.2

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmsted-68

1. Olmsted Road - Highway 68
Background Plus **Alt 1** Project Short-Term Conditions AM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	46	3.0	0.324	12.3	LOS B	0.9	24.2	0.64	0.66	30.1
8	T1	27	3.0	0.324	12.3	LOS B	0.9	24.2	0.64	0.66	30.2
18	R2	88	3.0	0.324	12.3	LOS B	0.9	24.2	0.64	0.66	29.6
Approach		161	3.0	0.324	12.3	LOS B	0.9	24.2	0.64	0.66	29.9
East: Highway 68											
1	L2	101	3.0	0.665	14.5	LOS B	5.1	131.3	0.58	0.43	29.5
6	T1	842	3.0	0.665	14.5	LOS B	5.1	131.3	0.58	0.43	29.6
16	R2	299	3.0	0.665	14.5	LOS B	5.1	131.3	0.58	0.43	29.1
Approach		1242	3.0	0.665	14.5	LOS B	5.1	131.3	0.58	0.43	29.5
North: Olmsted Road											
7	L2	115	3.0	0.423	13.6	LOS B	1.4	35.6	0.64	0.68	29.2
4	T1	25	3.0	0.423	13.6	LOS B	1.4	35.6	0.64	0.68	29.3
14	R2	87	3.0	0.423	13.6	LOS B	1.4	35.6	0.64	0.68	28.8
Approach		227	3.0	0.423	13.6	LOS B	1.4	35.6	0.64	0.68	29.1
West: Highway 68											
5	L2	83	3.0	0.595	13.2	LOS B	3.9	100.9	0.60	0.54	30.0
2	T1	901	3.0	0.595	13.2	LOS B	3.9	100.9	0.60	0.54	30.2
12	R2	35	3.0	0.595	13.2	LOS B	3.9	100.9	0.60	0.54	29.6
Approach		1018	3.0	0.595	13.2	LOS B	3.9	100.9	0.60	0.54	30.2
All Vehicles		2649	3.0	0.665	13.8	LOS B	5.1	131.3	0.59	0.51	29.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmsted-68

1. Olmsted Road - Highway 68
Background Plus **Alt 1** Project Short-Term Conditions PM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	29	3.0	0.464	15.4	LOS C	1.6	40.4	0.68	0.73	29.2
8	T1	21	3.0	0.464	15.4	LOS C	1.6	40.4	0.68	0.73	29.3
18	R2	187	3.0	0.464	15.4	LOS C	1.6	40.4	0.68	0.73	28.7
Approach		237	3.0	0.464	15.4	LOS C	1.6	40.4	0.68	0.73	28.8
East: Highway 68											
1	L2	57	3.0	0.673	14.3	LOS B	5.2	133.0	0.52	0.35	29.6
6	T1	1105	3.0	0.673	14.3	LOS B	5.2	133.0	0.52	0.35	29.8
16	R2	148	3.0	0.673	14.3	LOS B	5.2	133.0	0.52	0.35	29.2
Approach		1310	3.0	0.673	14.3	LOS B	5.2	133.0	0.52	0.35	29.7
North: Olmsted Road											
7	L2	263	3.0	0.947	59.3	LOS F	8.2	209.9	0.94	1.39	18.3
4	T1	20	3.0	0.947	59.3	LOS F	8.2	209.9	0.94	1.39	18.4
14	R2	158	3.0	0.947	59.3	LOS F	8.2	209.9	0.94	1.39	18.1
Approach		440	3.0	0.947	59.3	LOS F	8.2	209.9	0.94	1.39	18.3
West: Highway 68											
5	L2	66	3.0	0.526	12.3	LOS B	3.0	75.7	0.61	0.61	30.3
2	T1	733	3.0	0.526	12.3	LOS B	3.0	75.7	0.61	0.61	30.6
12	R2	15	3.0	0.526	12.3	LOS B	3.0	75.7	0.61	0.61	30.0
Approach		814	3.0	0.526	12.3	LOS B	3.0	75.7	0.61	0.61	30.5
All Vehicles		2801	3.0	0.947	20.9	LOS C	8.2	209.9	0.63	0.62	27.2

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmstead-Garden

2. Olmsted Road - Garden Road
Background Plus **Alt 1** Project Short-Term Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	396	3.0	0.428	8.0	LOS A	2.3	60.0	0.17	0.06	30.9
8	T1	25	3.0	0.428	8.0	LOS A	2.3	60.0	0.17	0.06	31.0
18	R2	35	3.0	0.428	8.0	LOS A	2.3	60.0	0.17	0.06	30.3
Approach		455	3.0	0.428	8.0	LOS A	2.3	60.0	0.17	0.06	30.8
East: Garden Road											
1	L2	18	3.0	0.039	5.5	LOS A	0.1	3.2	0.45	0.36	32.3
6	T1	2	3.0	0.039	5.5	LOS A	0.1	3.2	0.45	0.36	32.4
16	R2	7	3.0	0.039	5.5	LOS A	0.1	3.2	0.45	0.36	31.7
Approach		27	3.0	0.039	5.5	LOS A	0.1	3.2	0.45	0.36	32.2
North: Olmsted Road											
7	L2	5	3.0	0.029	5.3	LOS A	0.1	2.4	0.44	0.33	33.2
4	T1	13	3.0	0.029	5.3	LOS A	0.1	2.4	0.44	0.33	33.4
14	R2	2	3.0	0.029	5.3	LOS A	0.1	2.4	0.44	0.33	32.6
Approach		21	3.0	0.029	5.3	LOS A	0.1	2.4	0.44	0.33	33.3
West: Garden Road											
5	L2	12	3.0	0.164	4.9	LOS A	0.6	16.1	0.13	0.05	33.9
2	T1	13	3.0	0.164	4.9	LOS A	0.6	16.1	0.13	0.05	34.1
12	R2	148	3.0	0.164	4.9	LOS A	0.6	16.1	0.13	0.05	33.3
Approach		173	3.0	0.164	4.9	LOS A	0.6	16.1	0.13	0.05	33.4
All Vehicles		676	3.0	0.428	7.1	LOS A	2.3	60.0	0.18	0.08	31.6

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmstead-Garden

2. Olmsted Road - Garden Road
Background Plus **Alt 1** Project Short-Term Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	134	3.0	0.228	5.6	LOS A	0.9	24.1	0.17	0.07	32.5
8	T1	50	3.0	0.228	5.6	LOS A	0.9	24.1	0.17	0.07	32.6
18	R2	54	3.0	0.228	5.6	LOS A	0.9	24.1	0.17	0.07	31.9
Approach		238	3.0	0.228	5.6	LOS A	0.9	24.1	0.17	0.07	32.4
East: Garden Road											
1	L2	67	3.0	0.110	5.1	LOS A	0.4	9.9	0.33	0.22	32.5
6	T1	17	3.0	0.110	5.1	LOS A	0.4	9.9	0.33	0.22	32.6
16	R2	13	3.0	0.110	5.1	LOS A	0.4	9.9	0.33	0.22	31.9
Approach		98	3.0	0.110	5.1	LOS A	0.4	9.9	0.33	0.22	32.4
North: Olmsted Road											
7	L2	13	3.0	0.105	5.1	LOS A	0.4	9.5	0.34	0.24	33.6
4	T1	62	3.0	0.105	5.1	LOS A	0.4	9.5	0.34	0.24	33.7
14	R2	17	3.0	0.105	5.1	LOS A	0.4	9.5	0.34	0.24	33.0
Approach		92	3.0	0.105	5.1	LOS A	0.4	9.5	0.34	0.24	33.6
West: Garden Road											
5	L2	17	3.0	0.385	8.1	LOS A	1.8	47.3	0.36	0.25	32.4
2	T1	17	3.0	0.385	8.1	LOS A	1.8	47.3	0.36	0.25	32.5
12	R2	330	3.0	0.385	8.1	LOS A	1.8	47.3	0.36	0.25	31.8
Approach		365	3.0	0.385	8.1	LOS A	1.8	47.3	0.36	0.25	31.9
All Vehicles		793	3.0	0.385	6.6	LOS A	1.8	47.3	0.30	0.19	32.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 218-68

12. Highway 218 - Highway 68
Background Plus **Alt 1** Project Short-Term Conditions AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Monterra Road											
3	L2	11	3.0	0.128	14.1	LOS B	0.3	7.9	0.75	0.75	29.4
8	T1	21	3.0	0.128	14.1	LOS B	0.3	7.9	0.75	0.75	29.5
18	R2	8	3.0	0.128	14.1	LOS B	0.3	7.9	0.75	0.75	28.9
Approach		39	3.0	0.128	14.1	LOS B	0.3	7.9	0.75	0.75	29.4
East: Highway 68											
1	L2	7	3.0	0.438	8.6	LOS A	1.8	45.0	0.30	0.20	32.2
6	T1	862	3.0	0.438	8.6	LOS A	1.8	45.0	0.29	0.19	32.3
16	R2	330	3.0	0.330	7.0	LOS A	1.1	27.6	0.23	0.15	32.2
Approach		1199	3.0	0.438	8.2	LOS A	1.8	45.0	0.27	0.18	32.3
North: Highway 218											
7	L2	735	3.0	0.660	21.1	LOS C	3.1	80.1	0.72	0.81	26.1
4	T1	16	3.0	0.660	20.7	LOS C	3.0	77.5	0.71	0.80	26.3
14	R2	352	3.0	0.217	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		1103	3.0	0.660	14.3	LOS B	3.1	80.1	0.49	0.55	28.6
West: Highway 68											
5	L2	104	3.0	0.832	32.5	LOS D	6.0	152.8	0.82	1.01	23.8
2	T1	929	3.0	0.832	32.0	LOS D	6.0	152.8	0.81	1.00	24.1
12	R2	3	3.0	0.832	31.6	LOS D	5.8	148.0	0.81	0.99	23.9
Approach		1037	3.0	0.832	32.1	LOS D	6.0	152.8	0.81	1.00	24.1
All Vehicles		3378	3.0	0.832	17.6	LOS C	6.0	152.8	0.52	0.56	28.1

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 218-68

12. Highway 218 - Highway 68
Background Plus **Alt 1** Project Short-Term Conditions PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Monterra Road											
3	L2	11	3.0	0.148	11.0	LOS B	0.4	9.5	0.66	0.66	30.8
8	T1	35	3.0	0.148	11.0	LOS B	0.4	9.5	0.66	0.66	30.9
18	R2	15	3.0	0.148	11.0	LOS B	0.4	9.5	0.66	0.66	30.3
Approach		61	3.0	0.148	11.0	LOS B	0.4	9.5	0.66	0.66	30.8
East: Highway 68											
1	L2	7	3.0	0.629	14.3	LOS B	3.6	91.1	0.57	0.58	29.8
6	T1	1074	3.0	0.629	14.2	LOS B	3.6	91.1	0.56	0.57	29.9
16	R2	790	3.0	0.906	33.6	LOS D	11.6	298.1	0.92	1.09	23.2
Approach		1871	3.0	0.906	22.4	LOS C	11.6	298.1	0.71	0.79	26.7
North: Highway 218											
7	L2	315	3.0	0.345	13.0	LOS B	1.1	27.3	0.65	0.68	28.8
4	T1	20	3.0	0.345	12.7	LOS B	1.0	26.4	0.64	0.67	29.1
14	R2	135	3.0	0.083	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		470	3.0	0.345	9.3	LOS A	1.1	27.3	0.47	0.49	30.6
West: Highway 68											
5	L2	283	3.0	0.619	14.0	LOS B	3.4	87.2	0.57	0.59	29.0
2	T1	762	3.0	0.619	13.9	LOS B	3.4	87.2	0.55	0.57	29.8
12	R2	8	3.0	0.619	13.9	LOS B	3.2	82.9	0.54	0.56	29.4
Approach		1052	3.0	0.619	13.9	LOS B	3.4	87.2	0.55	0.57	29.6
All Vehicles		3453	3.0	0.906	17.8	LOS C	11.6	298.1	0.63	0.68	28.1

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: York-68

14. York Road / Highway 68
Background Plus **Alt 1** Project Short-Term Conditions AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	1010	3.0	0.836	25.7	LOS D	11.0	281.8	0.89	0.91	25.9
16	R2	429	3.0	0.836	25.7	LOS D	11.0	281.8	0.89	0.91	25.4
Approach		1439	3.0	0.836	25.7	LOS D	11.0	281.8	0.89	0.91	25.8
North: York Road											
7	L2	92	3.0	0.369	12.6	LOS B	1.1	29.3	0.63	0.65	29.7
14	R2	103	3.0	0.369	12.6	LOS B	1.1	29.3	0.63	0.65	29.2
Approach		196	3.0	0.369	12.6	LOS B	1.1	29.3	0.63	0.65	29.4
West: Highway 68											
5	L2	236	3.0	0.574	11.2	LOS B	3.8	97.0	0.39	0.23	30.3
2	T1	910	3.0	0.574	11.2	LOS B	3.8	97.0	0.39	0.23	30.9
Approach		1146	3.0	0.574	11.2	LOS B	3.8	97.0	0.39	0.23	30.8
All Vehicles		2780	3.0	0.836	18.8	LOS C	11.0	281.8	0.67	0.61	27.9

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: York-68

14. York Road / Highway 68
Background Plus **Alt 1** Project Short-Term Conditions PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	1046	3.0	0.590	11.6	LOS B	4.0	103.2	0.39	0.23	31.0
16	R2	138	3.0	0.590	11.6	LOS B	4.0	103.2	0.39	0.23	30.3
Approach		1184	3.0	0.590	11.6	LOS B	4.0	103.2	0.39	0.23	30.9
North: York Road											
7	L2	379	3.0	0.990	65.4	LOS F	11.9	304.5	0.97	1.59	17.4
14	R2	132	3.0	0.990	65.4	LOS F	11.9	304.5	0.97	1.59	17.2
Approach		511	3.0	0.990	65.4	LOS F	11.9	304.5	0.97	1.59	17.4
West: Highway 68											
5	L2	87	3.0	0.649	16.6	LOS C	4.6	117.2	0.72	0.79	28.6
2	T1	877	3.0	0.649	16.6	LOS C	4.6	117.2	0.72	0.79	28.9
Approach		964	3.0	0.649	16.6	LOS C	4.6	117.2	0.72	0.79	28.9
All Vehicles		2659	3.0	0.990	23.7	LOS C	11.9	304.5	0.62	0.69	26.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: CdT-68

17. Corral de Tierra Road - Highway 68
Background Plus **Alt 1** Project Short-Term Conditions AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Corral de Tierra Road											
3	L2	162	3.0	0.853	39.2	LOS E	5.5	140.9	0.86	1.09	22.0
8	T1	1	3.0	0.853	39.2	LOS E	5.5	140.9	0.86	1.09	22.1
18	R2	285	3.0	0.853	39.2	LOS E	5.5	140.9	0.86	1.09	21.8
Approach		448	3.0	0.853	39.2	LOS E	5.5	140.9	0.86	1.09	21.9
East: Higwhay 68											
1	L2	167	3.0	0.829	23.7	LOS C	11.2	287.1	0.83	0.71	26.2
6	T1	1363	3.0	0.829	23.7	LOS C	11.2	287.1	0.83	0.71	26.5
16	R2	5	3.0	0.829	23.7	LOS C	11.2	287.1	0.83	0.71	26.0
Approach		1536	3.0	0.829	23.7	LOS C	11.2	287.1	0.83	0.71	26.4
North: Corral de Tierra Road											
7	L2	1	3.0	0.010	11.3	LOS B	0.0	0.6	0.71	0.71	30.4
4	T1	1	3.0	0.010	11.3	LOS B	0.0	0.6	0.71	0.71	30.6
14	R2	1	3.0	0.010	11.3	LOS B	0.0	0.6	0.71	0.71	29.9
Approach		3	3.0	0.010	11.3	LOS B	0.0	0.6	0.71	0.71	30.3
West: Highway 68											
5	L2	1	3.0	0.580	12.1	LOS B	3.6	91.4	0.52	0.39	30.7
2	T1	1021	3.0	0.580	12.1	LOS B	3.6	91.4	0.52	0.39	30.8
12	R2	47	3.0	0.580	12.1	LOS B	3.6	91.4	0.52	0.39	30.1
Approach		1068	3.0	0.580	12.1	LOS B	3.6	91.4	0.52	0.39	30.8
All Vehicles		3055	3.0	0.853	21.9	LOS C	11.2	287.1	0.73	0.66	26.9

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: CdT-68

17. Corral de Tierra Road - Highway 68
Background Plus **Alt 1** Project Short-Term Conditions PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Corral de Tierra Road											
3	L2	83	3.0	0.505	17.9	LOS C	1.7	44.7	0.73	0.79	27.9
8	T1	1	3.0	0.505	17.9	LOS C	1.7	44.7	0.73	0.79	28.0
18	R2	151	3.0	0.505	17.9	LOS C	1.7	44.7	0.73	0.79	27.5
Approach		235	3.0	0.505	17.9	LOS C	1.7	44.7	0.73	0.79	27.6
East: Higwhay 68											
1	L2	210	3.0	0.629	12.6	LOS B	4.6	118.4	0.43	0.25	29.9
6	T1	1041	3.0	0.629	12.6	LOS B	4.6	118.4	0.43	0.25	30.3
16	R2	9	3.0	0.629	12.6	LOS B	4.6	118.4	0.43	0.25	29.9
Approach		1260	3.0	0.629	12.6	LOS B	4.6	118.4	0.43	0.25	30.3
North: Corral de Tierra Road											
7	L2	9	3.0	0.034	9.1	LOS A	0.1	2.1	0.63	0.63	30.9
4	T1	1	3.0	0.034	9.1	LOS A	0.1	2.1	0.63	0.63	31.0
14	R2	4	3.0	0.034	9.1	LOS A	0.1	2.1	0.63	0.63	30.4
Approach		14	3.0	0.034	9.1	LOS A	0.1	2.1	0.63	0.63	30.7
West: Highway 68											
5	L2	5	3.0	0.720	17.6	LOS C	6.6	169.1	0.71	0.65	28.5
2	T1	1177	3.0	0.720	17.6	LOS C	6.6	169.1	0.71	0.65	28.6
12	R2	78	3.0	0.720	17.6	LOS C	6.6	169.1	0.71	0.65	28.0
Approach		1261	3.0	0.720	17.6	LOS C	6.6	169.1	0.71	0.65	28.6
All Vehicles		2770	3.0	0.720	15.3	LOS C	6.6	169.1	0.58	0.48	29.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: SanBen-68

18. San Benancio Road - Highway 68
Background Plus **Alt 1** Project Short-Term Conditions AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: San Benancio Road											
3	L2	184	3.0	0.946	58.3	LOS F	8.2	210.6	0.94	1.38	18.5
8	T1	1	3.0	0.946	58.3	LOS F	8.2	210.6	0.94	1.38	18.6
18	R2	263	3.0	0.946	58.3	LOS F	8.2	210.6	0.94	1.38	18.3
Approach		448	3.0	0.946	58.3	LOS F	8.2	210.6	0.94	1.38	18.4
East: Highway 68											
1	L2	165	3.0	0.813	22.8	LOS C	10.3	262.5	0.82	0.74	26.5
6	T1	1308	3.0	0.813	22.8	LOS C	10.3	262.5	0.82	0.74	26.7
16	R2	1	3.0	0.813	22.8	LOS C	10.3	262.5	0.82	0.74	26.3
Approach		1474	3.0	0.813	22.8	LOS C	10.3	262.5	0.82	0.74	26.7
North: San Benancio Road											
7	L2	1	3.0	0.010	11.0	LOS B	0.0	0.6	0.70	0.70	30.6
4	T1	1	3.0	0.010	11.0	LOS B	0.0	0.6	0.70	0.70	30.7
14	R2	1	3.0	0.010	11.0	LOS B	0.0	0.6	0.70	0.70	30.0
Approach		3	3.0	0.010	11.0	LOS B	0.0	0.6	0.70	0.70	30.4
West: Highway 68											
5	L2	1	3.0	0.661	14.0	LOS B	4.1	103.9	0.47	0.37	29.9
2	T1	1163	3.0	0.661	14.0	LOS B	4.1	103.9	0.46	0.36	30.0
12	R2	115	3.0	0.661	13.9	LOS B	3.8	98.2	0.45	0.35	29.3
Approach		1279	3.0	0.661	13.9	LOS B	4.1	103.9	0.46	0.36	30.0
All Vehicles		3204	3.0	0.946	24.2	LOS C	10.3	262.5	0.69	0.68	26.2

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: SanBen-68

18. San Benancio Road - Highway 68
Background Plus **Alt 1** Project Short-Term Conditions PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: San Benancio Road											
3	L2	60	3.0	0.337	13.7	LOS B	1.0	25.1	0.68	0.71	29.4
8	T1	1	3.0	0.337	13.7	LOS B	1.0	25.1	0.68	0.71	29.5
18	R2	90	3.0	0.337	13.7	LOS B	1.0	25.1	0.68	0.71	28.9
Approach		151	3.0	0.337	13.7	LOS B	1.0	25.1	0.68	0.71	29.1
East: Highway 68											
1	L2	177	3.0	0.677	13.9	LOS B	5.7	147.0	0.41	0.21	29.5
6	T1	1212	3.0	0.677	13.9	LOS B	5.7	147.0	0.41	0.21	29.9
16	R2	2	3.0	0.677	13.9	LOS B	5.7	147.0	0.41	0.21	29.4
Approach		1391	3.0	0.677	13.9	LOS B	5.7	147.0	0.41	0.21	29.8
North: San Benancio Road											
7	L2	1	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	31.2
4	T1	1	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	31.3
14	R2	1	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	30.7
Approach		3	3.0	0.008	9.4	LOS A	0.0	0.5	0.65	0.63	31.1
West: Highway 68											
5	L2	3	3.0	0.688	15.1	LOS C	4.6	117.7	0.51	0.42	29.5
2	T1	1236	3.0	0.688	15.0	LOS C	4.6	117.7	0.50	0.41	29.6
12	R2	80	3.0	0.688	15.0	LOS B	4.3	111.3	0.49	0.40	28.9
Approach		1320	3.0	0.688	15.0	LOS C	4.6	117.7	0.50	0.41	29.6
All Vehicles		2865	3.0	0.688	14.4	LOS B	5.7	147.0	0.47	0.33	29.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: JCR-68

11. Josselyn Canyon Road - Highway 68
Background Plus **Alt 1** Project Short-Term Conditions AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Josselyn Canyon Road											
3	L2	213	3.0	0.531	17.2	LOS C	2.0	50.1	0.70	0.76	27.6
18	R2	62	3.0	0.531	17.2	LOS C	2.0	50.1	0.70	0.76	27.2
Approach		275	3.0	0.531	17.2	LOS C	2.0	50.1	0.70	0.76	27.5
East: Highway 68											
1	L2	53	3.0	0.570	12.2	LOS B	3.5	90.6	0.55	0.46	30.4
6	T1	951	3.0	0.570	12.2	LOS B	3.5	90.6	0.55	0.46	30.7
Approach		1004	3.0	0.570	12.2	LOS B	3.5	90.6	0.55	0.46	30.6
West: Highway 68											
2	T1	1042	3.0	0.560	10.6	LOS B	3.8	96.5	0.29	0.14	31.4
12	R2	122	3.0	0.560	10.6	LOS B	3.8	96.5	0.29	0.14	30.7
Approach		1164	3.0	0.560	10.6	LOS B	3.8	96.5	0.29	0.14	31.3
All Vehicles		2443	3.0	0.570	12.0	LOS B	3.8	96.5	0.44	0.34	30.6

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: JCR-68

11. Josselyn Canyon Road - Highway 68
Background Plus **Alt 1** Project Short-Term Conditions PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Josselyn Canyon Road											
3	L2	77	3.0	0.187	8.0	LOS A	0.5	12.7	0.49	0.49	31.2
18	R2	39	3.0	0.187	8.0	LOS A	0.5	12.7	0.49	0.49	30.7
Approach		116	3.0	0.187	8.0	LOS A	0.5	12.7	0.49	0.49	31.0
East: Highway 68											
1	L2	71	3.0	0.719	15.7	LOS C	6.6	168.9	0.49	0.28	29.1
6	T1	1387	3.0	0.719	15.7	LOS C	6.6	168.9	0.49	0.28	29.3
Approach		1458	3.0	0.719	15.7	LOS C	6.6	168.9	0.49	0.28	29.3
West: Highway 68											
2	T1	787	3.0	0.429	8.3	LOS A	2.3	58.4	0.27	0.14	32.5
12	R2	88	3.0	0.429	8.3	LOS A	2.3	58.4	0.27	0.14	31.7
Approach		875	3.0	0.429	8.3	LOS A	2.3	58.4	0.27	0.14	32.4
All Vehicles		2449	3.0	0.719	12.7	LOS B	6.6	168.9	0.41	0.24	30.4

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Pasadera-68

15. Pasadera Drive - Highway 68
Background Plus **Alt 1** Project Short-Term Conditions AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Boots Road											
3	L2	75	3.0	0.205	9.6	LOS A	0.5	13.8	0.58	0.58	30.5
8	T1	4	3.0	0.205	9.6	LOS A	0.5	13.8	0.58	0.58	30.6
18	R2	28	3.0	0.205	9.6	LOS A	0.5	13.8	0.58	0.58	30.0
Approach		108	3.0	0.205	9.6	LOS A	0.5	13.8	0.58	0.58	30.4
East: Highway 68											
1	L2	25	3.0	0.691	15.0	LOS B	5.6	142.2	0.54	0.36	29.5
6	T1	1297	3.0	0.691	15.0	LOS B	5.6	142.2	0.54	0.36	29.6
16	R2	25	3.0	0.691	15.0	LOS B	5.6	142.2	0.54	0.36	29.0
Approach		1347	3.0	0.691	15.0	LOS B	5.6	142.2	0.54	0.36	29.6
North: Pasadera Drive											
7	L2	35	3.0	0.252	13.2	LOS B	0.7	17.2	0.70	0.71	29.6
4	T1	1	3.0	0.252	13.2	LOS B	0.7	17.2	0.70	0.71	29.7
14	R2	65	3.0	0.252	13.2	LOS B	0.7	17.2	0.70	0.71	29.1
Approach		101	3.0	0.252	13.2	LOS B	0.7	17.2	0.70	0.71	29.3
West: Highway 68											
5	L2	36	3.0	0.491	9.3	LOS A	2.9	74.2	0.28	0.14	31.8
2	T1	950	3.0	0.491	9.3	LOS A	2.9	74.2	0.28	0.14	32.0
12	R2	26	3.0	0.491	9.3	LOS A	2.9	74.2	0.28	0.14	31.2
Approach		1012	3.0	0.491	9.3	LOS A	2.9	74.2	0.28	0.14	31.9
All Vehicles		2567	3.0	0.691	12.4	LOS B	5.6	142.2	0.45	0.29	30.5

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Pasadera-68

15. Pasadera Drive - Highway 68
Background Plus **Alt 1** Project Short-Term Conditions PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Boots Road											
3	L2	48	3.0	0.139	10.0	LOS B	0.3	8.9	0.63	0.63	30.2
8	T1	4	3.0	0.139	10.0	LOS B	0.3	8.9	0.63	0.63	30.3
18	R2	10	3.0	0.139	10.0	LOS B	0.3	8.9	0.63	0.63	29.7
Approach		62	3.0	0.139	10.0	LOS B	0.3	8.9	0.63	0.63	30.1
East: Highway 68											
1	L2	12	3.0	0.571	11.4	LOS B	3.6	92.8	0.44	0.29	30.9
6	T1	1060	3.0	0.571	11.4	LOS B	3.6	92.8	0.44	0.29	31.1
16	R2	33	3.0	0.571	11.4	LOS B	3.6	92.8	0.44	0.29	30.3
Approach		1104	3.0	0.571	11.4	LOS B	3.6	92.8	0.44	0.29	31.0
North: Pasadera Drive											
7	L2	23	3.0	0.149	9.4	LOS A	0.4	9.7	0.59	0.59	31.3
4	T1	2	3.0	0.149	9.4	LOS A	0.4	9.7	0.59	0.59	31.4
14	R2	48	3.0	0.149	9.4	LOS A	0.4	9.7	0.59	0.59	30.7
Approach		73	3.0	0.149	9.4	LOS A	0.4	9.7	0.59	0.59	30.9
West: Highway 68											
5	L2	71	3.0	0.615	11.8	LOS B	4.7	120.9	0.27	0.11	30.6
2	T1	1151	3.0	0.615	11.8	LOS B	4.7	120.9	0.27	0.11	30.8
12	R2	77	3.0	0.615	11.8	LOS B	4.7	120.9	0.27	0.11	30.2
Approach		1299	3.0	0.615	11.8	LOS B	4.7	120.9	0.27	0.11	30.8
All Vehicles		2538	3.0	0.615	11.5	LOS B	4.7	120.9	0.36	0.22	30.9

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Laureles-68

16. Laureles Grade Road - Highway 68
Background Plus **Alt 1** Project Short-Term Conditions AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Laureles Grade Road											
3	L2	214	3.0	0.344	10.5	LOS B	1.1	27.2	0.54	0.56	29.6
18	R2	292	3.0	0.470	13.2	LOS B	1.7	43.6	0.59	0.63	29.8
Approach		507	3.0	0.470	12.0	LOS B	1.7	43.6	0.57	0.60	29.7
East: Highway 68											
1	L2	271	3.0	0.852	26.8	LOS D	12.2	312.4	0.92	0.91	25.1
6	T1	1229	3.0	0.852	26.8	LOS D	12.2	312.4	0.92	0.91	25.5
Approach		1500	3.0	0.852	26.8	LOS D	12.2	312.4	0.92	0.91	25.4
West: Highway 68											
2	T1	787	3.0	0.474	10.6	LOS B	2.4	61.5	0.53	0.47	31.5
12	R2	223	3.0	0.137	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		1010	3.0	0.474	8.2	LOS A	2.4	61.5	0.42	0.37	32.4
All Vehicles		3016	3.0	0.852	18.1	LOS C	12.2	312.4	0.69	0.67	28.1

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Laureles-68

16. Laureles Grade Road - Highway 68
Background Plus **Alt 1** Project Short-Term Conditions PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Laureles Grade Road											
3	L2	221	3.0	0.387	12.2	LOS B	1.2	31.8	0.60	0.63	29.0
18	R2	371	3.0	0.650	20.5	LOS C	2.9	74.4	0.71	0.80	27.1
Approach		591	3.0	0.650	17.4	LOS C	2.9	74.4	0.67	0.74	27.8
East: Highway 68											
1	L2	230	3.0	0.639	14.3	LOS B	4.7	120.4	0.62	0.55	29.1
6	T1	886	3.0	0.639	14.3	LOS B	4.7	120.4	0.62	0.55	29.6
Approach		1116	3.0	0.639	14.3	LOS B	4.7	120.4	0.62	0.55	29.5
West: Highway 68											
2	T1	908	3.0	0.524	11.3	LOS B	2.9	75.2	0.54	0.45	31.1
12	R2	159	3.0	0.098	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		1066	3.0	0.524	9.6	LOS A	2.9	75.2	0.46	0.38	31.8
All Vehicles		2774	3.0	0.650	13.2	LOS B	4.7	120.4	0.57	0.52	30.0

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Torero-68

19. Torero Drive - Highway 68
Background Plus **Alt 1** Project Short-Term Conditions AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	950	36.0	0.648	16.7	LOS C	2.8	88.8	0.39	0.26	28.4
16	R2	2	3.0	0.648	16.7	LOS C	2.8	88.8	0.39	0.26	28.3
Approach		952	35.9	0.648	16.7	LOS C	2.8	88.8	0.39	0.26	28.4
North: Torero Drive											
7	L2	13	3.0	0.029	8.5	LOS A	0.1	1.8	0.60	0.60	30.4
14	R2	484	3.0	0.298	0.0	LOS A	0.0	0.0	0.00	0.00	36.5
Approach		497	3.0	0.298	0.3	LOS A	0.1	1.8	0.02	0.02	36.3
West: Highway 68											
5	L2	121	3.0	0.662	12.9	LOS B	5.9	151.3	0.17	0.05	30.1
2	T1	1312	3.0	0.662	12.9	LOS B	5.9	151.3	0.17	0.05	30.3
Approach		1433	3.0	0.662	12.9	LOS B	5.9	151.3	0.17	0.05	30.3
All Vehicles		2882	13.9	0.662	12.0	LOS B	5.9	151.3	0.21	0.11	30.5

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Torero-68

19. Torero Drive - Highway 68
Background Plus **Alt 1** Project Short-Term Conditions PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	1338	36.0	0.908	37.0	LOS E	7.2	228.8	0.48	0.31	22.6
16	R2	60	3.0	0.908	36.7	LOS E	7.2	228.8	0.49	0.31	22.6
Approach		1398	34.6	0.908	37.0	LOS E	7.2	228.8	0.48	0.31	22.6
North: Torero Drive											
7	L2	13	3.0	0.042	12.5	LOS B	0.1	2.6	0.73	0.73	28.9
14	R2	55	3.0	0.034	0.0	LOS A	0.0	0.0	0.00	0.00	36.5
Approach		68	3.0	0.042	2.4	LOS A	0.1	2.6	0.14	0.14	34.7
West: Highway 68											
5	L2	85	3.0	0.630	11.9	LOS B	5.2	132.8	0.15	0.04	30.5
2	T1	1278	3.0	0.630	11.9	LOS B	5.2	132.8	0.15	0.04	30.8
Approach		1363	3.0	0.630	11.9	LOS B	5.2	132.8	0.15	0.04	30.7
All Vehicles		2829	18.6	0.908	24.1	LOS C	7.2	228.8	0.32	0.18	26.2

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmstead-Garden

2. Olmsted Road - Garden Road
Cumulative Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	415	3.0	0.473	8.8	LOS A	2.8	71.0	0.19	0.08	30.6
8	T1	86	3.0	0.473	8.8	LOS A	2.8	71.0	0.19	0.08	30.7
Approach		501	3.0	0.473	8.8	LOS A	2.8	71.0	0.19	0.08	30.6
North: Olmsted Road											
4	T1	45	3.0	0.065	5.7	LOS A	0.2	5.5	0.45	0.37	33.7
14	R2	2	3.0	0.065	5.7	LOS A	0.2	5.5	0.45	0.37	33.0
Approach		47	3.0	0.065	5.7	LOS A	0.2	5.5	0.45	0.37	33.7
West: Garden Road											
5	L2	34	3.0	0.182	5.1	LOS A	0.7	18.2	0.15	0.06	33.6
12	R2	157	3.0	0.182	5.1	LOS A	0.7	18.2	0.15	0.06	33.0
Approach		190	3.0	0.182	5.1	LOS A	0.7	18.2	0.15	0.06	33.1
All Vehicles		738	3.0	0.473	7.6	LOS A	2.8	71.0	0.20	0.09	31.4

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmstead-Garden

2. Olmsted Road - Garden Road
Cumulative Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	140	3.0	0.262	6.0	LOS A	1.1	28.9	0.17	0.07	32.4
8	T1	135	3.0	0.262	6.0	LOS A	1.1	28.9	0.17	0.07	32.6
Approach		275	3.0	0.262	6.0	LOS A	1.1	28.9	0.17	0.07	32.5
North: Olmsted Road											
4	T1	170	3.0	0.201	5.8	LOS A	0.8	20.1	0.29	0.19	33.7
14	R2	22	3.0	0.201	5.8	LOS A	0.8	20.1	0.29	0.19	33.0
Approach		191	3.0	0.201	5.8	LOS A	0.8	20.1	0.29	0.19	33.6
West: Garden Road											
5	L2	43	3.0	0.425	8.9	LOS A	2.1	53.8	0.42	0.30	31.9
12	R2	348	3.0	0.425	8.9	LOS A	2.1	53.8	0.42	0.30	31.3
Approach		391	3.0	0.425	8.9	LOS A	2.1	53.8	0.42	0.30	31.4
All Vehicles		858	3.0	0.425	7.2	LOS A	2.1	53.8	0.31	0.20	32.2

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 218-68

12. Highway 218 - Highway 68
Cumulative Conditions
AM Peak Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Monterra Road											
3	L2	13	3.0	0.218	17.5	LOS C	0.5	13.9	0.79	0.80	28.2
8	T1	38	3.0	0.218	17.5	LOS C	0.5	13.9	0.79	0.80	28.4
18	R2	10	3.0	0.218	17.5	LOS C	0.5	13.9	0.79	0.80	27.8
Approach		61	3.0	0.218	17.5	LOS C	0.5	13.9	0.79	0.80	28.2
East: Highway 68											
1	L2	13	3.0	0.479	9.5	LOS A	2.0	51.5	0.35	0.25	31.7
6	T1	917	3.0	0.479	9.5	LOS A	2.0	51.5	0.34	0.24	31.9
16	R2	343	3.0	0.349	7.4	LOS A	1.2	29.8	0.26	0.18	32.1
Approach		1274	3.0	0.479	8.9	LOS A	2.0	51.5	0.32	0.23	32.0
North: Highway 218											
7	L2	817	3.0	0.775	29.8	LOS D	4.4	112.3	0.81	0.96	23.8
4	T1	24	3.0	0.775	29.2	LOS D	4.3	109.2	0.80	0.95	24.0
14	R2	362	3.0	0.223	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		1203	3.0	0.775	20.8	LOS C	4.4	112.3	0.56	0.67	26.4
West: Highway 68											
5	L2	113	3.0	0.933	49.7	LOS E	9.2	236.3	0.91	1.30	20.2
2	T1	965	3.0	0.933	48.9	LOS E	9.2	236.3	0.90	1.29	20.4
12	R2	3	3.0	0.933	48.3	LOS E	9.0	231.0	0.90	1.28	20.3
Approach		1082	3.0	0.933	49.0	LOS E	9.2	236.3	0.90	1.29	20.4
All Vehicles		3620	3.0	0.933	25.0	LOS C	9.2	236.3	0.58	0.70	25.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 218-68

12. Highway 218 - Highway 68
Cumulative Conditions
PM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Monterra Road											
3	L2	17	3.0	0.195	12.3	LOS B	0.5	12.7	0.69	0.69	30.2
8	T1	45	3.0	0.195	12.3	LOS B	0.5	12.7	0.69	0.69	30.3
18	R2	15	3.0	0.195	12.3	LOS B	0.5	12.7	0.69	0.69	29.7
Approach		77	3.0	0.195	12.3	LOS B	0.5	12.7	0.69	0.69	30.2
East: Highway 68											
1	L2	3	3.0	0.653	15.2	LOS C	3.9	98.8	0.60	0.63	29.4
6	T1	1101	3.0	0.653	15.1	LOS C	3.9	98.8	0.59	0.62	29.6
16	R2	802	3.0	0.928	37.3	LOS E	13.3	339.4	0.97	1.20	22.4
Approach		1907	3.0	0.928	24.5	LOS C	13.3	339.4	0.75	0.86	26.1
North: Highway 218											
7	L2	327	3.0	0.380	14.1	LOS B	1.2	31.0	0.68	0.71	28.5
4	T1	34	3.0	0.380	13.7	LOS B	1.2	30.0	0.66	0.70	28.8
14	R2	145	3.0	0.089	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		505	3.0	0.380	10.0	LOS B	1.2	31.0	0.48	0.51	30.3
West: Highway 68											
5	L2	286	3.0	0.657	15.6	LOS C	3.9	99.8	0.61	0.66	28.5
2	T1	801	3.0	0.657	15.4	LOS C	3.9	99.8	0.59	0.64	29.2
12	R2	12	3.0	0.657	15.3	LOS C	3.7	95.0	0.58	0.63	28.8
Approach		1099	3.0	0.657	15.5	LOS C	3.9	99.8	0.60	0.64	29.0
All Vehicles		3588	3.0	0.928	19.4	LOS C	13.3	339.4	0.66	0.74	27.6

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmsted-68

1. Olmsted Road - Highway 68
Cumulative Conditions
AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	47	3.0	0.355	13.4	LOS B	1.1	27.2	0.66	0.69	29.7
8	T1	29	3.0	0.355	13.4	LOS B	1.1	27.2	0.66	0.69	29.8
18	R2	93	3.0	0.355	13.4	LOS B	1.1	27.2	0.66	0.69	29.2
Approach		170	3.0	0.355	13.4	LOS B	1.1	27.2	0.66	0.69	29.4
East: Highway 68											
1	L2	101	3.0	0.715	16.7	LOS C	6.5	166.3	0.66	0.54	28.6
6	T1	882	3.0	0.715	16.7	LOS C	6.5	166.3	0.66	0.54	28.8
16	R2	327	3.0	0.715	16.7	LOS C	6.5	166.3	0.66	0.54	28.3
Approach		1310	3.0	0.715	16.7	LOS C	6.5	166.3	0.66	0.54	28.7
North: Olmsted Road											
7	L2	128	3.0	0.296	11.2	LOS B	0.8	21.6	0.61	0.62	29.6
4	T1	26	3.0	0.296	11.2	LOS B	0.8	21.6	0.61	0.62	29.7
14	R2	74	3.0	0.132	8.0	LOS A	0.3	8.6	0.52	0.52	32.0
Approach		228	3.0	0.296	10.2	LOS B	0.8	21.6	0.58	0.59	30.4
West: Highway 68											
5	L2	99	3.0	0.629	14.4	LOS B	4.5	115.2	0.64	0.60	29.5
2	T1	926	3.0	0.629	14.4	LOS B	4.5	115.2	0.64	0.60	29.7
12	R2	36	3.0	0.629	14.4	LOS B	4.5	115.2	0.64	0.60	29.2
Approach		1061	3.0	0.629	14.4	LOS B	4.5	115.2	0.64	0.60	29.7
All Vehicles		2768	3.0	0.715	15.1	LOS C	6.5	166.3	0.64	0.58	29.2

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Olmsted-68

1. Olmsted Road - Highway 68
Cumulative Conditions
PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Olmsted Road											
3	L2	29	3.0	0.499	16.9	LOS C	1.7	44.5	0.71	0.76	28.6
8	T1	24	3.0	0.499	16.9	LOS C	1.7	44.5	0.71	0.76	28.7
18	R2	191	3.0	0.499	16.9	LOS C	1.7	44.5	0.71	0.76	28.1
Approach		245	3.0	0.499	16.9	LOS C	1.7	44.5	0.71	0.76	28.2
East: Highway 68											
1	L2	55	3.0	0.705	15.7	LOS C	6.0	152.7	0.59	0.41	29.1
6	T1	1130	3.0	0.705	15.7	LOS C	6.0	152.7	0.59	0.41	29.3
16	R2	166	3.0	0.705	15.7	LOS C	6.0	152.7	0.59	0.41	28.7
Approach		1352	3.0	0.705	15.7	LOS C	6.0	152.7	0.59	0.41	29.2
North: Olmsted Road											
7	L2	288	3.0	0.683	26.6	LOS D	2.9	73.9	0.81	0.92	24.6
4	T1	24	3.0	0.683	26.6	LOS D	2.9	73.9	0.81	0.92	24.7
14	R2	171	3.0	0.359	13.5	LOS B	1.1	27.6	0.67	0.70	29.6
Approach		483	3.0	0.683	22.0	LOS C	2.9	73.9	0.76	0.84	26.1
West: Highway 68											
5	L2	77	3.0	0.561	13.5	LOS B	3.3	85.6	0.65	0.68	29.8
2	T1	751	3.0	0.561	13.5	LOS B	3.3	85.6	0.65	0.68	30.1
12	R2	15	3.0	0.561	13.5	LOS B	3.3	85.6	0.65	0.68	29.5
Approach		843	3.0	0.561	13.5	LOS B	3.3	85.6	0.65	0.68	30.0
All Vehicles		2923	3.0	0.705	16.2	LOS C	6.0	152.7	0.64	0.59	28.8

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: JCR-68

11. Josselyn Canyon Road - Highway 68
Cumulative Conditions
AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Josselyn Canyon Road											
3	L2	214	3.0	0.553	18.5	LOS C	2.1	52.8	0.72	0.79	27.2
18	R2	63	3.0	0.553	18.5	LOS C	2.1	52.8	0.72	0.79	26.8
Approach		277	3.0	0.553	18.5	LOS C	2.1	52.8	0.72	0.79	27.1
East: Highway 68											
1	L2	60	3.0	0.602	13.1	LOS B	4.0	103.3	0.58	0.49	30.1
6	T1	999	3.0	0.602	13.1	LOS B	4.0	103.3	0.58	0.49	30.3
Approach		1059	3.0	0.602	13.1	LOS B	4.0	103.3	0.58	0.49	30.3
West: Highway 68											
2	T1	1087	3.0	0.586	11.2	LOS B	4.1	105.1	0.32	0.16	31.2
12	R2	122	3.0	0.586	11.2	LOS B	4.1	105.1	0.32	0.16	30.4
Approach		1209	3.0	0.586	11.2	LOS B	4.1	105.1	0.32	0.16	31.1
All Vehicles		2545	3.0	0.602	12.8	LOS B	4.1	105.1	0.47	0.37	30.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: JCR-68

11. Josselyn Canyon Road - Highway 68
Cumulative Conditions
PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Josselyn Canyon Road											
3	L2	77	3.0	0.203	8.4	LOS A	0.5	13.8	0.50	0.50	31.1
18	R2	47	3.0	0.203	8.4	LOS A	0.5	13.8	0.50	0.50	30.6
Approach		124	3.0	0.203	8.4	LOS A	0.5	13.8	0.50	0.50	30.9
East: Highway 68											
1	L2	78	3.0	0.738	16.5	LOS C	7.1	181.5	0.52	0.29	28.8
6	T1	1416	3.0	0.738	16.5	LOS C	7.1	181.5	0.52	0.29	29.0
Approach		1495	3.0	0.738	16.5	LOS C	7.1	181.5	0.52	0.29	29.0
West: Highway 68											
2	T1	810	3.0	0.738	15.7	LOS C	7.1	181.7	0.50	0.28	29.4
12	R2	88	3.0	0.149	4.9	LOS A	0.6	14.3	0.20	0.10	33.2
Approach		898	3.0	0.738	14.6	LOS B	7.1	181.7	0.47	0.26	29.7
All Vehicles		2516	3.0	0.738	15.4	LOS C	7.1	181.7	0.50	0.29	29.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 218-68

12. Highway 218 - Highway 68
Cumulative Conditions
AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Monterra Road											
3	L2	13	3.0	0.218	17.5	LOS C	0.5	13.9	0.79	0.80	28.2
8	T1	38	3.0	0.218	17.5	LOS C	0.5	13.9	0.79	0.80	28.4
18	R2	10	3.0	0.218	17.5	LOS C	0.5	13.9	0.79	0.80	27.8
Approach		61	3.0	0.218	17.5	LOS C	0.5	13.9	0.79	0.80	28.2
East: Highway 68											
1	L2	13	3.0	0.479	9.5	LOS A	2.0	51.5	0.35	0.25	31.7
6	T1	917	3.0	0.479	9.5	LOS A	2.0	51.5	0.34	0.24	31.9
16	R2	343	3.0	0.211	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		1274	3.0	0.479	6.9	LOS A	2.0	51.5	0.25	0.18	33.0
North: Highway 218											
7	L2	817	3.0	0.775	29.8	LOS D	4.4	112.3	0.81	0.96	23.8
4	T1	24	3.0	0.775	29.2	LOS D	4.3	109.2	0.80	0.95	24.0
14	R2	362	3.0	0.223	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		1203	3.0	0.775	20.8	LOS C	4.4	112.3	0.56	0.67	26.4
West: Highway 68											
5	L2	113	3.0	0.933	49.7	LOS E	9.2	236.3	0.91	1.30	20.2
2	T1	965	3.0	0.933	48.9	LOS E	9.2	236.3	0.90	1.29	20.4
12	R2	3	3.0	0.933	48.3	LOS E	9.0	231.0	0.90	1.28	20.3
Approach		1082	3.0	0.933	49.0	LOS E	9.2	236.3	0.90	1.29	20.4
All Vehicles		3620	3.0	0.933	24.3	LOS C	9.2	236.3	0.56	0.68	26.0

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 218-68

12. Highway 218 - Highway 68
Cumulative Conditions
PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Monterra Road											
3	L2	17	3.0	0.195	12.3	LOS B	0.5	12.7	0.69	0.69	30.2
8	T1	45	3.0	0.195	12.3	LOS B	0.5	12.7	0.69	0.69	30.3
18	R2	15	3.0	0.195	12.3	LOS B	0.5	12.7	0.69	0.69	29.7
Approach		77	3.0	0.195	12.3	LOS B	0.5	12.7	0.69	0.69	30.2
East: Highway 68											
1	L2	3	3.0	0.653	15.2	LOS C	3.9	98.8	0.60	0.63	29.4
6	T1	1101	3.0	0.653	15.1	LOS C	3.9	98.8	0.59	0.62	29.6
16	R2	802	3.0	0.493	0.1	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		1907	3.0	0.653	8.8	LOS A	3.9	98.8	0.34	0.36	32.0
North: Highway 218											
7	L2	327	3.0	0.380	14.1	LOS B	1.2	31.0	0.68	0.71	28.5
4	T1	34	3.0	0.380	13.7	LOS B	1.2	30.0	0.66	0.70	28.8
14	R2	145	3.0	0.089	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		505	3.0	0.380	10.0	LOS B	1.2	31.0	0.48	0.51	30.3
West: Highway 68											
5	L2	286	3.0	0.657	15.6	LOS C	3.9	99.8	0.61	0.66	28.5
2	T1	801	3.0	0.657	15.4	LOS C	3.9	99.8	0.59	0.64	29.2
12	R2	12	3.0	0.657	15.3	LOS C	3.7	95.0	0.58	0.63	28.8
Approach		1099	3.0	0.657	15.5	LOS C	3.9	99.8	0.60	0.64	29.0
All Vehicles		3588	3.0	0.657	11.1	LOS B	3.9	99.8	0.45	0.47	30.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: York-68

14. York Road / Highway 68
Cumulative Conditions
AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	1085	3.0	0.896	32.9	LOS D	14.8	378.2	1.00	1.12	23.9
16	R2	429	3.0	0.896	32.9	LOS D	14.8	378.2	1.00	1.12	23.4
Approach		1514	3.0	0.896	32.9	LOS D	14.8	378.2	1.00	1.12	23.8
North: York Road											
7	L2	93	3.0	0.197	10.4	LOS B	0.5	13.7	0.62	0.62	29.7
14	R2	107	3.0	0.212	10.2	LOS B	0.6	14.2	0.60	0.60	30.8
Approach		200	3.0	0.212	10.3	LOS B	0.6	14.2	0.61	0.61	30.2
West: Highway 68											
5	L2	253	3.0	0.611	12.0	LOS B	3.4	86.1	0.33	0.20	30.0
2	T1	997	3.0	0.611	11.9	LOS B	3.4	86.1	0.32	0.19	30.6
Approach		1250	3.0	0.611	11.9	LOS B	3.4	86.1	0.32	0.19	30.5
All Vehicles		2964	3.0	0.896	22.5	LOS C	14.8	378.2	0.69	0.69	26.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: York-68

14. York Road / Highway 68
Cumulative Conditions
PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	1078	3.0	0.608	12.0	LOS B	4.3	109.6	0.41	0.24	30.8
16	R2	138	3.0	0.608	12.0	LOS B	4.3	109.6	0.41	0.24	30.1
Approach		1216	3.0	0.608	12.0	LOS B	4.3	109.6	0.41	0.24	30.7
North: York Road											
7	L2	384	3.0	0.530	18.1	LOS C	2.0	50.9	0.72	0.79	27.2
14	R2	136	3.0	0.530	17.5	LOS C	1.9	49.3	0.71	0.77	27.3
Approach		520	3.0	0.530	17.9	LOS C	2.0	50.9	0.72	0.78	27.2
West: Highway 68											
5	L2	89	3.0	0.610	14.1	LOS B	3.3	83.3	0.58	0.62	29.6
2	T1	916	3.0	0.610	14.0	LOS B	3.3	83.3	0.57	0.61	29.9
Approach		1005	3.0	0.610	14.0	LOS B	3.3	83.3	0.57	0.61	29.8
All Vehicles		2741	3.0	0.610	13.9	LOS B	4.3	109.6	0.53	0.48	29.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Pasadera-68

15. Pasadera Drive - Highway 68
Cumulative Conditions
AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Boots Road											
3	L2	77	3.0	0.230	10.6	LOS B	0.6	15.5	0.61	0.61	30.1
8	T1	5	3.0	0.230	10.6	LOS B	0.6	15.5	0.61	0.61	30.2
18	R2	30	3.0	0.230	10.6	LOS B	0.6	15.5	0.61	0.61	29.6
Approach		113	3.0	0.230	10.6	LOS B	0.6	15.5	0.61	0.61	30.0
East: Highway 68											
1	L2	29	3.0	0.744	17.4	LOS C	7.1	180.7	0.62	0.42	28.6
6	T1	1389	3.0	0.744	17.4	LOS C	7.1	180.7	0.62	0.42	28.7
16	R2	27	3.0	0.744	17.4	LOS C	7.1	180.7	0.62	0.42	28.1
Approach		1446	3.0	0.744	17.4	LOS C	7.1	180.7	0.62	0.42	28.7
North: Pasadera Drive											
7	L2	35	3.0	0.271	14.5	LOS B	0.7	18.6	0.72	0.74	29.1
4	T1	1	3.0	0.271	14.5	LOS B	0.7	18.6	0.72	0.74	29.2
14	R2	65	3.0	0.271	14.5	LOS B	0.7	18.6	0.72	0.74	28.7
Approach		101	3.0	0.271	14.5	LOS B	0.7	18.6	0.72	0.74	28.8
West: Highway 68											
5	L2	36	3.0	0.538	10.4	LOS B	3.2	84.8	0.30	0.16	31.3
2	T1	1041	3.0	0.538	10.2	LOS B	3.6	90.6	0.31	0.16	31.6
12	R2	26	3.0	0.538	10.0	LOS A	3.6	90.6	0.32	0.16	30.9
Approach		1103	3.0	0.538	10.2	LOS B	3.6	90.6	0.31	0.16	31.6
All Vehicles		2763	3.0	0.744	14.1	LOS B	7.1	180.7	0.50	0.34	29.8

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Pasadera-68

15. Pasadera Drive - Highway 68
Cumulative Conditions
PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Boots Road											
3	L2	51	3.0	0.154	10.8	LOS B	0.4	9.9	0.65	0.65	29.9
8	T1	4	3.0	0.154	10.8	LOS B	0.4	9.9	0.65	0.65	30.0
18	R2	10	3.0	0.154	10.8	LOS B	0.4	9.9	0.65	0.65	29.4
Approach		65	3.0	0.154	10.8	LOS B	0.4	9.9	0.65	0.65	29.8
East: Highway 68											
1	L2	15	3.0	0.605	12.4	LOS B	4.0	102.1	0.50	0.35	30.5
6	T1	1095	3.0	0.605	12.4	LOS B	4.0	102.1	0.50	0.35	30.6
16	R2	39	3.0	0.605	12.4	LOS B	4.0	102.1	0.50	0.35	29.9
Approach		1149	3.0	0.605	12.4	LOS B	4.0	102.1	0.50	0.35	30.6
North: Pasadera Drive											
7	L2	24	3.0	0.162	9.9	LOS A	0.4	10.6	0.61	0.61	31.1
4	T1	2	3.0	0.162	9.9	LOS A	0.4	10.6	0.61	0.61	31.2
14	R2	51	3.0	0.162	9.9	LOS A	0.4	10.6	0.61	0.61	30.6
Approach		77	3.0	0.162	9.9	LOS A	0.4	10.6	0.61	0.61	30.7
West: Highway 68											
5	L2	85	3.0	0.653	12.9	LOS B	5.4	139.2	0.31	0.14	30.1
2	T1	1212	3.0	0.653	12.9	LOS B	5.4	139.2	0.31	0.14	30.3
12	R2	77	3.0	0.653	12.9	LOS B	5.4	139.2	0.31	0.14	29.7
Approach		1374	3.0	0.653	12.9	LOS B	5.4	139.2	0.31	0.14	30.3
All Vehicles		2665	3.0	0.653	12.6	LOS B	5.4	139.2	0.41	0.25	30.4

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Laureles-68

16. Laureles Grade Road - Highway 68
Cumulative Conditions
AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Laureles Grade Road											
3	L2	228	3.0	0.378	11.4	LOS B	1.2	31.0	0.56	0.59	29.3
18	R2	311	3.0	0.514	14.7	LOS B	2.0	50.1	0.62	0.67	29.2
Approach		539	3.0	0.514	13.3	LOS B	2.0	50.1	0.60	0.64	29.2
East: Highway 68											
1	L2	291	3.0	0.926	37.0	LOS E	18.3	469.3	1.00	1.13	22.6
6	T1	1315	3.0	0.926	37.0	LOS E	18.3	469.3	1.00	1.13	22.9
Approach		1607	3.0	0.926	37.0	LOS E	18.3	469.3	1.00	1.13	22.8
West: Highway 68											
2	T1	827	3.0	0.509	11.5	LOS B	2.8	71.2	0.57	0.53	31.1
12	R2	276	3.0	0.170	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		1103	3.0	0.509	8.6	LOS A	2.8	71.2	0.43	0.40	32.2
All Vehicles		3249	3.0	0.926	23.4	LOS C	18.3	469.3	0.74	0.80	26.4

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Laureles-68

16. Laureles Grade Road - Highway 68
Cumulative Conditions
PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Laureles Grade Road											
3	L2	230	3.0	0.420	13.3	LOS B	1.4	35.5	0.63	0.67	28.6
18	R2	386	3.0	0.703	24.1	LOS C	3.4	85.8	0.76	0.87	25.9
Approach		616	3.0	0.703	20.1	LOS C	3.4	85.8	0.71	0.79	26.9
East: Highway 68											
1	L2	250	3.0	0.676	15.8	LOS C	5.5	140.3	0.66	0.61	28.6
6	T1	921	3.0	0.676	15.8	LOS C	5.5	140.3	0.66	0.61	29.1
Approach		1171	3.0	0.676	15.8	LOS C	5.5	140.3	0.66	0.61	29.0
West: Highway 68											
2	T1	961	3.0	0.567	12.5	LOS B	3.5	89.9	0.58	0.52	30.6
12	R2	167	3.0	0.103	0.0	LOS A	0.0	0.0	0.00	0.00	36.2
Approach		1128	3.0	0.567	10.6	LOS B	3.5	89.9	0.49	0.44	31.3
All Vehicles		2915	3.0	0.703	14.7	LOS B	5.5	140.3	0.61	0.58	29.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: CdT-68

17. Corral de Tierra Road - Highway 68
Cumulative Conditions
AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Corral de Tierra Road											
3	L2	162	3.0	0.346	13.4	LOS B	1.1	27.4	0.67	0.70	28.6
8	T1	1	3.0	0.577	19.6	LOS C	2.2	56.5	0.73	0.81	27.8
18	R2	285	3.0	0.577	19.6	LOS C	2.2	56.5	0.73	0.81	27.2
Approach		448	3.0	0.577	17.4	LOS C	2.2	56.5	0.71	0.77	27.7
East: Higwhay 68											
1	L2	167	3.0	0.909	31.9	LOS D	14.7	376.5	0.92	0.82	24.0
6	T1	1592	3.0	0.909	31.8	LOS D	14.7	376.5	0.90	0.80	24.2
16	R2	5	3.0	0.909	31.8	LOS D	14.0	358.7	0.89	0.79	23.8
Approach		1765	3.0	0.909	31.8	LOS D	14.7	376.5	0.90	0.80	24.1
North: Corral de Tierra Road											
7	L2	1	3.0	0.012	13.3	LOS B	0.0	0.7	0.75	0.75	29.6
4	T1	1	3.0	0.012	13.3	LOS B	0.0	0.7	0.75	0.75	29.7
14	R2	1	3.0	0.012	13.3	LOS B	0.0	0.7	0.75	0.75	29.1
Approach		3	3.0	0.012	13.3	LOS B	0.0	0.7	0.75	0.75	29.5
West: Highway 68											
5	L2	1	3.0	0.624	13.3	LOS B	4.3	110.9	0.55	0.43	30.2
2	T1	1101	3.0	0.624	13.3	LOS B	4.3	110.9	0.55	0.43	30.3
12	R2	47	3.0	0.624	13.3	LOS B	4.3	110.9	0.55	0.43	29.6
Approach		1149	3.0	0.624	13.3	LOS B	4.3	110.9	0.55	0.43	30.3
All Vehicles		3365	3.0	0.909	23.6	LOS C	14.7	376.5	0.76	0.67	26.4

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: CdT-68

17. Corral de Tierra Road - Highway 68
Cumulative Conditions
PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Corral de Tierra Road											
3	L2	83	3.0	0.197	11.6	LOS B	0.5	13.4	0.67	0.67	29.2
8	T1	1	3.0	0.340	13.8	LOS B	1.0	25.4	0.68	0.71	30.0
18	R2	151	3.0	0.340	13.8	LOS B	1.0	25.4	0.68	0.71	29.3
Approach		235	3.0	0.340	13.1	LOS B	1.0	25.4	0.68	0.70	29.3
East: Higwhay 68											
1	L2	212	3.0	0.640	12.7	LOS B	3.8	96.3	0.34	0.20	29.9
6	T1	1093	3.0	0.640	12.7	LOS B	3.8	96.3	0.33	0.20	30.3
16	R2	9	3.0	0.640	12.7	LOS B	3.5	90.7	0.32	0.19	29.8
Approach		1314	3.0	0.640	12.7	LOS B	3.8	96.3	0.33	0.20	30.2
North: Corral de Tierra Road											
7	L2	9	3.0	0.035	9.4	LOS A	0.1	2.1	0.64	0.64	30.7
4	T1	1	3.0	0.035	9.4	LOS A	0.1	2.1	0.64	0.64	30.8
14	R2	4	3.0	0.035	9.4	LOS A	0.1	2.1	0.64	0.64	30.2
Approach		14	3.0	0.035	9.4	LOS A	0.1	2.1	0.64	0.64	30.6
West: Highway 68											
5	L2	5	3.0	0.752	19.2	LOS C	7.6	193.4	0.75	0.70	27.9
2	T1	1229	3.0	0.752	19.2	LOS C	7.6	193.4	0.75	0.70	28.0
12	R2	78	3.0	0.752	19.2	LOS C	7.6	193.4	0.75	0.70	27.4
Approach		1313	3.0	0.752	19.2	LOS C	7.6	193.4	0.75	0.70	28.0
All Vehicles		2876	3.0	0.752	15.7	LOS C	7.6	193.4	0.55	0.47	29.1

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: SanBen-68

18. San Benancio Road - Highway 68
Cumulative Conditions
AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: San Benancio Road											
3	L2	201	3.0	0.481	18.7	LOS C	1.6	42.2	0.75	0.81	26.8
8	T1	1	3.0	0.600	22.5	LOS C	2.3	57.9	0.78	0.86	26.8
18	R2	266	3.0	0.600	22.5	LOS C	2.3	57.9	0.78	0.86	26.3
Approach		468	3.0	0.600	20.9	LOS C	2.3	57.9	0.77	0.84	26.5
East: Highway 68											
1	L2	166	3.0	0.890	29.9	LOS D	12.5	320.1	0.88	0.85	24.5
6	T1	1511	3.0	0.890	29.8	LOS D	12.5	320.1	0.87	0.83	24.7
16	R2	1	3.0	0.890	29.7	LOS D	11.9	305.0	0.85	0.82	24.3
Approach		1678	3.0	0.890	29.8	LOS D	12.5	320.1	0.87	0.84	24.7
North: San Benancio Road											
7	L2	1	3.0	0.012	12.9	LOS B	0.0	0.7	0.74	0.74	29.8
4	T1	1	3.0	0.012	12.9	LOS B	0.0	0.7	0.74	0.74	29.9
14	R2	1	3.0	0.012	12.9	LOS B	0.0	0.7	0.74	0.74	29.3
Approach		3	3.0	0.012	12.9	LOS B	0.0	0.7	0.74	0.74	29.7
West: Highway 68											
5	L2	1	3.0	0.704	15.6	LOS C	4.9	126.0	0.52	0.41	29.3
2	T1	1247	3.0	0.704	15.6	LOS C	4.9	126.0	0.51	0.40	29.4
12	R2	114	3.0	0.704	15.5	LOS C	4.7	119.2	0.49	0.39	28.7
Approach		1362	3.0	0.704	15.6	LOS C	4.9	126.0	0.51	0.40	29.3
All Vehicles		3512	3.0	0.890	23.1	LOS C	12.5	320.1	0.71	0.67	26.6

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: SanBen-68

18. San Benancio Road - Highway 68
Cumulative Conditions
PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: San Benancio Road											
3	L2	60	3.0	0.150	11.3	LOS B	0.4	10.0	0.67	0.67	29.3
8	T1	1	3.0	0.229	12.1	LOS B	0.6	15.3	0.67	0.67	30.7
18	R2	97	3.0	0.229	12.1	LOS B	0.6	15.3	0.67	0.67	30.0
Approach		158	3.0	0.229	11.8	LOS B	0.6	15.3	0.67	0.67	29.7
East: Highway 68											
1	L2	192	3.0	0.698	14.5	LOS B	4.8	124.0	0.33	0.18	29.3
6	T1	1265	3.0	0.698	14.5	LOS B	4.8	124.0	0.32	0.17	29.6
16	R2	2	3.0	0.698	14.5	LOS B	4.6	116.6	0.31	0.17	29.2
Approach		1460	3.0	0.698	14.5	LOS B	4.8	124.0	0.32	0.17	29.6
North: San Benancio Road											
7	L2	1	3.0	0.012	10.0	LOS A	0.0	0.7	0.67	0.67	31.1
4	T1	1	3.0	0.012	10.0	LOS A	0.0	0.7	0.67	0.67	31.3
14	R2	2	3.0	0.012	10.0	LOS A	0.0	0.7	0.67	0.67	30.6
Approach		4	3.0	0.012	10.0	LOS A	0.0	0.7	0.67	0.67	30.9
West: Highway 68											
5	L2	3	3.0	0.772	20.0	LOS C	8.4	214.2	0.76	0.68	27.7
2	T1	1304	3.0	0.772	20.0	LOS C	8.4	214.2	0.76	0.68	27.8
12	R2	78	3.0	0.772	20.0	LOS C	8.4	214.2	0.76	0.68	27.2
Approach		1386	3.0	0.772	20.0	LOS C	8.4	214.2	0.76	0.68	27.7
All Vehicles		3008	3.0	0.772	16.9	LOS C	8.4	214.2	0.54	0.43	28.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Torero-68

19. Torero Drive - Highway 68
Cumulative Conditions
AM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	1042	36.0	0.711	19.6	LOS C	3.3	106.9	0.42	0.28	27.4
16	R2	2	3.0	0.711	19.6	LOS C	3.3	106.9	0.42	0.28	27.3
Approach		1045	35.9	0.711	19.6	LOS C	3.3	106.9	0.42	0.28	27.4
North: Torero Drive											
7	L2	13	3.0	0.032	9.3	LOS A	0.1	2.0	0.64	0.64	30.1
14	R2	572	3.0	0.352	0.1	LOS A	0.0	0.0	0.00	0.00	36.4
Approach		585	3.0	0.352	0.3	LOS A	0.1	2.0	0.01	0.01	36.3
West: Highway 68											
5	L2	121	3.0	0.703	14.3	LOS B	7.1	180.5	0.19	0.05	29.5
2	T1	1402	3.0	0.703	14.3	LOS B	7.1	180.5	0.19	0.05	29.8
Approach		1523	3.0	0.703	14.3	LOS B	7.1	180.5	0.19	0.05	29.7
All Vehicles		3152	13.9	0.711	13.5	LOS B	7.1	180.5	0.23	0.12	29.9

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: Torero-68

19. Torero Drive - Highway 68
Cumulative Conditions
PM Peak Hour - Option 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Highway 68											
6	T1	1390	3.0	0.721	15.8	LOS C	6.5	167.6	0.51	0.30	29.3
16	R2	60	3.0	0.721	15.8	LOS C	6.5	167.6	0.51	0.30	28.6
Approach		1450	3.0	0.721	15.8	LOS C	6.5	167.6	0.51	0.30	29.3
North: Torero Drive											
7	L2	13	3.0	0.032	9.4	LOS A	0.1	2.0	0.64	0.64	30.1
14	R2	55	3.0	0.034	0.0	LOS A	0.0	0.0	0.00	0.00	36.5
Approach		68	3.0	0.034	1.8	LOS A	0.1	2.0	0.12	0.12	35.0
West: Highway 68											
5	L2	85	3.0	0.664	13.0	LOS B	6.0	152.9	0.17	0.05	30.1
2	T1	1353	3.0	0.664	13.0	LOS B	6.0	152.9	0.17	0.05	30.3
Approach		1438	3.0	0.664	13.0	LOS B	6.0	152.9	0.17	0.05	30.3
All Vehicles		2957	3.0	0.721	14.1	LOS B	6.5	167.6	0.34	0.17	29.9

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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I: Vehicle Queue Estimates

Scenario # →							1											
	N-S Street	E-W Street	Int Control	LOS Std	Peak Hour	Prop Imp #	Existing											
							NB			SB			EB			WB		
							L	T	R	L	T	R	L	T	R	L	T	R
1	Olmsted Road	Highway 68	Signal	C/D	AM		-	157	-	-	150	-	#111	#875	24	#166	#769	155
					PM		-	284	-	-	#478	-	#126	660	17	#106	#1463	92
				C/D	AM	*PI#1*	*21.4*			*26.8*			*89.0*			*109.0*		
					PM		*37.0*			*142.2*			*67.9*			*121.7*		
2	Olmsted Road	Garden Road	One-Way Stop	D	AM	*PI#2*	*54.4*			*3.4*			*14.6*			-		
					PM		*20.6*			*11.9*			*41.3*			-		
5	Airport Road	N. Fremont Street	Signal	D	AM		-	81	69	-	68	-	29	100	35	104	355	-
					PM		-	108	146	-	39	-	53	265	51	87	169	-
6	Del Monte Boulevard	Highway 218	Signal	C/D	AM		#207	124	150	#126	298	281	107	228	-	#210	153	87
					PM		#402	406	#421	#192	188	273	107	187	-	#128	227	158
7	Highway 218	Fremont Boulevard	Signal	C/D	AM		#341	113	-	85	163	-	#153	156	175	#231	298	62
					PM		#320	212	-	147	162	-	#251	326	187	#237	206	53
8	Highway 218	General Jim Moore Blvd	Signal	C/D	AM		-	176	65	#125	274	-	-	-	-	#329	-	92
					PM		-	#629	256	#181	69	-	-	-	-	100	-	87
10	Highway 218	Ryan Ranch Road	Signal	C/D	AM		-	137	24	74	285	-	-	-	-	18	-	15
					PM		-	#1254	6	30	72	-	-	-	-	70	-	126
11	Josselyn Canyon Road	Highway 68	Signal	C/D	AM		#376	-	102	-	-	-	-	#1406	-	#100	491	-
					PM		124	-	63	-	-	-	-	475	38	108	#1611	-
					AM	*PI#3*	*47.2*			-			*88.7*			*79.2*		
					PM		*11.5*			-			*156.6*			*157.5*		
12	Highway 218	Highway 68	Signal	C/D	AM		20	19	-	255	16	#342	#115	290	-	-	332	115
					PM		14	61	-	126	11	119	#376	282	-	9	#553	531
					AM	*PI#4*	*2.9*			*59.1*			*113.9*			*39.8*		
					PM		*6.4*			*22.8*			*74.8*			*261.4*		
13	Ragsdale Drive	Highway 68	Signal	C/D	AM		-	-	-	-	-	71	#401	-	-	-	288	-
					PM		-	-	-	-	-	#695	70	-	-	-	#462	-
14	York Road	Highway 68	Signal	C/D	AM		-	-	-	126	-	138	#351	427	-	-	#1075	268
					PM		-	-	-	#476	-	142	#164	497	-	-	#1039	68
					AM	*PI#5*	-			*26.6*			*80.5*			*218.0*		
					PM		-			*235.4*			*105.7*			*97.2*		
15	Pasadera Drive	Highway 68	Signal	C/D	AM		115	55	-	-	65	104	#75	617	15	47	#1494	13
					PM		70	27	-	-	44	69	#107	#1016	27	24	720	12
					AM	*PI#6*	*11.9*			*15.4*			*62.4*			*118.0*		
					PM		*7.7*			*8.6*			*105.5*			*83.9*		
16	Laureles Grade Road	Highway 68	Signal	C/D	AM		193	-	220	-	-	-	-	557	88	#138	#1038	-
					PM		182	-	268	-	-	-	-	#758	76	101	482	-
					AM	*PI#7*	*37.6*			-			*54.0*			*222.9*		
					PM		*65.1*			-			*64.3*			*102.6*		
17	Corral de Tierra Road	Highway 68	Signal	C/D	AM		-	234	336	-	7	-	-	#1187	34	m168	m351	-
					PM		-	130	167	-	26	16	20	#1454	52	m216	m373	-
					AM	*PI#8*	*121.1*			*0.5*			*78.7*			*159.5*		
					PM		*42.4*			*2.0*			*149.2*			*107.3*		
18	San Benancio Road	Highway 68	Signal	C/D	AM		-	213	347	-	-	8	-	m#1480	m65	#163	#1552	-
					PM		-	96	132	-	-	-	m4	#1198	m26	114	#1465	-
					AM	*PI#9*	*134.7*			*0.5*			*85.1*			*147.8*		
					PM		*22.2*			*0.5*			*96.4*			*128.9*		
19	Torero Drive	Highway 68	One-Way Stop	C/D	AM	*PI#10*	-			*116.5*			*127.6*			*75.0*		
					PM		-			*8.1*			*116.0*			*137.8*		

Notes:

1 Queue lengths shown in feet.

2 # = 95th percentile volume exceeds capacity, queue may be longer. Queue shown in maximum after two cycles.

3 m = Volume for 95th percentile queue is metered by upstream signal.

4 Mitigated queue lengths with proposed roundabout improvements (i.e., designated with PI#) indicate the estimated 95% percentile queue by approach (in feet).

Scenario # →							2													
							Ex+Prop Short-Term													
	N-S Street	E-W Street	Int Control	LOS Std	Peak Hour	Miti #	Prop Imp #	Proj Trips	NB			SB			EB			WB		
									L	T	R	L	T	R	L	T	R	L	T	R
1	Olmsted Road	Highway 68	Signal	C/D	AM			-7	-	157	-	-	149	-	#107	#875	24	#166	#769	153
					PM			-13	-	283	-	-	#468	-	#117	660	17	#106	#1463	89
				C/D	AM		*PI#1*		*21.3*			*26.6*			*88.3*			*107.9*		
					PM				*36.9*			*135.4*			*67.3*			*120.6*		
2	Olmsted Road	Garden Road	One-Way Stop	D	AM		*PI#2*		*53.3*			*2.2*			*14.7*			*2.5*		
					PM				*20.0*			*7.1*			*41.6*			*7.7*		
5	Airport Road	N. Fremont Street	Signal	D	AM			9	-	82	70	-	68	-	29	102	36	108	358	-
					PM			15	-	109	151	-	39	-	54	268	53	92	171	-
6	Del Monte Boulevard	Highway 218	Signal	C/D	AM			1	#207	124	150	#126	298	281	107	228	-	#210	153	87
					PM			2	#402	406	#421	#192	188	273	107	187	-	#128	227	158
					AM	*M#1*			*82*	*126*	*152*	*#126*	*298*	*280*	*107*	*231*	-	*#201*	*153*	*86*
					PM				*143*	*407*	*#424*	*#190*	*186*	*269*	*107*	*186*	-	*#124*	*225*	*157*
7	Highway 218	Fremont Boulevard	Signal	C/D	AM			5	#345	113	-	85	164	-	#154	156	176	#230	300	62
					PM			9	#348	186	-	#174	143	-	#254	274	162	#232	172	45
					AM	*M#2*			*#142*	*110*	-	*75*	*140*	-	*#148*	*132*	*150*	*#200*	*245*	*52*
					PM				*#132*	*188*	-	*#177*	*144*	-	*#247*	*281*	*166*	*#221*	*175*	*46*
8	Highway 218	General Jim Moore Blvd	Signal	C/D	AM			2	-	177	65	#126	274	-	-	-	-	#328	-	93
					PM			3	-	#629	255	#182	69	-	-	-	-	98	-	87
10	Highway 218	Ryan Ranch Road	Signal	C/D	AM			1	-	138	24	74	283	-	-	-	-	18	-	15
					PM			1	-	#1254	6	30	73	-	-	-	-	70	-	126
11	Josselyn Canyon Road	Highway 68	Signal	C/D	AM			-2	#376	-	102	-	-	-	-	#1402	-	#100	491	-
					PM			-5	124	-	63	-	-	-	-	473	38	108	#1603	-
					AM		*PI#3*		*47.2*			-			*88.4*			*79.2*		
					PM				*11.4*			-			*155.5*			*156.5*		
12	Highway 218	Highway 68	Signal	C/D	AM			-2	20	19	-	256	16	#338	#115	290	-	-	331	116
					PM			-3	14	61	-	127	11	117	#372	281	-	9	#552	535
					AM		*PI#4*		*2.9*			*59.1*			*113.7*			*39.6*		
					PM				*6.4*			*23.0*			*74.4*			*263.6*		
13	Ragsdale Drive	Highway 68	Signal	C/D	AM			0	-	-	-	-	-	71	#401	-	-	-	288	-
					PM			1	-	-	-	-	-	#695	70	-	-	-	#462	-
14	York Road	Highway 68	Signal	C/D	AM			0	-	-	-	126	-	138	#351	427	-	-	#1075	268
					PM			1	-	-	-	#476	-	142	#164	498	-	-	#1039	68
					AM	*M#3*	*PI#5*			-			*26.6*			*80.5*			*218.0*	
					PM					-			*235.5*			*106.0*			*97.2*	
15	Pasadera Drive	Highway 68	Signal	C/D	AM			0	115	55	-	-	65	104	#75	617	15	47	#1494	13
					PM			1	70	27	-	-	44	69	#107	#1019	27	24	720	12
					AM		*PI#6*		*11.9*			*15.4*			*62.4*			*118.0*		
					PM				*7.7*			*8.6*			*105.7*			*83.9*		
16	Laureles Grade Road	Highway 68	Signal	C/D	AM			0	193	-	220	-	-	-	-	557	88	#138	#1038	-
					PM			1	182	-	268	-	-	-	-	#759	76	101	482	-
					AM		*PI#7*		*37.6*			-			*54.0*			*222.9*		
					PM				*65.2*			-			*64.5*			*102.6*		
17	Corral de Tierra Road	Highway 68	Signal	C/D	AM			0	-	234	336	-	7	-	-	#1187	34	m168	m351	-
					PM			1	-	130	167	-	26	16	20	#1454	52	m216	m373	-
					AM	*M#4*	*PI#8*		*121.1*			*0.5*			*78.7*			*159.5*		
					PM				*42.5*			*2.0*			*149.6*			*107.3*		
18	San Benancio Road	Highway 68	Signal	C/D	AM			0	-	213	347	-	-	8	-	m#1480	m65	#163	#1552	-
					PM			1	-	96	132	-	-	-	m4	m#1198	m26	114	#1465	-
					AM		*PI#9*		*134.7*			*0.5*			*85.1*			*147.8*		
					PM				*22.2*			*0.5*			*96.6*			*128.9*		
19	Torero Drive	Highway 68	One-Way Stop	C/D	AM	*M#5*	*PI#10*			-			*116.2*			*127.6*			*74.9*	
					PM					-			*8.1*			*116.2*			*137.8*	

Notes:

1 Queue lengths shown in feet.

2 # = 95th percentile volume exceeds capacity, queue may be longer. Queue shown in maximum after two cycles.

3 m = Volume for 95th percentile queue is metered by upstream signal.

4 Mitigated queue lengths with proposed roundabout improvements (i.e., designated with PI#) indicate the estimated 95% percentile queue by approach (in feet).

Scenario # →								3															
	N-S Street	E-W Street	Int Control	LOS Std	Peak Hour	Miti #	Prop Imp #	Ex+Alt1 Short-Term															
								Proj Trips	NB			SB			EB			WB		
									L	T	R	L	T	R	L	T	R	L	T	R
1	Olmsted Road	Highway 68	Signal	C/D	AM			-10	-	157	-	-	148	-	#104	#880	24	#166	#771	152
					PM			-11	-	283	-	-	#462	-	#113	662	17	#108	#1467	90
				C/D	AM		*PI#1*		*21.3*			*25.8*			*88.0*			*107.6*		
					PM				*36.8*			*133.8*			*67.1*			*121.2*		
2	Olmsted Road	Garden Road	One-Way Stop	D	AM		*PI#2*		*52.4*			*1.6*			*14.5*			*2.5*		
					PM				*19.9*			*6.7*			*41.1*			*7.7*		
5	Airport Road	N. Fremont Street	Signal	D	AM			-3	-	81	69	-	68	-	29	100	35	104	355	-
					PM			-4	-	107	146	-	39	-	53	264	50	87	168	-
6	Del Monte Boulevard	Highway 218	Signal	C/D	AM			4	#207	125	150	#126	300	281	107	228	-	#210	153	87
					PM			4	#402	406	#422	#192	188	273	107	187	-	#129	227	158
					AM	*M#1*			*82*	*126*	*152*	*#126*	*298*	*280*	*107*	*231*	-	*#202*	*153*	*86*
					PM				*143*	*407*	*#426*	*#190*	*186*	*269*	*107*	*186*	-	*#125*	*225*	*157*
7	Highway 218	Fremont Boulevard	Signal	C/D	AM			4	#340	114	-	85	164	-	#154	156	176	#230	300	62
					PM			4	#346	187	-	#175	143	-	#253	274	159	#236	172	45
					AM	*M#2*			*#141*	*110*	-	*75*	*140*	-	*#148*	*132*	*149*	*#201*	*244*	*52*
					PM				*#130*	*190*	-	*#178*	*144*	-	*#245*	*281*	*163*	*#224*	*175*	*46*
8	Highway 218	General Jim Moore Blvd	Signal	C/D	AM			6	-	177	65	#126	277	-	-	-	-	#331	-	92
					PM			6	-	#634	256	#181	69	-	-	-	-	100	-	87
10	Highway 218	Ryan Ranch Road	Signal	C/D	AM			10	-	140	24	74	286	-	-	-	-	18	-	15
					PM			12	-	#1264	6	30	74	-	-	-	-	70	-	126
11	Josselyn Canyon Road	Highway 68	Signal	C/D	AM			-2	#376	-	102	-	-	-	-	#1404	-	#100	490	-
					PM			-3	124	-	63	-	-	-	-	473	38	108	#1607	-
					AM		*PI#3*		*47.2*			-			*88.5*			*79.0*		
					PM				*11.4*			-			*55.7*			*157.2*		
12	Highway 218	Highway 68	Signal	C/D	AM			3	20	19	-	256	16	#343	#123	289	-	-	330	116
					PM			4	14	61	-	128	11	123	#379	280	-	15	#552	531
					AM		*PI#4*		*3.0*			*59.1*			*114.5*			*39.5*		
					PM				*6.4*			*23.2*			*75.1*			*262.9*		
13	Ragsdale Drive	Highway 68	Signal	C/D	AM			-1	-	-	-	-	-	71	#401	-	-	-	288	-
					PM			-1	-	-	-	-	-	#695	70	-	-	-	#462	-
14	York Road	Highway 68	Signal	C/D	AM			-1	-	-	-	126	-	138	#351	427	-	-	#1075	268
					PM			-1	-	-	-	#476	-	142	#164	496	-	-	#1039	68
					AM		*PI#5*		-			*26.6*			*80.5*			*217.4*		
					PM				-			*235.4*			*105.5*			*97.2*		
15	Pasadera Drive	Highway 68	Signal	C/D	AM			-1	115	55	-	-	65	104	#75	617	15	47	#1491	13
					PM			-1	70	27	-	-	44	69	#107	#1014	27	24	720	12
					AM		*PI#6*		*11.9*			*15.4*			*62.4*			*117.8*		
					PM				*7.6*			*8.6*			*105.3*			*83.9*		
16	Laureles Grade Road	Highway 68	Signal	C/D	AM			-1	193	-	220	-	-	-	-	557	88	#138	#1037	-
					PM			-1	182	-	268	-	-	-	-	#756	76	101	482	-
					AM		*PI#7*		*37.6*			-			*54.0*			*222.3*		
					PM				*65.0*			-			*64.2*			*102.6*		
17	Corral de Tierra Road	Highway 68	Signal	C/D	AM			-1	-	234	336	-	7	-	-	#1187	34	m169	m351	-
					PM			-1	-	130	167	-	26	16	20	#1452	52	m216	m373	-
					AM		*PI#8*		*121.1*			*0.5*			*78.7*			*159.1*		
					PM				*42.4*			*2.0*			*148.8*			*107.3*		
18	San Benancio Road	Highway 68	Signal	C/D	AM			-1	-	213	347	-	-	8	-	m#1480	m65	#163	#1550	-
					PM			-1	-	96	132	-	-	-	m4	m#1198	m26	114	#1465	-
					AM		*PI#9*		*134.7*			*0.5*			*85.1*			*147.4*		
					PM				*22.2*			*0.5*			*96.1*			*128.9*		
19	Torero Drive	Highway 68	One-Way Stop	C/D	AM		*PI#10*		-			*116.2*			*127.6*			*74.9*		
					PM				-			*8.1*			*115.8*			*137.8*		

Notes:

1 Queue lengths shown in feet.

2 # = 95th percentile volume exceeds capacity, queue may be longer. Queue shown in maximum after two cycles.

3 m = Volume for 95th percentile queue is metered by upstream signal.

4 Mitigated queue lengths with proposed roundabout improvements (i.e., designated with PI#) indicate the estimated 95% percentile queue by approach (in feet).

Scenario # →							4											
N-S Street	E-W Street	Int Control	LOS Std	Peak Hour	Prop Imp #	Background												
						NB			SB			EB			WB			
						L	T	R	L	T	R	L	T	R	L	T	R	
1 Olmsted Road	Highway 68	Signal	C/D	AM		-	184	-	-	#207	85	#153	#945	24	#184	#847	168	
				PM		-	292	-	-	#520	191	#148	721	17	#108	#1543	105	
			C/D	AM	*PI#1*	*24.3*			*32.0*			*101.9*			*135.6*			
				PM		*40.7*			*237.6*			*76.9*			*133.6*			
2 Olmsted Road	Garden Road	One-Way Stop	D	AM	*PI#2*	*62.2*			*4.4*			*16.4*			-			
				PM		*24.7*			*15.9*			*47.3*			-			
5 Airport Road	N. Fremont Street	Signal	D	AM		-	84	73	-	70	-	30	109	38	110	#396	-	
				PM		-	114	155	-	41	-	56	#292	54	94	183	-	
6 Del Monte Boulevard	Highway 218	Signal	C/D	AM		#234	136	165	#143	335	313	114	255	-	#241	171	95	
				PM		#449	447	#469	#242	208	305	115	208	-	#148	256	177	
7 Highway 218	Fremont Boulevard	Signal	C/D	AM		#392	125	-	94	180	-	#194	176	198	#262	337	68	
				PM		#350	226	-	#189	184	-	#273	#367	206	#251	226	56	
8 Highway 218	General Jim Moore Blvd	Signal	C/D	AM		-	212	76	#158	346	-	-	-	-	#415	-	112	
				PM		-	#748	303	#208	80	-	-	-	-	108	-	95	
10 Highway 218	Ryan Ranch Road	Signal	C/D	AM		-	154	26	86	357	-	-	-	-	20	-	19	
				PM		-	#1645	6	36	87	-	-	-	-	86	-	160	
11 Josselyn Canyon Road	Highway 68	Signal	C/D	AM		#391	-	106	-	-	-	-	#1486	-	#122	544	-	
				PM		126	-	74	-	-	-	-	512	39	119	#1666	-	
				AM	*PI#3*	*50.1*			-			*96.7*			*90.8*			
				PM		*12.7*			-			*58.6*			*168.2*			
12 Highway 218	Highway 68	Signal	C/D	AM		23	45	-	295	24	#359	#138	#437	-	17	#387	122	
				PM		26	74	-	133	30	133	#381	301	-	11	#576	557	
				AM	*PI#4*	*7.9*			*80.1*			*151.6*			*45.3*			
				PM		*9.5*			*26.8*			*86.9*			*296.2*			
13 Ragsdale Drive	Highway 68	Signal	C/D	AM		-	-	-	-	-	71	#401	-	-	-	Qu	-	
				PM		-	-	-	-	-	#814	82	-	-	-	#561	-	
14 York Road	Highway 68	Signal	C/D	AM		-	-	-	146	-	164	#423	548	-	-	#1340	288	
				PM		-	-	-	#523	-	158	#176	562	-	-	#1149	70	
				AM	*PI#5*	-			*29.3*			*97.0*			*282.7*			
				PM		-			*304.5*			*117.5*			*103.2*			
15 Pasadera Drive	Highway 68	Signal	C/D	AM		117	61	-	-	66	105	#76	818	15	56	#1679	14	
				PM		79	33	-	-	50	79	#143	#1174	28	31	823	15	
				AM	*PI#6*	*13.8*			*17.2*			*74.2*			*142.5*			
				PM		*8.9*			*9.7*			*121.1*			*92.8*			
16 Laureles Grade Road	Highway 68	Signal	C/D	AM		246	-	290	-	-	-	-	638	121	#171	#1293	-	
				PM		190	-	280	-	-	-	-	#840	82	#117	548	-	
				AM	*PI#7*	*43.6*			-			*61.5*			*313.4*			
				PM		*74.5*			-			*75.4*			*120.4*			
17 Corral de Tierra Road	Highway 68	Signal	C/D	AM		-	232	337	-	6	-	8	#1355	34	m152	m#1247	-	
				PM		-	130	170	-	26	16	20	#1541	51	m206	m361	-	
				AM	*PI#8*	*140.9*			*0.6*			*91.4*			*288.0*			
				PM		*44.7*			*2.1*			*169.6*			*118.4*			
18 San Benancio Road	Highway 68	Signal	C/D	AM		-	240	#375	-	-	8	-	m#1462	m58	#167	#1950	-	
				PM		-	98	139	-	-	-	m3	m#1207	m25	125	#1578	-	
				AM	*PI#9*	*210.6*			*0.6*			*103.9*			*263.3*			
				PM		*25.1*			*0.5*			*118.0*			*147.0*			
19 Torero Drive	Highway 68	One-Way Stop	C/D	AM	*PI#10*	-			*1.8*			*151.3*			*88.9*			
				PM		-			*2.6*			*133.0*			*228.8*			

Notes:

1 Queue lengths shown in feet.

2 # = 95th percentile volume exceeds capacity, queue may be longer. Queue shown in maximum after two cycles.

3 m = Volume for 95th percentile queue is metered by upstream signal.

4 Mitigated queue lengths with proposed roundabout improvements (i.e., designated with PI#) indicate the estimated 95% percentile queue by approach (in feet).

Scenario # →								5												
	N-S Street	E-W Street	Int Control	LOS Std	Peak Hour	Miti #	Prop Imp #	Back+Prop Short-Term												
								Proj Trips	NB			SB			EB			WB		
									L	T	R	L	T	R	L	T	R	L	T	R
1	Olmsted Road	Highway 68	Signal	C/D	AM			-7	-	184	-	-	#204	85	#148	#945	24	#184	#847	164
					PM			-13	-	291	-	-	#512	188	#142	721	17	#108	#1543	103
				C/D	AM		*PI#1*		*24.3*			*31.7*			*101.1*			*133.0*		
					PM				*40.5*			*213.5*			*75.9*			*132.3*		
2	Olmsted Road	Garden Road	One-Way Stop	D	AM		*PI#2*		*61.0*			*3.0*			*16.3*			*3.2*		
					PM				*24.3*			*9.8*			*47.8*			*9.9*		
5	Airport Road	N. Fremont Street	Signal	D	AM			9	-	84	74	-	70	-	30	110	39	114	#398	-
					PM			15	-	115	159	-	41	-	57	#298	55	99	185	-
6	Del Monte Boulevard	Highway 218	Signal	C/D	AM			1	#234	136	165	#143	336	313	114	255	-	#241	171	95
					PM			2	#449	447	#469	#242	208	305	115	208	-	#148	256	177
					AM				*89*	*138*	*120*	*#145*	*335*	*226*	*113*	*257*	-	*#232*	*174*	*97*
					PM				*157*	*#490*	*339*	*#219*	*205*	*228*	*115*	*208*	-	*#149*	*257*	*177*
					AM	*M#6*			*89*	*138*	*120*	*#145*	*335*	*226*	*113*	*257*	-	*#232*	*174*	*97*
					PM				*157*	*#490*	*339*	*#219*	*205*	*228*	*115*	*208*	-	*#149*	*257*	*177*
7	Highway 218	Fremont Boulevard	Signal	C/D	AM			5	#398	125	-	94	180	-	#194	177	200	#262	338	68
					PM			9	#395	206	-	#200	158	-	#287	321	185	#262	197	50
					AM	*M#2*			*142*	*125*	-	*94*	*180*	-	*#194*	*177*	*200*	*#262*	*338*	*68*
					PM				*#150*	*238*	-	*#191*	*180*	-	*#235*	*365*	*209*	*#221*	*230*	*57*
8	Highway 218	General Jim Moore Blvd	Signal	C/D	AM			2	-	214	76	#158	346	-	-	-	-	#414	-	112
					PM			3	-	#750	302	#209	80	-	-	-	-	108	-	96
9	Highway 218	Del Rey Gardens Drive	One-Way Stop	C/D	AM	*M#7*			*8*	*31*	-	-	*114*	*12*	*19*	-	*28*	-	-	-
					PM				*8*	*142*	-	-	*26*	*6*	*24*	-	*25*	-	-	-
10	Highway 218	Ryan Ranch Road	Signal	C/D	AM			1	-	155	26	86	356	-	-	-	-	20	-	19
					PM			1	-	#1645	6	36	87	-	-	-	-	86	-	160
11	Josselyn Canyon Road	Highway 68	Signal	C/D	AM			-2	#391	-	106	-	-	-	-	#1482	-	#122	544	-
					PM			-5	126	-	74	-	-	-	-	509	39	119	#1660	-
					AM		*PI#3*		*50.0*			-			*96.3*			*90.8*		
					PM				*12.7*			-			*58.4*			*168.2*		
12	Highway 218	Highway 68	Signal	C/D	AM			-2	23	45	-	295	24	#357	#138	#437	-	17	#386	124
					PM			-3	26	74	-	134	30	130	#380	301	-	11	#575	558
					AM		*PI#4*		*7.9*			*80.1*			*151.4*			*45.1*		
					PM				*9.4*			*27.1*			*86.5*			*298.8*		
13	Ragsdale Drive	Highway 68	Signal	C/D	AM			0	-	-	-	-	-	71	#401	26	-	-	327	-
					PM			1	-	-	-	-	-	#814	82	-	-	-	#561	-
14	York Road	Highway 68	Signal	C/D	AM			0	-	-	-	146	-	164	#423	548	-	-	#1340	288
					PM			1	-	-	-	#523	-	158	#176	564	-	-	#1149	70
					AM	*M#3*	*PI#5*		-			*29.3*			*97.0*			*282.7*		
					PM				-			*304.5*			*117.8*			*103.2*		
15	Pasadera Drive	Highway 68	Signal	C/D	AM			0	117	61	-	-	66	105	#76	818	15	56	#1679	14
					PM			1	79	33	-	-	50	79	#143	#1176	28	31	823	15
					AM		*PI#6*		*13.8*			*17.2*			*74.2*			*142.5*		
					PM				*8.9*			*9.7*			*121.3*			*92.8*		
16	Laureles Grade Road	Highway 68	Signal	C/D	AM			0	246	-	290	-	-	-	-	638	121	#171	#1293	-
					PM			1	190	-	280	-	-	-	-	#841	82	#117	548	-
					AM	*M#8*	*PI#7*		*43.6*			-			*61.5*			*313.4*		
					PM				*74.6*			-			*75.6*			*120.4*		
17	Corral de Tierra Road	Highway 68	Signal	C/D	AM			0	-	232	337	-	6	-	8	#1355	34	m152	m#1247	-
					PM			1	-	130	170	-	26	16	20	#1543	51	m206	m361	-
					AM	*M#4*	*PI#8*		*140.9*			*0.6*			*91.4*			*288.0*		
					PM				*44.7*			*2.1*			*170.0*			*118.4*		
18	San Benancio Road	Highway 68	Signal	C/D	AM			0	-	240	#375	-	8	8	-	m#1462	m58	#167	#1950	-
					PM			1	-	98	139	-	-	-	m3	m#1207	m25	125	#1578	-
					AM	*M#9*	*PI#9*		*210.6*			*0.6*			*103.9*			*263.3*		
					PM				*25.2*			*0.5*			*118.3*			*147.0*		
19	Torero Drive	Highway 68	One-Way Stop	C/D	AM	*M#5*	*PI#10*		-			*1.8*			*151.3*			*88.9*		
					PM				-			*2.6*			*133.3*			*228.8*		

Notes:

1 Queue lengths shown in feet.

2 # = 95th percentile volume exceeds capacity, queue may be longer. Queue shown in maximum after two cycles.

3 m = Volume for 95th percentile queue is metered by upstream signal.

4 Mitigated queue lengths with proposed roundabout improvements (i.e., designated with PI#) indicate the estimated 95% percentile queue by approach (in feet).

Scenario # →								6												
	N-S Street	E-W Street	Int Control	LOS Std	Peak Hour	Miti #	Prop Imp #	Back+Alt1 Short-Term												
								Proj Trips	NB			SB			EB			WB		
									L	T	R	L	T	R	L	T	R	L	T	R
1	Olmsted Road	Highway 68	Signal	C/D	AM			-10	-	184	-	-	#199	84	#143	#951	24	#184	#848	164
					PM			-11	-	290	-	-	#503	188	#140	722	17	#112	#1545	104
				C/D	AM		*PI#1*		*24.2*			*35.6*			*100.9*			*131.3*		
					PM				*40.4*			*209.9*			*75.7*			*133.0*		
2	Olmsted Road	Garden Road	One-Way Stop	D	AM		*PI#2*		*60.0*			*2.4*			*16.1*			*3.2*		
					PM				*24.1*			*9.5*			*47.3*			*9.9*		
5	Airport Road	N. Fremont Street	Signal	D	AM			-3	-	84	73	-	70	-	30	108	37	110	#395	-
					PM			-4	-	113	155	-	41	-	56	#292	54	94	183	-
6	Del Monte Boulevard	Highway 218	Signal	C/D	AM			4	#234	137	165	#143	336	313	114	255	-	#242	171	95
					PM			4	#449	447	#470	#242	208	305	115	208	-	#149	256	177
					AM	*M#6*			*89*	*138*	*120*	*#145*	*336*	*226*	*113*	*257*	-	*#233*	*174*	*97*
					PM				*157*	*#490*	*340*	*#219*	*205*	*228*	*115*	*208*	-	*#150*	*257*	*177*
7	Highway 218	Fremont Boulevard	Signal	C/D	AM			4	#394	126	-	94	181	-	#195	176	199	#264	338	68
					PM			4	#390	207	-	#200	158	-	#286	320	182	#265	197	50
					AM	*M#2*			*#172*	*125*	-	*85*	*161*	-	*#177*	*148*	*168*	*#240*	*283*	*58*
					PM				*#150*	*241*	-	*#188*	*180*	-	*#235*	*365*	*206*	*#223*	*229*	*57*
8	Highway 218	General Jim Moore Blvd	Signal	C/D	AM			6	-	214	76	#158	350	-	-	-	-	#415	-	112
					PM			6	-	#753	303	#208	80	-	-	-	-	108	-	95
9	Highway 218	Del Rey Gardens Drive	One-Way Stop	C/D	AM	*M#7*			*11*	*31*	-	-	*116*	*13*	*20*	-	*28*	-	-	-
					PM				*10*	*147*	-	-	*27*	*6*	*25*	-	*28*	-	-	-
10	Highway 218	Ryan Ranch Road	Signal	C/D	AM			10	-	158	26	86	359	-	-	-	-	20	-	19
					PM			12	-	#1655	6	36	89	-	-	-	-	86	-	160
11	Josselyn Canyon Road	Highway 68	Signal	C/D	AM			-2	#391	-	106	-	-	-	-	#1484	-	#122	542	-
					PM			-3	126	-	74	-	-	-	-	509	39	119	#1664	-
					AM		*PI#3*		*50.1*			-			*96.5*			*90.6*		
					PM				*12.7*			-			*58.4*			*168.9*		
12	Highway 218	Highway 68	Signal	C/D	AM			3	23	45	-	295	24	#361	#143	#437	-	17	#383	125
					PM			4	26	74	-	135	30	136	#387	299	-	19	#574	557
					AM		*PI#4*		*7.9*			*80.1*			*152.8*			*45.0*		
					PM				*9.5*			*27.3*			*87.2*			*298.1*		
13	Ragsdale Drive	Highway 68	Signal	C/D	AM			-1	-	-	-	-	-	71	#401	-	-	-	326	-
					PM			-1	-	-	-	-	-	#814	82	-	-	-	#561	-
14	York Road	Highway 68	Signal	C/D	AM			-1	-	-	-	146	-	164	#423	548	-	-	#1338	288
					PM			-1	-	-	-	#523	-	158	#176	557	-	-	#1149	70
					AM		*PI#5*		-			*29.3*			*97.0*			*281.8*		
					PM				-			*304.5*			*117.2*			*103.2*		
15	Pasadera Drive	Highway 68	Signal	C/D	AM			-1	117	61	-	-	66	105	#76	818	15	56	#1677	14
					PM			-1	79	33	-	-	50	79	#143	#1172	28	31	823	15
					AM		*PI#6*		*13.8*			*17.2*			*74.2*			*142.2*		
					PM				*8.9*			*9.7*			*120.9*			*92.8*		
16	Laureles Grade Road	Highway 68	Signal	C/D	AM			-1	246	-	290	-	-	-	-	638	121	#171	#1293	-
					PM			-1	190	-	280	-	-	-	-	#839	82	#117	548	-
					AM		*PI#7*		*43.6*			-			*61.5*			*312.4*		
					PM				*74.4*			-			*75.2*			*120.4*		
17	Corral de Tierra Road	Highway 68	Signal	C/D	AM			-1	-	232	337	-	6	-	8	#1355	34	m152	m#1247	-
					PM			-1	-	130	170	-	26	16	20	#1539	51	m206	m361	-
					AM		*PI#8*		*140.9*			*0.6*			*91.4*			*287.1*		
					PM				*44.7*			*2.1*			*169.1*			*118.4*		
18	San Benancio Road	Highway 68	Signal	C/D	AM			-1	-	240	#375	-	8	8	-	m#1462	m58	#167	#1948	-
					PM			-1	-	98	139	-	-	-	m3	m#1207	m25	125	#1578	-
					AM		*PI#9*		*210.6*			*0.6*			*103.9*			*262.5*		
					PM				*25.1*			*0.5*			*117.7*			*147.0*		
19	Torero Drive	Highway 68	One-Way Stop	C/D	AM		*PI#10*		-			*1.8*			*151.3*			*88.8*		
					PM				-			*2.6*			*132.8*			*228.8*		

Notes:

1 Queue lengths shown in feet.

2 # = 95th percentile volume exceeds capacity, queue may be longer. Queue shown in maximum after two cycles.

3 m = Volume for 95th percentile queue is metered by upstream signal.

4 Mitigated queue lengths with proposed roundabout improvements (i.e., designated with PI#) indicate the estimated 95% percentile queue by approach (in feet).

Scenario # →						7													
	N-S Street	E-W Street	Int Control	LOS Std	Peak Hour	Prop Imp #	Cumulative												
							NB			SB			EB			WB			
							L	T	R	L	T	R	L	T	R	L	T	R	
1	Olmsted Road	Highway 68	Signal	C/D	AM		-	195	-	-	#231	93	#179	#993	25	#185	#916	181	
					PM		-	296	-	-	#555	198	#168	781	18	#108	#1617	120	
				C/D	AM	*PI#1*	*27.2*			*21.6*			*115.2*			*166.3*			
					PM		*44.5*			*73.9*			*85.6*			*152.7*			
2	Olmsted Road	Garden Road	One-Way Stop	D	AM	*PI#2*	*71.0*			*5.5*			*18.2*			-			
					PM		*28.9*			*20.1*			*53.8*			-			
5	Airport Road	N. Fremont Street	Signal	D	AM		-	101	85	-	81	-	36	123	41	133	435	-	
					PM		-	118	165	-	42	-	58	#353	58	103	199	-	
6	Del Monte Boulevard	Highway 218	Signal	C/D	AM		#265	152	185	#165	382	#381	124	285	-	#265	190	104	
					PM		#500	#561	#552	#258	230	#346	126	228	-	#169	283	192	
7	Highway 218	Fremont Boulevard	Signal	C/D	AM		#448	137	-	100	196	-	#210	199	223	#296	#424	75	
					PM		#405	252	-	#202	196	-	#316	#460	230	#290	253	61	
8	Highway 218	General Jim Moore Blvd	Signal	C/D	AM		-	234	81	#177	397	-	-	-	-	#474	-	121	
					PM		-	#923	365	#256	94	-	-	-	-	130	-	112	
9	Highway 218	Del Rey Gardens Drive	One-Way Stop	C/D	AM		*12*	*34*	-	-	*132*	*13*	*20*	-	*29*	-	-	-	
					PM		*9*	*170*	-	-	*29*	*7*	*27*	-	*29*	-	-	-	
10	Highway 218	Ryan Ranch Road	Signal	C/D	AM		-	180	29	103	440	-	-	-	-	24	-	22	
					PM		-	#1909	6	38	100	-	-	-	-	92	-	172	
11	Josselyn Canyon Road	Highway 68	Signal	C/D	AM		#398	-	108	-	-	-	-	#1573	-	#140	618	-	
					PM		126	-	84	-	-	-	-	550	40	129	#1725	-	
					AM	*PI#3*	*52.8*			-			*105.1*			*103.3*			
					PM		*13.8*			-			*181.7*			*181.5*			
12	Highway 218	Highway 68	Signal	C/D	AM		27	65	-	#362	30	#377	#159	#463	-	26	#424	131	
					PM		37	91	-	155	49	160	#405	316	-	12	#600	603	
					AM	*PI#4*	*13.9*			*112.3*			*236.3*			*51.5*			
					PM		*12.7*			*31.0*			*99.8*			*98.8*			
13	Ragsdale Drive	Highway 68	Signal	C/D	AM		-	-	-	-	-	71	#401	31	-	-	365	-	
					PM		-	-	-	-	-	#825	84	-	-	-	#585	-	
14	York Road	Highway 68	Signal	C/D	AM		-	-	-	149	-	168	#467	712	-	-	#1493	287	
					PM		-	-	-	#561	-	172	#189	652	-	-	#1275	74	
					AM	*PI#5*	-			*14.2*			*86.1*			*378.2*			
					PM		-			*50.9*			*83.3*			*109.6*			
15	Pasadera Drive	Highway 68	Signal	C/D	AM		123	66	-	-	66	105	#76	#1185	15	62	#1866	16	
					PM		83	32	-	-	51	82	#165	#1287	28	36	#1015	17	
					AM	*PI#6*	*15.5*			*18.6*			*90.6*			*180.7*			
					PM		*9.9*			*10.6*			*139.2*			*102.1*			
16	Laureles Grade Road	Highway 68	Signal	C/D	AM		#327	-	362	-	-	-	-	721	154	#204	#1569	-	
					PM		221	-	337	-	-	-	-	#951	86	#153	603	-	
					AM	*PI#7*	*50.1*			-			*71.2*			*469.3*			
					PM		*85.8*			-			*89.9*			*140.3*			
17	Corral de Tierra Road	Highway 68	Signal	C/D	AM		-	228	331	-	6	-	8	#1542	35	m137	m#1379	-	
					PM		-	130	170	-	26	16	20	#1642	51	m198	m353	-	
					AM	*PI#8*	*56.5*			*0.7*			*110.9*			*376.5*			
					PM		*25.4*			*2.1*			*193.4*			*96.3*			
18	San Benancio Road	Highway 68	Signal	C/D	AM		-	264	#391	-	8	8	-	m#1443	m52	#167	#2357	-	
					PM		-	97	148	-	-	-	m3	m#1245	m25	134	#1693	-	
					AM	*PI#9*	*57.9*			*0.7*			*126.0*			*320.1*			
					PM		*15.3*			*0.7*			*214.2*			*124.0*			
19	Torero Drive	Highway 68	One-Way Stop	C/D	AM	*PI#10*	-			*2.0*			*180.5*			*106.9*			
					PM		-			*2.0*			*152.9*			*167.6*			

Notes:

1 Queue lengths shown in feet.

2 # = 95th percentile volume exceeds capacity, queue may be longer. Queue shown in maximum after two cycles.

3 m = Volume for 95th percentile queue is metered by upstream signal.

4 Mitigated queue lengths with proposed roundabout improvements (i.e., designated with PI#) indicate the estimated 95% percentile queue by approach (in feet).

Scenario # →						8													
N-S Street		E-W Street	Int Control	LOS Std	Peak Hour	Cu+Prop Long-Term													
						Proj Trips	NB			SB			EB			WB		
							L	T	R	L	T	R	L	T	R	L	T	R
1	Olmsted Road	Highway 68	Signal	C/D	AM	530	-	309	-	-	#386	135	#373	#1366	30	#235	#1176	437
					PM	544	-	321	-	-	#892	290	#276	#985	21	#231	#1909	197
5	Airport Road	N. Fremont Street	Signal	D	AM	134	-	101	85	-	81	-	36	150	41	133	454	-
					PM	132	-	118	165	-	42	-	58	#373	57	103	233	-
6	Del Monte Boulevard	Highway 218	Signal	C/D	AM	150	#265	152	187	#218	382	#381	124	336	-	#273	195	106
					PM	148	#500	#561	#567	#267	230	#346	#138	235	-	#174	323	213
7	Highway 218	Fremont Boulevard	Signal	C/D	AM	365	#479	163	-	109	#296	-	#230	228	#416	#408	#431	79
					PM	361	#525	390	-	#232	260	-	#341	#564	291	#341	313	73
8	Highway 218	General Jim Moore Blvd	Signal	C/D	AM	487	-	348	124	#202	#1050	-	-	-	-	#799	-	152
					PM	392	-	#1691	401	#359	101	-	-	-	-	#267	-	167
10	Highway 218	Ryan Ranch Road	Signal	C/D	AM	606	-	#624	23	#147	#795	-	-	-	-	24	-	26
					PM	595	-	#2159	6	38	327	-	-	-	-	92	-	172
11	Josselyn Canyon Road	Highway 68	Signal	C/D	AM	237	#398	-	108	-	-	-	-	#2007	-	#140	723	-
					PM	239	126	-	84	-	-	-	-	644	40	129	#2112	-
12	Highway 218	Highway 68	Signal	C/D	AM	759	36	92	-	#558	42	#665	#492	507	-	36	#715	598
					PM	755	41	105	-	#434	57	#485	#543	377	-	13	#701	842
13	Ragsdale Drive	Highway 68	Signal	C/D	AM	535	-	-	-	-	-	94	#454	-	-	-	#649	-
					PM	532	-	-	-	-	-	#1033	124	-	-	-	#781	-
14	York Road	Highway 68	Signal	C/D	AM	507	-	-	-	149	-	186	#525	933	-	-	#2392	261
					PM	503	-	-	-	#622	-	189	#230	#1713	-	-	#1511	72
15	Pasadera Drive	Highway 68	Signal	C/D	AM	493	123	66	-	-	66	122	#84	#1338	15	62	#2722	16
					PM	490	83	32	-	-	51	86	#190	#2022	28	36	#1276	18
16	Laureles Grade Road	Highway 68	Signal	C/D	AM	479	#352	-	346	-	-	-	-	#1019	171	190	#2406	-
					PM	477	#348	-	#560	-	-	-	-	#1836	92	#225	707	-
17	Corral de Tierra Road	Highway 68	Signal	C/D	AM	451	-	246	331	-	6	-	8	#1688	37	m115	m#1483	-
					PM	449	-	133	174	-	26	16	20	#2365	55	m185	m336	-
18	San Benancio Road	Highway 68	Signal	C/D	AM	437	-	284	#401	-	8	8	-	m#1432	m49	#167	#3146	-
					PM	436	-	100	148	-	-	-	m3	m#1265	m22	134	#1863	-

Notes:

1 Queue lengths shown in feet.

2 # = 95th percentile volume exceeds capacity, queue may be longer. Queue shown in maximum after two cycles.

3 m = Volume for 95th percentile queue is metered by upstream signal.

Scenario # →						9													
	N-S Street	E-W Street	Int Control	LOS Std	Peak Hour	Cu+Alt1 Long-Term													
						Proj Trips	NB			SB			EB			WB		
							L	T	R	L	T	R	L	T	R	L	T	R
1	Olmsted Road	Highway 68	Signal	C/D	AM	522	-	308	-	-	#383	134	#365	#1366	30	#235	#1176	436
					PM	542	-	318	-	-	#889	290	#274	#985	21	#231	#1909	197
5	Airport Road	N. Fremont Street	Signal	D	AM	134	-	101	85	-	81	-	36	150	41	133	454	-
					PM	131	-	118	165	-	42	-	58	#373	57	103	233	-
6	Del Monte Boulevard	Highway 218	Signal	C/D	AM	151	#265	152	187	#218	382	#381	124	336	-	#273	195	106
					PM	148	#500	#561	#567	#267	230	#346	#138	235	-	#174	323	213
7	Highway 218	Fremont Boulevard	Signal	C/D	AM	369	#481	163	-	109	#297	-	#230	228	#417	#413	#430	79
					PM	363	#525	391	-	#232	260	-	#341	#563	292	#343	313	73
8	Highway 218	General Jim Moore Blvd	Signal	C/D	AM	493	-	349	122	#202	#1057	-	-	-	-	#800	-	152
					PM	486	-	#1697	513	#359	102	-	-	-	-	#267	-	167
10	Highway 218	Ryan Ranch Road	Signal	C/D	AM	610	-	#624	23	#147	#801	-	-	-	-	24	-	26
					PM	599	-	#2163	6	38	328	-	-	-	-	92	-	172
11	Josselyn Canyon Road	Highway 68	Signal	C/D	AM	233	#398	-	108	-	-	-	-	#2003	-	#140	714	-
					PM	238	126	-	84	-	-	-	-	643	40	129	#2112	-
12	Highway 218	Highway 68	Signal	C/D	AM	760	36	92	-	#561	42	#667	#486	506	-	36	#712	599
					PM	757	41	105	-	#436	57	#486	#545	375	-	13	#701	845
13	Ragsdale Drive	Highway 68	Signal	C/D	AM	536	-	-	-	-	-	94	#454	33	-	-	#648	-
					PM	532	-	-	-	-	-	#1033	124	-	-	-	#782	-
14	York Road	Highway 68	Signal	C/D	AM	508	-	-	-	149	-	186	#525	943	-	-	#2390	261
					PM	504	-	-	-	#622	-	189	#230	#1713	-	-	#1513	72
15	Pasadera Drive	Highway 68	Signal	C/D	AM	494	123	66	-	-	66	122	#84	#1341	15	62	#2720	16
					PM	491	83	32	-	-	51	86	#190	#2022	28	36	#1278	18
16	Laureles Grade Road	Highway 68	Signal	C/D	AM	480	#352	-	346	-	-	-	-	#1023	171	190	#2404	-
					PM	478	#348	-	#560	-	-	-	-	#1836	92	#225	708	-
17	Corral de Tierra Road	Highway 68	Signal	C/D	AM	452	-	246	331	-	6	-	8	#1695	37	m115	m#1483	-
					PM	450	-	133	174	-	26	16	20	#2365	55	m185	m336	-
18	San Benancio Road	Highway 68	Signal	C/D	AM	438	-	284	#401	-	8	8	-	m#1432	m49	#167	#3144	-
					PM	437	-	100	148	-	8	11	m3	m#1265	m22	134	#1867	-

Notes:

1 Queue lengths shown in feet.

2 # = 95th percentile volume exceeds capacity, queue may be longer. Queue shown in maximum after two cycles.

3 m = Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	80	929	35	108	857	300	162	139	65
v/c Ratio	0.58	0.97	0.04	0.79	0.86	0.31	0.57	0.77	0.24
Control Delay	64.9	44.4	10.1	85.9	29.1	11.8	46.1	67.1	37.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.9	44.4	10.1	85.9	29.1	11.8	46.1	67.1	37.2
Queue Length 50th (ft)	52	558	9	72	464	93	98	88	37
Queue Length 95th (ft)	#111	#875	24	#166	#769	155	157	150	72
Internal Link Dist (ft)		887			815		992	437	
Turn Bay Length (ft)	290		135	360		180			200
Base Capacity (vph)	139	960	949	136	1000	978	379	240	355
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.97	0.04	0.79	0.86	0.31	0.43	0.58	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	23	520	68	132	1456	98	82	80
v/c Ratio	0.07	0.29	0.09	0.39	0.60	0.32	0.27	0.25
Control Delay	23.2	11.3	10.9	26.1	9.2	24.4	23.6	23.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.2	11.3	10.9	26.1	9.2	24.4	23.6	23.1
Queue Length 50th (ft)	6	60	13	34	118	25	20	20
Queue Length 95th (ft)	29	100	35	104	355	81	69	68
Internal Link Dist (ft)		1817			2312	2104		326
Turn Bay Length (ft)	100		90	110			30	
Base Capacity (vph)	352	2388	1045	427	2544	836	830	886
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.22	0.07	0.31	0.57	0.12	0.10	0.09

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	198	569	364	402	93	143	326	173	91	739	307
v/c Ratio	0.52	0.66	0.77	0.41	0.22	0.72	0.25	0.31	0.51	0.67	0.65
Control Delay	46.8	35.4	52.9	29.0	27.8	63.9	23.8	26.3	54.0	31.9	36.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.8	35.4	52.9	29.0	27.8	63.9	23.8	26.3	54.0	31.9	36.2
Queue Length 50th (ft)	60	168	113	107	45	87	74	77	54	198	156
Queue Length 95th (ft)	107	228	#210	153	87	#207	124	150	#126	298	281
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	407	1291	490	1412	625	205	1371	593	181	1306	559
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.44	0.74	0.28	0.15	0.70	0.24	0.29	0.50	0.57	0.55

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	123	446	216	172	806	68	297	317	71	404
v/c Ratio	0.61	0.46	0.53	0.80	0.81	0.15	0.82	0.29	0.36	0.64
Control Delay	52.4	27.1	31.3	65.7	35.6	24.3	53.7	24.1	43.6	36.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.4	27.1	31.3	65.7	35.6	24.3	53.7	24.1	43.6	36.9
Queue Length 50th (ft)	63	102	96	91	208	27	153	69	36	105
Queue Length 95th (ft)	#153	156	175	#231	298	62	#341	113	85	163
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	212	1264	539	216	1277	574	364	1343	204	1006
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.35	0.40	0.80	0.63	0.12	0.82	0.24	0.35	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	505	165	313	105	135	605
v/c Ratio	0.77	0.29	0.59	0.23	0.52	0.71
Control Delay	27.1	16.2	24.7	19.3	36.4	18.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.1	16.2	24.7	19.3	36.4	18.7
Queue Length 50th (ft)	157	41	104	31	48	170
Queue Length 95th (ft)	#329	92	176	65	#125	274
Internal Link Dist (ft)	509		199			571
Turn Bay Length (ft)	75			145	400	
Base Capacity (vph)	812	711	913	799	261	1347
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.23	0.34	0.13	0.52	0.45

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	13	18	354	48	102	954
v/c Ratio	0.04	0.05	0.33	0.05	0.29	0.54
Control Delay	17.4	11.1	8.2	7.1	17.7	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.4	11.1	8.2	7.1	17.7	3.3
Queue Length 50th (ft)	2	3	37	4	15	0
Queue Length 95th (ft)	18	15	137	24	74	285
Internal Link Dist (ft)	170		833			870
Turn Bay Length (ft)				65	350	
Base Capacity (vph)	791	412	1412	1166	450	1755
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.04	0.25	0.04	0.23	0.54

Intersection Summary

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1199	49	967	227	64
v/c Ratio	1.02	0.60	0.75	0.98	0.31
Control Delay	52.2	97.9	12.0	118.8	63.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	52.2	97.9	12.0	118.8	63.8
Queue Length 50th (ft)	~1260	48	396	226	58
Queue Length 95th (ft)	#1406	#100	491	#376	102
Internal Link Dist (ft)	669		851	978	
Turn Bay Length (ft)		150			50
Base Capacity (vph)	1173	82	1307	231	208
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.02	0.60	0.74	0.98	0.31

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	94	952	864	325	9	8	685	9	359
v/c Ratio	0.43	0.64	0.79	0.33	0.04	0.04	0.68	0.02	0.77
Control Delay	46.3	18.3	31.9	6.4	40.8	41.0	30.6	25.1	41.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.3	18.3	31.9	6.4	40.8	41.0	30.6	25.1	41.5
Queue Length 50th (ft)	45	160	201	39	4	4	147	3	156
Queue Length 95th (ft)	#115	290	332	115	20	19	255	16	#342
Internal Link Dist (ft)		116	1317			770		833	
Turn Bay Length (ft)	970			220			175		620
Base Capacity (vph)	218	1692	1407	1071	225	198	1323	711	607
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.56	0.61	0.30	0.04	0.04	0.52	0.01	0.59

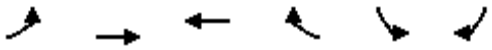
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	SBR
Lane Group Flow (vph)	477	1004	1105	96
v/c Ratio	0.90	0.37	0.67	0.19
Control Delay	49.7	1.1	16.6	19.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	49.7	1.1	16.6	19.3
Queue Length 50th (ft)	235	16	216	35
Queue Length 95th (ft)	#401	22	288	71
Internal Link Dist (ft)		1317	504	
Turn Bay Length (ft)	785			
Base Capacity (vph)	567	2718	1659	534
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.84	0.37	0.67	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	223	841	957	438	93	102
v/c Ratio	0.92	0.65	0.95	0.43	0.49	0.61
Control Delay	92.7	8.5	40.1	13.6	60.1	67.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.7	8.5	40.1	13.6	60.1	67.7
Queue Length 50th (ft)	177	219	642	163	70	78
Queue Length 95th (ft)	#351	427	#1075	268	126	138
Internal Link Dist (ft)		386	8292		1387	
Turn Bay Length (ft)	420			325		100
Base Capacity (vph)	243	1296	1020	1019	290	257
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.65	0.94	0.43	0.32	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	38	917	28	21	1290	23	77	30	37	69
v/c Ratio	0.48	0.73	0.02	0.26	1.05	0.02	0.58	0.22	0.29	0.46
Control Delay	84.4	13.7	4.7	71.9	58.2	4.9	75.7	59.5	62.1	67.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.4	13.7	4.7	71.9	58.2	4.9	75.7	59.5	62.1	67.2
Queue Length 50th (ft)	33	403	5	18	~1246	4	66	25	31	58
Queue Length 95th (ft)	#75	617	15	47	#1494	13	115	55	65	104
Internal Link Dist (ft)		8292			6818			1075	1353	
Turn Bay Length (ft)	580		330	460		580	70			
Base Capacity (vph)	79	1252	1169	81	1228	1070	294	306	284	334
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.73	0.02	0.26	1.05	0.02	0.26	0.10	0.13	0.21

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	715	161	240	1097	192	261
v/c Ratio	0.76	0.17	0.69	0.93	0.67	0.53
Control Delay	22.6	10.7	55.9	27.9	51.9	33.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.6	10.7	55.9	27.9	51.9	33.5
Queue Length 50th (ft)	316	44	78	493	120	141
Queue Length 95th (ft)	557	88	#138	#1038	193	220
Internal Link Dist (ft)	6818			8784	1274	
Turn Bay Length (ft)		500	400			400
Base Capacity (vph)	983	963	359	1221	432	495
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.17	0.67	0.90	0.44	0.53

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1005	50	179	1221	173	305	1
v/c Ratio	0.99	0.05	0.82	0.97	0.82	0.62	0.00
Control Delay	53.9	11.2	64.1	15.8	88.7	49.8	50.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.9	11.2	64.1	15.8	88.7	49.8	50.0
Queue Length 50th (ft)	~969	18	174	450	165	251	1
Queue Length 95th (ft)	#1187	34	m168	m351	234	336	7
Internal Link Dist (ft)	8784			1836	1457		148
Turn Bay Length (ft)		400	200			110	
Base Capacity (vph)	1014	993	218	1263	257	495	357
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.05	0.82	0.97	0.67	0.62	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBR
Lane Group Flow (vph)	1128	119	170	1158	174	272	1
v/c Ratio	1.30	0.14	0.99	1.17	0.41	0.74	0.01
Control Delay	169.8	19.3	136.6	116.1	50.8	65.1	67.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	169.8	19.3	136.6	116.1	50.8	65.1	67.0
Queue Length 50th (ft)	~1413	62	87	~1345	144	247	1
Queue Length 95th (ft)	m#1480	m65	#163	#1552	213	347	8
Internal Link Dist (ft)	1836			201	257		
Turn Bay Length (ft)		157	230			200	50
Base Capacity (vph)	865	828	171	989	428	370	260
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.30	0.14	0.99	1.17	0.41	0.74	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	60	696	15	53	1052	132	225	260	148
v/c Ratio	0.61	0.74	0.02	0.54	1.12	0.15	0.56	1.11	0.34
Control Delay	95.1	28.4	13.4	89.2	99.2	14.6	52.8	140.3	45.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	95.1	28.4	13.4	89.2	99.2	14.6	52.8	140.3	45.9
Queue Length 50th (ft)	59	486	6	52	~1199	57	191	~293	117
Queue Length 95th (ft)	#126	660	17	#106	#1463	92	284	#478	184
Internal Link Dist (ft)		887			815		992	437	
Turn Bay Length (ft)	290		135	360		180			200
Base Capacity (vph)	98	946	935	99	937	900	401	234	441
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.74	0.02	0.54	1.12	0.15	0.56	1.11	0.34

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	60	1042	88	111	723	164	231	49
v/c Ratio	0.18	0.73	0.14	0.33	0.46	0.52	0.64	0.14
Control Delay	25.7	19.4	13.5	27.8	13.7	28.5	31.3	20.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.7	19.4	13.5	27.8	13.7	28.5	31.3	20.9
Queue Length 50th (ft)	20	161	19	37	100	57	82	15
Queue Length 95th (ft)	53	265	51	87	169	108	146	39
Internal Link Dist (ft)		1817			2312	2104		326
Turn Bay Length (ft)	100		90	110			30	
Base Capacity (vph)	351	1695	751	334	1788	766	875	867
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.61	0.12	0.33	0.40	0.21	0.26	0.06

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	197	467	228	564	173	285	974	418	143	479	298
v/c Ratio	0.54	0.56	0.62	0.65	0.46	1.01	0.76	0.76	0.68	0.42	0.61
Control Delay	49.2	35.1	51.5	37.1	36.0	99.0	33.0	38.8	60.3	27.9	34.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.2	35.1	51.5	37.1	36.0	99.0	33.0	38.8	60.3	27.9	34.9
Queue Length 50th (ft)	60	134	70	166	92	~182	277	225	85	120	153
Queue Length 95th (ft)	107	187	#128	227	158	#402	406	#421	#192	188	273
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	371	1207	371	1242	537	283	1373	594	223	1261	544
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.39	0.61	0.45	0.32	1.01	0.71	0.70	0.64	0.38	0.55

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	188	839	224	173	553	52	262	531	142	408
v/c Ratio	0.77	0.81	0.50	0.77	0.56	0.12	0.81	0.65	0.56	0.61
Control Delay	61.3	35.9	30.4	62.3	29.2	24.9	56.5	34.3	45.4	35.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.3	35.9	30.4	62.3	29.2	24.9	56.5	34.3	45.4	35.3
Queue Length 50th (ft)	97	213	97	90	129	20	133	135	71	105
Queue Length 95th (ft)	#251	326	187	#237	206	53	#320	212	147	162
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	243	1309	568	226	1271	559	332	1036	326	1017
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.64	0.39	0.77	0.44	0.09	0.79	0.51	0.44	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	104	87	861	501	156	285
v/c Ratio	0.41	0.39	0.84	0.56	0.64	0.19
Control Delay	37.1	37.1	23.5	14.0	47.6	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	37.1	23.5	14.0	47.6	3.7
Queue Length 50th (ft)	45	38	319	143	70	33
Queue Length 95th (ft)	100	87	#629	256	#181	69
Internal Link Dist (ft)	509		199			571
Turn Bay Length (ft)	75			145	400	
Base Capacity (vph)	440	394	1290	1129	259	1617
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.22	0.67	0.44	0.60	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	43	103	1304	8	12	380
v/c Ratio	0.33	0.44	0.90	0.01	0.14	0.23
Control Delay	58.7	50.6	22.0	4.1	57.4	2.1
Queue Delay	0.0	0.0	5.0	0.0	0.0	0.0
Total Delay	58.7	50.6	27.0	4.1	57.4	2.1
Queue Length 50th (ft)	32	70	678	1	9	41
Queue Length 95th (ft)	70	126	#1254	6	30	72
Internal Link Dist (ft)	170		833			870
Turn Bay Length (ft)				65	350	
Base Capacity (vph)	304	234	1449	908	84	1638
Starvation Cap Reductn	0	0	105	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.44	0.97	0.01	0.14	0.23

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	744	85	60	1317	74	31
v/c Ratio	0.61	0.07	0.50	0.98	0.52	0.25
Control Delay	11.0	5.1	80.4	31.1	77.4	67.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.0	5.1	80.4	31.1	77.4	67.6
Queue Length 50th (ft)	289	18	56	844	69	28
Queue Length 95th (ft)	475	38	108	#1611	124	63
Internal Link Dist (ft)	669			851	978	
Turn Bay Length (ft)		420	150			50
Base Capacity (vph)	1214	1249	141	1347	198	172
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.07	0.43	0.98	0.37	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	274	736	2	1053	778	4	39	293	4	117
v/c Ratio	0.89	0.42	0.01	0.88	0.76	0.02	0.23	0.45	0.01	0.40
Control Delay	71.3	15.4	45.0	39.3	19.0	45.8	48.4	36.7	31.5	38.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.3	15.4	45.0	39.3	19.0	45.8	48.4	36.7	31.5	38.7
Queue Length 50th (ft)	167	118	1	316	353	2	23	87	2	67
Queue Length 95th (ft)	#376	282	9	#553	531	14	61	126	11	119
Internal Link Dist (ft)		116		1317			770		833	
Turn Bay Length (ft)	970		400		220			175		620
Base Capacity (vph)	309	1757	193	1194	1193	173	167	1028	569	463
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.42	0.01	0.88	0.65	0.02	0.23	0.29	0.01	0.25

Intersection Summary

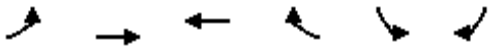
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	SBR
Lane Group Flow (vph)	121	947	1144	732
v/c Ratio	0.16	0.32	0.94	1.02
Control Delay	14.0	0.3	40.7	64.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.0	0.3	40.7	64.0
Queue Length 50th (ft)	37	0	319	~444
Queue Length 95th (ft)	70	0	#462	#695
Internal Link Dist (ft)		1317	504	
Turn Bay Length (ft)	785			
Base Capacity (vph)	763	2980	1223	718
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.16	0.32	0.94	1.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	82	814	981	134	363	123
v/c Ratio	0.89	0.73	1.00	0.14	0.97	0.37
Control Delay	124.5	15.3	51.4	9.8	88.1	44.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	124.5	15.3	51.4	9.8	88.1	44.8
Queue Length 50th (ft)	64	338	705	40	281	83
Queue Length 95th (ft)	#164	497	#1039	68	#476	142
Internal Link Dist (ft)		386	8292		1387	
Turn Bay Length (ft)	420			325		100
Base Capacity (vph)	92	1122	984	974	373	330
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.73	1.00	0.14	0.97	0.37

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	54	1036	73	8	971	24	42	11	22	42
v/c Ratio	0.50	0.79	0.05	0.07	0.79	0.02	0.33	0.07	0.17	0.30
Control Delay	68.0	13.0	3.1	54.6	16.2	4.4	55.4	49.2	51.2	53.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.0	13.0	3.1	54.6	16.2	4.4	55.4	49.2	51.2	53.7
Queue Length 50th (ft)	34	284	7	5	406	4	25	6	13	25
Queue Length 95th (ft)	#107	#1016	27	24	720	12	70	27	44	69
Internal Link Dist (ft)		8292			6818			1075	1353	
Turn Bay Length (ft)	580		330	460		580	70			
Base Capacity (vph)	109	1403	1430	109	1402	1429	400	479	396	443
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.74	0.05	0.07	0.69	0.02	0.10	0.02	0.06	0.09

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	820	143	202	815	201	341
v/c Ratio	0.92	0.16	0.59	0.72	0.67	0.70
Control Delay	36.4	10.6	48.0	13.0	47.1	35.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.4	10.6	48.0	13.0	47.1	35.9
Queue Length 50th (ft)	399	36	58	230	110	172
Queue Length 95th (ft)	#758	76	101	482	182	268
Internal Link Dist (ft)	6818			8784	1274	
Turn Bay Length (ft)		500	400			400
Base Capacity (vph)	891	908	344	1139	464	488
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.16	0.59	0.72	0.43	0.70

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	5	1080	75	199	955	79	144	9	4
v/c Ratio	0.05	1.04	0.08	0.65	0.73	0.60	0.31	0.06	0.03
Control Delay	68.8	66.9	11.4	63.3	8.3	83.5	42.4	60.3	59.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.8	66.9	11.4	63.3	8.3	83.5	42.4	60.3	59.0
Queue Length 50th (ft)	5	~1144	27	208	220	76	110	8	4
Queue Length 95th (ft)	20	#1454	52	m216	m373	130	167	26	16
Internal Link Dist (ft)		8784			1836	1457		148	
Turn Bay Length (ft)	400		400	200			110		50
Base Capacity (vph)	99	1034	999	305	1311	264	464	283	301
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	1.04	0.08	0.65	0.73	0.30	0.31	0.03	0.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR
Lane Group Flow (vph)	3	1121	76	154	1111	56	80
v/c Ratio	0.03	1.08	0.07	0.56	0.96	0.29	0.50
Control Delay	61.7	60.8	10.3	74.3	36.4	65.7	74.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.7	60.8	10.3	74.3	36.4	65.7	74.2
Queue Length 50th (ft)	3	~1219	23	75	802	52	75
Queue Length 95th (ft)	m4	m#1198	m26	114	#1465	96	132
Internal Link Dist (ft)		1836			201	257	
Turn Bay Length (ft)	200		157	230			200
Base Capacity (vph)	92	1038	1045	276	1162	190	160
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	1.08	0.07	0.56	0.96	0.29	0.50

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	78	929	35	108	857	295	162	138	65
v/c Ratio	0.56	0.97	0.04	0.79	0.86	0.30	0.57	0.77	0.25
Control Delay	64.0	44.2	10.1	85.9	29.0	11.7	46.2	66.9	37.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.0	44.2	10.1	85.9	29.0	11.7	46.2	66.9	37.3
Queue Length 50th (ft)	51	556	9	72	463	91	98	87	37
Queue Length 95th (ft)	#107	#875	24	#166	#769	153	157	149	72
Internal Link Dist (ft)		887			815		992	437	
Turn Bay Length (ft)	290		135	360		180			200
Base Capacity (vph)	139	961	950	136	1000	979	380	241	356
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.97	0.04	0.79	0.86	0.30	0.43	0.57	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	23	520	70	138	1456	99	83	80
v/c Ratio	0.07	0.29	0.09	0.41	0.60	0.32	0.27	0.25
Control Delay	23.2	11.4	11.0	26.3	9.2	24.4	23.7	23.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.2	11.4	11.0	26.3	9.2	24.4	23.7	23.1
Queue Length 50th (ft)	6	60	14	36	118	25	21	20
Queue Length 95th (ft)	29	102	36	108	358	82	70	68
Internal Link Dist (ft)		1817			2312	2104		326
Turn Bay Length (ft)	100		90	110			30	
Base Capacity (vph)	352	2383	1043	427	2544	835	830	885
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.22	0.07	0.32	0.57	0.12	0.10	0.09

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	198	569	364	402	93	143	326	173	91	740	307
v/c Ratio	0.52	0.66	0.77	0.41	0.22	0.72	0.25	0.31	0.51	0.67	0.65
Control Delay	46.8	35.4	52.9	29.0	27.8	63.9	23.8	26.3	54.0	31.9	36.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.8	35.4	52.9	29.0	27.8	63.9	23.8	26.3	54.0	31.9	36.2
Queue Length 50th (ft)	60	168	113	107	45	87	74	77	54	199	156
Queue Length 95th (ft)	107	228	#210	153	87	#207	124	150	#126	298	281
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	407	1291	490	1412	625	205	1371	593	181	1306	559
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.44	0.74	0.28	0.15	0.70	0.24	0.29	0.50	0.57	0.55

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	123	446	217	171	807	68	300	317	71	405
v/c Ratio	0.61	0.46	0.53	0.79	0.81	0.15	0.82	0.29	0.36	0.64
Control Delay	52.5	27.2	31.4	65.3	35.7	24.3	54.7	24.1	43.7	36.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.5	27.2	31.4	65.3	35.7	24.3	54.7	24.1	43.7	36.9
Queue Length 50th (ft)	63	102	97	90	209	27	155	69	36	105
Queue Length 95th (ft)	#154	156	176	#230	300	62	#345	113	85	164
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	212	1263	538	216	1275	573	364	1341	204	1005
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.35	0.40	0.79	0.63	0.12	0.82	0.24	0.35	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	503	166	315	105	135	605
v/c Ratio	0.77	0.29	0.59	0.23	0.52	0.71
Control Delay	27.2	16.4	24.7	19.2	36.4	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.2	16.4	24.7	19.2	36.4	18.6
Queue Length 50th (ft)	156	41	104	31	48	168
Queue Length 95th (ft)	#328	93	177	65	#126	274
Internal Link Dist (ft)	509		199			571
Turn Bay Length (ft)	75			145	400	
Base Capacity (vph)	814	712	915	801	262	1347
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.23	0.34	0.13	0.52	0.45

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	13	18	357	48	102	953
v/c Ratio	0.04	0.05	0.33	0.05	0.29	0.54
Control Delay	17.4	11.1	8.2	7.1	17.7	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.4	11.1	8.2	7.1	17.7	3.3
Queue Length 50th (ft)	2	3	37	4	15	0
Queue Length 95th (ft)	18	15	138	24	74	283
Internal Link Dist (ft)	170		833			870
Turn Bay Length (ft)				65	350	
Base Capacity (vph)	789	411	1410	1165	449	1755
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.04	0.25	0.04	0.23	0.54

Intersection Summary

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1196	49	967	227	64
v/c Ratio	1.02	0.60	0.75	0.98	0.31
Control Delay	51.5	97.9	12.0	118.8	63.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	51.5	97.9	12.0	118.8	63.8
Queue Length 50th (ft)	~1254	48	396	226	58
Queue Length 95th (ft)	#1402	#100	491	#376	102
Internal Link Dist (ft)	669		851	978	
Turn Bay Length (ft)		150			50
Base Capacity (vph)	1173	82	1307	231	208
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.02	0.60	0.74	0.98	0.31

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	94	951	862	328	9	8	686	9	356
v/c Ratio	0.43	0.64	0.79	0.33	0.04	0.04	0.68	0.02	0.77
Control Delay	46.2	18.2	31.8	6.5	40.8	40.9	30.7	25.1	41.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.2	18.2	31.8	6.5	40.8	40.9	30.7	25.1	41.3
Queue Length 50th (ft)	44	157	200	39	4	4	147	3	154
Queue Length 95th (ft)	#115	290	331	116	20	19	256	16	#338
Internal Link Dist (ft)		116	1317			770		833	
Turn Bay Length (ft)	970			220			175		620
Base Capacity (vph)	219	1697	1413	1072	226	199	1329	714	610
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.56	0.61	0.31	0.04	0.04	0.52	0.01	0.58

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	SBR
Lane Group Flow (vph)	477	1004	1105	96
v/c Ratio	0.90	0.37	0.67	0.19
Control Delay	49.7	1.1	16.6	19.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	49.7	1.1	16.6	19.3
Queue Length 50th (ft)	235	16	216	35
Queue Length 95th (ft)	#401	22	288	71
Internal Link Dist (ft)		1317	504	
Turn Bay Length (ft)	785			
Base Capacity (vph)	567	2718	1659	534
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.84	0.37	0.67	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	223	841	957	438	93	102
v/c Ratio	0.92	0.65	0.95	0.43	0.49	0.61
Control Delay	92.7	8.5	40.1	13.6	60.1	67.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.7	8.5	40.1	13.6	60.1	67.7
Queue Length 50th (ft)	177	219	642	163	70	78
Queue Length 95th (ft)	#351	427	#1075	268	126	138
Internal Link Dist (ft)		386	8292		1387	
Turn Bay Length (ft)	420			325		100
Base Capacity (vph)	243	1296	1020	1019	290	257
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.65	0.94	0.43	0.32	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	38	917	28	21	1290	23	77	30	37	69
v/c Ratio	0.48	0.73	0.02	0.26	1.05	0.02	0.58	0.22	0.29	0.46
Control Delay	84.4	13.7	4.7	71.9	58.2	4.9	75.7	59.5	62.1	67.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.4	13.7	4.7	71.9	58.2	4.9	75.7	59.5	62.1	67.2
Queue Length 50th (ft)	33	403	5	18	~1246	4	66	25	31	58
Queue Length 95th (ft)	#75	617	15	47	#1494	13	115	55	65	104
Internal Link Dist (ft)		8292			6818			1075	1353	
Turn Bay Length (ft)	580		330	460		580	70			
Base Capacity (vph)	79	1252	1169	81	1228	1070	294	306	284	334
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.73	0.02	0.26	1.05	0.02	0.26	0.10	0.13	0.21

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	715	161	240	1097	192	261
v/c Ratio	0.76	0.17	0.69	0.93	0.67	0.53
Control Delay	22.6	10.7	55.9	27.9	51.9	33.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.6	10.7	55.9	27.9	51.9	33.5
Queue Length 50th (ft)	316	44	78	493	120	141
Queue Length 95th (ft)	557	88	#138	#1038	193	220
Internal Link Dist (ft)	6818			8784	1274	
Turn Bay Length (ft)		500	400			400
Base Capacity (vph)	983	963	359	1221	432	495
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.17	0.67	0.90	0.44	0.53

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1005	50	179	1221	173	305	1
v/c Ratio	0.99	0.05	0.82	0.97	0.82	0.62	0.00
Control Delay	53.9	11.2	64.1	15.8	88.7	49.8	50.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.9	11.2	64.1	15.8	88.7	49.8	50.0
Queue Length 50th (ft)	~969	18	174	450	165	251	1
Queue Length 95th (ft)	#1187	34	m168	m351	234	336	7
Internal Link Dist (ft)	8784			1836	1457		148
Turn Bay Length (ft)		400	200			110	
Base Capacity (vph)	1014	993	218	1263	257	495	357
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.05	0.82	0.97	0.67	0.62	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBR
Lane Group Flow (vph)	1128	119	170	1158	174	272	1
v/c Ratio	1.30	0.14	0.99	1.17	0.41	0.74	0.01
Control Delay	169.8	19.3	136.6	116.1	50.8	65.1	67.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	169.8	19.3	136.6	116.1	50.8	65.1	67.0
Queue Length 50th (ft)	~1413	62	87	~1345	144	247	1
Queue Length 95th (ft)	m#1480	m65	#163	#1552	213	347	8
Internal Link Dist (ft)	1836			201	257		
Turn Bay Length (ft)		157	230			200	50
Base Capacity (vph)	865	828	171	989	428	370	260
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.30	0.14	0.99	1.17	0.41	0.74	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	57	696	15	53	1052	128	225	255	145
v/c Ratio	0.58	0.74	0.02	0.54	1.12	0.14	0.55	1.09	0.33
Control Delay	92.6	28.4	13.4	89.2	99.2	14.5	52.5	134.1	45.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.6	28.4	13.4	89.2	99.2	14.5	52.5	134.1	45.8
Queue Length 50th (ft)	56	486	6	52	~1199	55	190	~283	114
Queue Length 95th (ft)	#117	660	17	#106	#1463	89	283	#468	181
Internal Link Dist (ft)		887			815		992	437	
Turn Bay Length (ft)	290		135	360		180			200
Base Capacity (vph)	98	946	935	99	937	900	406	234	441
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.74	0.02	0.54	1.12	0.14	0.55	1.09	0.33

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	60	1042	90	117	723	166	238	49
v/c Ratio	0.18	0.74	0.14	0.35	0.46	0.52	0.65	0.14
Control Delay	25.9	19.7	13.7	28.3	13.9	28.4	31.6	20.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.9	19.7	13.7	28.3	13.9	28.4	31.6	20.8
Queue Length 50th (ft)	20	163	20	40	100	58	86	15
Queue Length 95th (ft)	54	268	53	92	171	109	151	39
Internal Link Dist (ft)		1817			2312	2104		326
Turn Bay Length (ft)	100		90	110			30	
Base Capacity (vph)	350	1689	748	333	1785	764	872	864
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.62	0.12	0.35	0.41	0.22	0.27	0.06

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	197	467	228	564	173	285	976	418	143	480	298
v/c Ratio	0.54	0.56	0.62	0.65	0.46	1.01	0.76	0.75	0.68	0.42	0.60
Control Delay	49.2	35.1	51.5	37.1	36.0	99.2	33.1	38.8	60.3	27.9	34.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.2	35.1	51.5	37.1	36.0	99.2	33.1	38.8	60.3	27.9	34.9
Queue Length 50th (ft)	60	134	70	166	92	~182	277	225	85	121	153
Queue Length 95th (ft)	107	187	#128	227	158	#402	406	#421	#192	188	273
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	370	1206	370	1241	536	283	1372	594	223	1260	544
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.39	0.62	0.45	0.32	1.01	0.71	0.70	0.64	0.38	0.55

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	189	840	229	172	554	52	265	530	142	409
v/c Ratio	0.94	0.78	0.49	0.88	0.52	0.11	1.17	0.67	0.65	0.53
Control Delay	89.1	29.4	25.5	78.4	23.7	20.1	147.3	30.9	49.8	28.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.1	29.4	25.5	78.4	23.7	20.1	147.3	30.9	49.8	28.2
Queue Length 50th (ft)	87	181	84	79	108	17	~146	115	63	85
Queue Length 95th (ft)	#254	274	162	#232	172	45	#348	186	#174	143
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	201	1480	644	195	1465	645	227	1183	219	1160
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.57	0.36	0.88	0.38	0.08	1.17	0.45	0.65	0.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	103	88	862	500	157	287
v/c Ratio	0.41	0.39	0.84	0.55	0.64	0.19
Control Delay	37.1	37.2	23.6	14.0	47.7	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	37.2	23.6	14.0	47.7	3.6
Queue Length 50th (ft)	45	38	320	143	71	33
Queue Length 95th (ft)	98	87	#629	255	#182	69
Internal Link Dist (ft)	509		199			571
Turn Bay Length (ft)	75			145	400	
Base Capacity (vph)	441	394	1290	1129	259	1618
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.22	0.67	0.44	0.61	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	43	103	1304	8	12	382
v/c Ratio	0.33	0.44	0.90	0.01	0.14	0.23
Control Delay	58.7	50.6	22.0	4.1	57.4	2.2
Queue Delay	0.0	0.0	5.0	0.0	0.0	0.0
Total Delay	58.7	50.6	27.0	4.1	57.4	2.2
Queue Length 50th (ft)	32	70	678	1	9	41
Queue Length 95th (ft)	70	126	#1254	6	30	73
Internal Link Dist (ft)	170		833			870
Turn Bay Length (ft)				65	350	
Base Capacity (vph)	304	234	1449	908	84	1638
Starvation Cap Reductn	0	0	105	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.44	0.97	0.01	0.14	0.23

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	742	85	60	1314	74	31
v/c Ratio	0.61	0.07	0.50	0.98	0.52	0.25
Control Delay	11.0	5.1	80.4	30.6	77.4	67.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.0	5.1	80.4	30.6	77.4	67.6
Queue Length 50th (ft)	288	18	56	834	69	28
Queue Length 95th (ft)	473	38	108	#1603	124	63
Internal Link Dist (ft)	669			851	978	
Turn Bay Length (ft)		420	150			50
Base Capacity (vph)	1214	1249	141	1347	198	172
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.07	0.43	0.98	0.37	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	272	734	2	1051	780	4	39	297	4	115
v/c Ratio	0.88	0.42	0.01	0.88	0.77	0.02	0.23	0.46	0.01	0.39
Control Delay	70.5	15.4	45.0	39.3	19.0	46.0	48.5	36.8	31.5	38.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.5	15.4	45.0	39.3	19.0	46.0	48.5	36.8	31.5	38.4
Queue Length 50th (ft)	166	118	1	317	355	2	23	88	2	66
Queue Length 95th (ft)	#372	281	9	#552	535	14	61	127	11	117
Internal Link Dist (ft)		116		1317			770		833	
Turn Bay Length (ft)	970		400		220			175		620
Base Capacity (vph)	309	1755	193	1193	1191	173	167	1027	568	462
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.42	0.01	0.88	0.65	0.02	0.23	0.29	0.01	0.25

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	SBR
Lane Group Flow (vph)	121	948	1144	732
v/c Ratio	0.16	0.32	0.94	1.02
Control Delay	14.0	0.3	40.7	64.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.0	0.3	40.7	64.0
Queue Length 50th (ft)	37	0	319	~444
Queue Length 95th (ft)	70	0	#462	#695
Internal Link Dist (ft)		1317	504	
Turn Bay Length (ft)	785			
Base Capacity (vph)	763	2980	1223	718
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.16	0.32	0.94	1.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	82	815	981	134	363	123
v/c Ratio	0.89	0.73	1.00	0.14	0.97	0.37
Control Delay	124.5	15.3	51.4	9.8	88.1	44.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	124.5	15.3	51.4	9.8	88.1	44.8
Queue Length 50th (ft)	64	338	705	40	281	83
Queue Length 95th (ft)	#164	498	#1039	68	#476	142
Internal Link Dist (ft)		386	8292		1387	
Turn Bay Length (ft)	420			325		100
Base Capacity (vph)	92	1122	984	974	373	330
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.73	1.00	0.14	0.97	0.37

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	54	1037	73	8	971	24	42	11	22	42
v/c Ratio	0.50	0.79	0.05	0.07	0.79	0.02	0.33	0.07	0.17	0.30
Control Delay	68.2	13.0	3.1	54.6	16.2	4.4	55.5	49.2	51.3	53.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.2	13.0	3.1	54.6	16.2	4.4	55.5	49.2	51.3	53.7
Queue Length 50th (ft)	34	285	7	5	406	4	25	6	13	25
Queue Length 95th (ft)	#107	#1019	27	24	720	12	70	27	44	69
Internal Link Dist (ft)		8292			6818			1075	1353	
Turn Bay Length (ft)	580		330	460		580	70			
Base Capacity (vph)	108	1402	1429	108	1401	1428	398	477	395	442
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.74	0.05	0.07	0.69	0.02	0.11	0.02	0.06	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	821	143	202	815	201	341
v/c Ratio	0.92	0.16	0.59	0.72	0.67	0.70
Control Delay	36.6	10.6	48.0	13.0	47.1	35.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.6	10.6	48.0	13.0	47.1	35.9
Queue Length 50th (ft)	399	36	58	230	110	172
Queue Length 95th (ft)	#759	76	101	482	182	268
Internal Link Dist (ft)	6818			8784	1274	
Turn Bay Length (ft)		500	400			400
Base Capacity (vph)	891	908	344	1139	464	488
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.16	0.59	0.72	0.43	0.70

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	5	1081	75	199	955	79	144	9	4
v/c Ratio	0.05	1.05	0.08	0.65	0.73	0.60	0.31	0.06	0.03
Control Delay	68.8	67.2	11.4	63.3	8.3	83.5	42.4	60.3	59.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.8	67.2	11.4	63.3	8.3	83.5	42.4	60.3	59.0
Queue Length 50th (ft)	5	~1146	27	208	220	76	110	8	4
Queue Length 95th (ft)	20	#1454	52	m216	m373	130	167	26	16
Internal Link Dist (ft)		8784			1836	1457		148	
Turn Bay Length (ft)	400		400	200			110		50
Base Capacity (vph)	99	1034	999	305	1311	264	464	283	301
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	1.05	0.08	0.65	0.73	0.30	0.31	0.03	0.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR
Lane Group Flow (vph)	3	1122	76	154	1111	56	80
v/c Ratio	0.03	1.08	0.07	0.56	0.96	0.29	0.50
Control Delay	61.7	61.1	10.3	74.3	36.4	65.7	74.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.7	61.1	10.3	74.3	36.4	65.7	74.2
Queue Length 50th (ft)	3	~1220	23	75	802	52	75
Queue Length 95th (ft)	m4	m#1198	m26	114	#1465	96	132
Internal Link Dist (ft)		1836			201	257	
Turn Bay Length (ft)	200		157	230			200
Base Capacity (vph)	92	1038	1045	276	1162	190	160
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	1.08	0.07	0.56	0.96	0.29	0.50

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	76	933	35	108	858	294	162	136	63
v/c Ratio	0.54	0.97	0.04	0.79	0.86	0.30	0.58	0.77	0.24
Control Delay	62.9	44.5	10.0	85.4	28.8	11.6	46.4	66.7	37.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.9	44.5	10.0	85.4	28.8	11.6	46.4	66.7	37.2
Queue Length 50th (ft)	50	557	9	72	460	90	98	86	36
Queue Length 95th (ft)	#104	#880	24	#166	#771	152	157	148	70
Internal Link Dist (ft)		887			815		992	437	
Turn Bay Length (ft)	290		135	360		180			200
Base Capacity (vph)	140	963	952	137	1002	981	381	241	356
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.97	0.04	0.79	0.86	0.30	0.43	0.56	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	23	519	67	132	1455	98	82	80
v/c Ratio	0.07	0.29	0.09	0.39	0.60	0.32	0.27	0.25
Control Delay	23.2	11.3	10.9	26.1	9.2	24.4	23.6	23.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.2	11.3	10.9	26.1	9.2	24.4	23.6	23.1
Queue Length 50th (ft)	6	60	13	34	118	25	20	20
Queue Length 95th (ft)	29	100	35	104	355	81	69	68
Internal Link Dist (ft)		1817			2312	2104		326
Turn Bay Length (ft)	100		90	110			30	
Base Capacity (vph)	352	2389	1046	428	2545	837	832	888
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.22	0.06	0.31	0.57	0.12	0.10	0.09

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	198	569	365	402	93	143	327	173	91	741	307
v/c Ratio	0.52	0.66	0.77	0.41	0.22	0.72	0.26	0.31	0.51	0.67	0.65
Control Delay	46.8	35.4	53.0	29.0	27.8	63.9	23.8	26.3	54.0	31.9	36.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.8	35.4	53.0	29.0	27.8	63.9	23.8	26.3	54.0	31.9	36.2
Queue Length 50th (ft)	60	168	113	107	45	87	74	77	54	199	156
Queue Length 95th (ft)	107	228	#210	153	87	#207	125	150	#126	300	281
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	407	1291	490	1412	625	205	1371	593	181	1306	559
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.44	0.74	0.28	0.15	0.70	0.24	0.29	0.50	0.57	0.55

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	123	445	216	173	805	68	297	319	71	407
v/c Ratio	0.61	0.46	0.53	0.80	0.81	0.15	0.82	0.29	0.36	0.64
Control Delay	52.5	27.2	31.4	66.4	35.7	24.4	53.8	24.1	43.7	36.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.5	27.2	31.4	66.4	35.7	24.4	53.8	24.1	43.7	36.9
Queue Length 50th (ft)	63	102	96	91	208	27	153	70	36	106
Queue Length 95th (ft)	#154	156	176	#232	298	62	#340	114	85	164
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	212	1263	538	216	1275	573	364	1340	204	1005
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.35	0.40	0.80	0.63	0.12	0.82	0.24	0.35	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	505	165	315	105	135	609
v/c Ratio	0.77	0.29	0.59	0.23	0.52	0.72
Control Delay	27.2	16.3	24.7	19.2	36.5	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.2	16.3	24.7	19.2	36.5	18.8
Queue Length 50th (ft)	157	41	105	31	48	172
Queue Length 95th (ft)	#331	92	177	65	#126	277
Internal Link Dist (ft)	509		199			571
Turn Bay Length (ft)	75			145	400	
Base Capacity (vph)	811	709	911	797	261	1345
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.23	0.35	0.13	0.52	0.45

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	13	18	362	48	102	958
v/c Ratio	0.04	0.05	0.33	0.05	0.29	0.55
Control Delay	17.4	11.1	8.3	7.1	17.8	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.4	11.1	8.3	7.1	17.8	3.4
Queue Length 50th (ft)	2	3	38	4	15	0
Queue Length 95th (ft)	18	15	140	24	74	286
Internal Link Dist (ft)	170		833			870
Turn Bay Length (ft)				65	350	
Base Capacity (vph)	786	409	1464	1210	447	1755
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.04	0.25	0.04	0.23	0.55

Intersection Summary

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1198	49	966	227	64
v/c Ratio	1.02	0.60	0.75	0.98	0.31
Control Delay	52.0	97.9	12.0	118.8	63.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	52.0	97.9	12.0	118.8	63.8
Queue Length 50th (ft)	~1258	48	395	226	58
Queue Length 95th (ft)	#1404	#100	490	#376	102
Internal Link Dist (ft)	669		851	978	
Turn Bay Length (ft)		150			50
Base Capacity (vph)	1173	82	1307	231	208
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.02	0.60	0.74	0.98	0.31

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	98	950	859	330	9	8	687	9	360
v/c Ratio	0.45	0.64	0.79	0.33	0.04	0.04	0.68	0.02	0.77
Control Delay	46.8	18.3	31.9	6.5	40.8	40.9	30.6	25.1	41.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.8	18.3	31.9	6.5	40.8	40.9	30.6	25.1	41.5
Queue Length 50th (ft)	47	160	201	40	4	4	147	3	155
Queue Length 95th (ft)	#123	289	330	116	20	19	256	16	#343
Internal Link Dist (ft)		116	1317			770		833	
Turn Bay Length (ft)	970			220			175		620
Base Capacity (vph)	219	1692	1410	1070	226	199	1326	712	609
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.56	0.61	0.31	0.04	0.04	0.52	0.01	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	SBR
Lane Group Flow (vph)	477	1004	1104	96
v/c Ratio	0.90	0.37	0.67	0.19
Control Delay	49.7	1.1	16.6	19.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	49.7	1.1	16.6	19.3
Queue Length 50th (ft)	235	16	216	35
Queue Length 95th (ft)	#401	22	288	71
Internal Link Dist (ft)		1317	504	
Turn Bay Length (ft)	785			
Base Capacity (vph)	567	2718	1659	534
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.84	0.37	0.67	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	223	841	956	438	93	102
v/c Ratio	0.91	0.65	0.95	0.43	0.49	0.61
Control Delay	92.3	8.5	40.1	13.6	60.0	67.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.3	8.5	40.1	13.6	60.0	67.6
Queue Length 50th (ft)	177	219	641	163	70	78
Queue Length 95th (ft)	#351	427	#1075	268	126	138
Internal Link Dist (ft)		386	8292		1387	
Turn Bay Length (ft)	420			325		100
Base Capacity (vph)	244	1297	1021	1021	290	257
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.65	0.94	0.43	0.32	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	38	917	28	21	1288	23	77	30	37	69
v/c Ratio	0.48	0.73	0.02	0.26	1.05	0.02	0.58	0.22	0.29	0.46
Control Delay	84.4	13.7	4.7	71.9	57.6	4.9	75.7	59.5	62.1	67.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.4	13.7	4.7	71.9	57.6	4.9	75.7	59.5	62.1	67.2
Queue Length 50th (ft)	33	403	5	18	~1242	4	66	25	31	58
Queue Length 95th (ft)	#75	617	15	47	#1491	13	115	55	65	104
Internal Link Dist (ft)		8292			6818			1075	1353	
Turn Bay Length (ft)	580		330	460		580	70			
Base Capacity (vph)	79	1252	1169	81	1228	1070	294	306	284	334
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.73	0.02	0.26	1.05	0.02	0.26	0.10	0.13	0.21

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	715	161	240	1096	192	261
v/c Ratio	0.76	0.17	0.69	0.93	0.67	0.53
Control Delay	22.6	10.7	55.8	27.8	51.8	33.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.6	10.7	55.8	27.8	51.8	33.4
Queue Length 50th (ft)	316	44	78	491	120	141
Queue Length 95th (ft)	557	88	#138	#1037	193	220
Internal Link Dist (ft)	6818			8784	1274	
Turn Bay Length (ft)		500	400			400
Base Capacity (vph)	984	965	360	1223	432	495
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.17	0.67	0.90	0.44	0.53

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1005	50	179	1220	173	305	1
v/c Ratio	0.99	0.05	0.82	0.97	0.82	0.62	0.00
Control Delay	53.9	11.2	64.1	15.7	88.7	49.8	50.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.9	11.2	64.1	15.7	88.7	49.8	50.0
Queue Length 50th (ft)	~969	18	174	449	165	251	1
Queue Length 95th (ft)	#1187	34	m169	m351	234	336	7
Internal Link Dist (ft)	8784			1836	1457		148
Turn Bay Length (ft)		400	200			110	
Base Capacity (vph)	1014	993	218	1263	257	495	357
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.05	0.82	0.97	0.67	0.62	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBR
Lane Group Flow (vph)	1128	119	170	1157	174	272	1
v/c Ratio	1.30	0.14	0.99	1.17	0.41	0.74	0.01
Control Delay	169.8	19.3	136.6	115.6	50.8	65.1	67.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	169.8	19.3	136.6	115.6	50.8	65.1	67.0
Queue Length 50th (ft)	~1413	62	87	~1343	144	247	1
Queue Length 95th (ft)	m#1480	m65	#163	#1550	213	347	8
Internal Link Dist (ft)	1836			201	257		
Turn Bay Length (ft)		157	230			200	50
Base Capacity (vph)	865	828	171	989	428	370	260
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.30	0.14	0.99	1.17	0.41	0.74	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	56	697	15	54	1054	129	225	253	145
v/c Ratio	0.57	0.74	0.02	0.55	1.12	0.14	0.55	1.08	0.33
Control Delay	91.8	28.4	13.4	89.9	100.0	14.5	52.5	131.7	45.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	91.8	28.4	13.4	89.9	100.0	14.5	52.5	131.7	45.8
Queue Length 50th (ft)	55	487	6	53	~1203	56	190	~279	114
Queue Length 95th (ft)	#113	662	17	#108	#1467	90	283	#462	181
Internal Link Dist (ft)		887			815		992	437	
Turn Bay Length (ft)	290		135	360		180			200
Base Capacity (vph)	98	946	935	99	937	900	406	234	441
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.74	0.02	0.55	1.12	0.14	0.55	1.08	0.33

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	60	1040	87	111	722	162	231	49
v/c Ratio	0.18	0.73	0.14	0.33	0.46	0.51	0.64	0.14
Control Delay	25.6	19.4	13.5	27.7	13.8	28.3	31.3	20.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.6	19.4	13.5	27.7	13.8	28.3	31.3	20.8
Queue Length 50th (ft)	20	161	19	37	99	56	82	15
Queue Length 95th (ft)	53	264	50	87	168	107	146	39
Internal Link Dist (ft)		1817			2312	2104		326
Turn Bay Length (ft)	100		90	110			30	
Base Capacity (vph)	352	1696	751	335	1787	767	876	868
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.61	0.12	0.33	0.40	0.21	0.26	0.06

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	197	467	229	564	173	285	976	419	143	480	298
v/c Ratio	0.54	0.56	0.62	0.65	0.46	1.01	0.76	0.76	0.68	0.42	0.60
Control Delay	49.2	35.1	51.7	37.1	36.0	99.2	33.0	38.9	60.3	27.9	34.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.2	35.1	51.7	37.1	36.0	99.2	33.0	38.9	60.3	27.9	34.8
Queue Length 50th (ft)	60	134	71	166	92	~183	277	226	86	121	153
Queue Length 95th (ft)	107	187	#129	227	158	#402	406	#422	#192	188	273
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	370	1206	370	1241	536	283	1371	594	223	1260	544
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.39	0.62	0.45	0.32	1.01	0.71	0.71	0.64	0.38	0.55

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	188	838	224	174	552	52	262	534	142	410
v/c Ratio	0.94	0.78	0.48	0.89	0.52	0.11	1.15	0.68	0.65	0.53
Control Delay	88.5	29.4	25.4	80.6	23.7	20.1	143.2	30.9	49.8	28.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.5	29.4	25.4	80.6	23.7	20.1	143.2	30.9	49.8	28.1
Queue Length 50th (ft)	86	181	82	80	108	17	~144	115	63	85
Queue Length 95th (ft)	#253	274	159	#236	172	45	#346	187	#175	143
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	200	1478	643	195	1464	644	227	1182	219	1160
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.57	0.35	0.89	0.38	0.08	1.15	0.45	0.65	0.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	104	87	864	501	156	288
v/c Ratio	0.41	0.39	0.84	0.55	0.63	0.19
Control Delay	37.2	37.1	23.6	14.0	47.6	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.2	37.1	23.6	14.0	47.6	3.7
Queue Length 50th (ft)	45	38	321	143	70	34
Queue Length 95th (ft)	100	87	#634	256	#181	69
Internal Link Dist (ft)	509		199			571
Turn Bay Length (ft)	75			145	400	
Base Capacity (vph)	439	393	1289	1128	258	1616
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.22	0.67	0.44	0.60	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	43	103	1310	8	12	388
v/c Ratio	0.33	0.44	0.90	0.01	0.14	0.24
Control Delay	58.8	50.8	22.4	4.1	57.5	2.2
Queue Delay	0.0	0.0	5.2	0.0	0.0	0.0
Total Delay	58.8	50.8	27.6	4.1	57.5	2.2
Queue Length 50th (ft)	32	70	688	1	9	42
Queue Length 95th (ft)	70	126	#1264	6	30	74
Internal Link Dist (ft)	170		833			870
Turn Bay Length (ft)				65	350	
Base Capacity (vph)	302	234	1451	909	84	1638
Starvation Cap Reductn	0	0	104	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.44	0.97	0.01	0.14	0.24

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	742	85	60	1316	74	31
v/c Ratio	0.61	0.07	0.50	0.98	0.52	0.25
Control Delay	11.0	5.1	80.4	31.0	77.4	67.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.0	5.1	80.4	31.0	77.4	67.6
Queue Length 50th (ft)	288	18	56	841	69	28
Queue Length 95th (ft)	473	38	108	#1607	124	63
Internal Link Dist (ft)	669			851	978	
Turn Bay Length (ft)		420	150			50
Base Capacity (vph)	1214	1249	141	1347	198	172
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.07	0.43	0.98	0.37	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	276	730	5	1050	778	4	39	298	4	121
v/c Ratio	0.89	0.42	0.03	0.88	0.76	0.02	0.23	0.46	0.01	0.42
Control Delay	72.4	15.3	44.8	39.1	19.0	45.8	48.4	36.8	31.5	39.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.4	15.3	44.8	39.1	19.0	45.8	48.4	36.8	31.5	39.0
Queue Length 50th (ft)	169	116	3	315	353	2	23	88	2	69
Queue Length 95th (ft)	#379	280	15	#552	531	14	61	128	11	123
Internal Link Dist (ft)		116		1317			770		833	
Turn Bay Length (ft)	970		400		220			175		620
Base Capacity (vph)	309	1756	193	1194	1192	173	167	1028	568	463
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.42	0.03	0.88	0.65	0.02	0.23	0.29	0.01	0.26

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	SBR
Lane Group Flow (vph)	121	946	1144	732
v/c Ratio	0.16	0.32	0.94	1.02
Control Delay	14.0	0.3	40.7	64.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.0	0.3	40.7	64.0
Queue Length 50th (ft)	37	0	319	~444
Queue Length 95th (ft)	70	0	#462	#695
Internal Link Dist (ft)		1317	504	
Turn Bay Length (ft)	785			
Base Capacity (vph)	763	2980	1223	718
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.16	0.32	0.94	1.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	82	813	981	134	363	123
v/c Ratio	0.89	0.72	1.00	0.14	0.97	0.37
Control Delay	124.5	15.2	51.4	9.8	88.1	44.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	124.5	15.2	51.4	9.8	88.1	44.8
Queue Length 50th (ft)	64	337	705	40	281	83
Queue Length 95th (ft)	#164	496	#1039	68	#476	142
Internal Link Dist (ft)		386	8292		1387	
Turn Bay Length (ft)	420			325		100
Base Capacity (vph)	92	1122	984	974	373	330
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.72	1.00	0.14	0.97	0.37

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	54	1035	73	8	971	24	42	11	22	42
v/c Ratio	0.50	0.79	0.05	0.07	0.79	0.02	0.33	0.07	0.17	0.29
Control Delay	67.8	13.0	3.1	54.6	16.2	4.4	55.4	49.2	51.2	53.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.8	13.0	3.1	54.6	16.2	4.4	55.4	49.2	51.2	53.6
Queue Length 50th (ft)	34	284	7	5	406	4	25	6	13	25
Queue Length 95th (ft)	#107	#1014	27	24	720	12	70	27	44	69
Internal Link Dist (ft)		8292			6818			1075	1353	
Turn Bay Length (ft)	580		330	460		580	70			
Base Capacity (vph)	109	1405	1432	109	1403	1431	401	481	398	445
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.74	0.05	0.07	0.69	0.02	0.10	0.02	0.06	0.09

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	819	143	202	815	201	341
v/c Ratio	0.92	0.16	0.59	0.72	0.67	0.70
Control Delay	36.2	10.6	48.0	13.0	47.1	35.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	10.6	48.0	13.0	47.1	35.9
Queue Length 50th (ft)	398	36	58	230	110	172
Queue Length 95th (ft)	#756	76	101	482	182	268
Internal Link Dist (ft)	6818			8784	1274	
Turn Bay Length (ft)		500	400			400
Base Capacity (vph)	891	908	344	1139	464	488
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.16	0.59	0.72	0.43	0.70

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	5	1079	75	199	955	79	144	9	4
v/c Ratio	0.05	1.04	0.08	0.65	0.73	0.60	0.31	0.06	0.03
Control Delay	68.8	66.6	11.4	63.3	8.3	83.5	42.4	60.3	59.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.8	66.6	11.4	63.3	8.3	83.5	42.4	60.3	59.0
Queue Length 50th (ft)	5	~1142	27	208	220	76	110	8	4
Queue Length 95th (ft)	20	#1452	52	m216	m373	130	167	26	16
Internal Link Dist (ft)		8784			1836	1457		148	
Turn Bay Length (ft)	400		400	200			110		50
Base Capacity (vph)	99	1034	999	305	1311	264	464	283	301
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	1.04	0.08	0.65	0.73	0.30	0.31	0.03	0.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR
Lane Group Flow (vph)	3	1120	76	154	1111	56	80
v/c Ratio	0.03	1.08	0.07	0.56	0.96	0.29	0.50
Control Delay	61.7	60.4	10.3	74.3	36.4	65.7	74.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.7	60.4	10.3	74.3	36.4	65.7	74.2
Queue Length 50th (ft)	3	~1216	23	75	802	52	75
Queue Length 95th (ft)	m4	m#1198	m26	114	#1465	96	132
Internal Link Dist (ft)		1836			201	257	
Turn Bay Length (ft)	200		157	230			200
Base Capacity (vph)	92	1038	1045	276	1162	190	160
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	1.08	0.07	0.56	0.96	0.29	0.50

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	93	960	37	108	900	326	172	154	72
v/c Ratio	0.75	0.97	0.04	0.88	0.91	0.34	0.62	0.85	0.26
Control Delay	88.9	46.4	9.9	109.1	35.6	12.6	53.3	82.8	41.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.9	46.4	9.9	109.1	35.6	12.6	53.3	82.8	41.9
Queue Length 50th (ft)	72	701	11	85	599	120	120	113	46
Queue Length 95th (ft)	#153	#945	24	#184	#847	168	184	#207	85
Internal Link Dist (ft)		887			815		992	437	
Turn Bay Length (ft)	290		135	360		180			200
Base Capacity (vph)	124	990	979	123	991	970	317	207	316
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.97	0.04	0.88	0.91	0.34	0.54	0.74	0.23

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	24	546	71	142	1530	102	87	83
v/c Ratio	0.08	0.29	0.09	0.45	0.62	0.36	0.30	0.27
Control Delay	23.7	11.1	10.9	27.9	9.7	26.0	24.8	24.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.7	11.1	10.9	27.9	9.7	26.0	24.8	24.1
Queue Length 50th (ft)	7	64	14	42	128	29	24	23
Queue Length 95th (ft)	30	109	38	110	#396	84	73	70
Internal Link Dist (ft)		1817			2312	2104		326
Turn Bay Length (ft)	100		90	110			30	
Base Capacity (vph)	328	2267	993	430	2461	760	774	825
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.24	0.07	0.33	0.62	0.13	0.11	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	217	629	401	443	103	158	359	190	101	813	337
v/c Ratio	0.57	0.71	0.87	0.45	0.23	0.81	0.30	0.37	0.60	0.72	0.70
Control Delay	49.3	37.7	63.1	30.6	29.0	76.3	25.5	28.1	60.5	34.1	38.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.3	37.7	63.1	30.6	29.0	76.3	25.5	28.1	60.5	34.1	38.8
Queue Length 50th (ft)	69	194	133	124	51	102	87	90	64	235	184
Queue Length 95th (ft)	114	255	#241	171	95	#234	136	165	#143	335	313
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	419	1220	463	1299	574	194	1295	560	171	1234	528
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.52	0.87	0.34	0.18	0.81	0.28	0.34	0.59	0.66	0.64

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	136	490	238	189	889	76	327	350	79	446
v/c Ratio	0.77	0.49	0.56	0.90	0.84	0.16	0.93	0.32	0.41	0.68
Control Delay	69.3	28.1	32.8	83.8	37.0	23.9	71.3	24.7	45.9	37.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.3	28.1	32.8	83.8	37.0	23.9	71.3	24.7	45.9	37.9
Queue Length 50th (ft)	75	116	110	105	237	30	179	79	41	120
Queue Length 95th (ft)	#194	176	198	#262	337	68	#392	125	94	180
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	177	1221	520	209	1290	580	351	1284	205	971
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.40	0.46	0.90	0.69	0.13	0.93	0.27	0.39	0.46

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	556	182	345	115	149	666
v/c Ratio	0.84	0.31	0.69	0.26	0.62	0.75
Control Delay	33.5	17.7	30.1	21.2	43.9	21.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.5	17.7	30.1	21.2	43.9	21.0
Queue Length 50th (ft)	198	51	132	38	61	225
Queue Length 95th (ft)	#415	112	212	76	#158	346
Internal Link Dist (ft)	509		199			571
Turn Bay Length (ft)	75			145	400	
Base Capacity (vph)	807	706	785	687	249	1200
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.26	0.44	0.17	0.60	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	14	21	391	52	112	1052
v/c Ratio	0.05	0.06	0.36	0.06	0.31	0.60
Control Delay	18.8	12.0	8.5	7.1	18.7	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.8	12.0	8.5	7.1	18.7	3.8
Queue Length 50th (ft)	2	3	44	5	16	0
Queue Length 95th (ft)	20	19	154	26	86	357
Internal Link Dist (ft)	170		833			870
Turn Bay Length (ft)				65	350	
Base Capacity (vph)	751	416	1526	1261	459	1763
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.05	0.26	0.04	0.24	0.60

Intersection Summary

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1246	57	1019	228	66
v/c Ratio	1.05	0.70	0.79	1.04	0.33
Control Delay	61.2	108.2	13.1	132.7	65.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	61.2	108.2	13.1	132.7	65.4
Queue Length 50th (ft)	~1344	56	438	~243	60
Queue Length 95th (ft)	#1486	#122	544	#391	106
Internal Link Dist (ft)	669		851	978	
Turn Bay Length (ft)		150			50
Base Capacity (vph)	1184	82	1317	219	198
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.05	0.70	0.77	1.04	0.33

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	107	988	7	917	345	11	30	775	17	371
v/c Ratio	0.55	0.71	0.03	0.83	0.35	0.05	0.15	0.77	0.03	0.81
Control Delay	53.9	25.2	41.2	35.8	7.3	42.6	43.5	36.1	26.4	46.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.9	25.2	41.2	35.8	7.3	42.6	43.5	36.1	26.4	46.4
Queue Length 50th (ft)	67	249	4	291	83	7	18	237	8	223
Queue Length 95th (ft)	#138	#437	17	#387	122	23	45	295	24	#359
Internal Link Dist (ft)		116		1317			770		833	
Turn Bay Length (ft)	970		400		220			175		620
Base Capacity (vph)	196	1503	225	1263	1042	202	200	1188	638	546
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.66	0.03	0.73	0.33	0.05	0.15	0.65	0.03	0.68

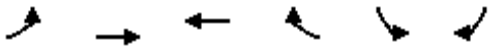
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	SBR
Lane Group Flow (vph)	477	1116	1192	96
v/c Ratio	0.90	0.41	0.72	0.19
Control Delay	49.7	1.2	17.9	19.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	49.7	1.2	17.9	19.3
Queue Length 50th (ft)	235	20	244	35
Queue Length 95th (ft)	#401	26	327	71
Internal Link Dist (ft)		1317	504	
Turn Bay Length (ft)	785			
Base Capacity (vph)	567	2718	1657	534
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.84	0.41	0.72	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	241	930	1033	439	94	106
v/c Ratio	0.96	0.71	0.99	0.42	0.53	0.68
Control Delay	109.7	9.7	50.7	14.0	71.8	82.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.7	9.7	50.7	14.0	71.8	82.8
Queue Length 50th (ft)	229	305	899	186	85	97
Queue Length 95th (ft)	#423	548	#1340	288	146	164
Internal Link Dist (ft)		386	8292		1387	
Turn Bay Length (ft)	420			325		100
Base Capacity (vph)	250	1317	1044	1044	245	217
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.71	0.99	0.42	0.38	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	38	1016	28	27	1388	27	80	35	38	70
v/c Ratio	0.48	0.81	0.02	0.33	1.13	0.03	0.59	0.24	0.29	0.46
Control Delay	84.7	17.8	4.8	75.5	89.5	5.0	76.1	60.0	62.1	66.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.7	17.8	4.8	75.5	89.5	5.0	76.1	60.0	62.1	66.8
Queue Length 50th (ft)	33	528	5	23	~1429	5	68	29	32	59
Queue Length 95th (ft)	#76	818	15	56	#1679	14	117	61	66	105
Internal Link Dist (ft)		8292			6818			1075	1353	
Turn Bay Length (ft)	580		330	460		580	70			
Base Capacity (vph)	79	1249	1167	81	1225	1068	293	312	282	333
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.81	0.02	0.33	1.13	0.03	0.27	0.11	0.13	0.21

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	754	214	259	1179	205	280
v/c Ratio	0.75	0.22	0.77	0.96	0.76	0.61
Control Delay	22.7	11.2	70.8	33.0	69.1	44.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.7	11.2	70.8	33.0	69.1	44.9
Queue Length 50th (ft)	405	71	106	739	161	195
Queue Length 95th (ft)	638	121	#171	#1293	246	290
Internal Link Dist (ft)	6818			8784	1274	
Turn Bay Length (ft)		500	400			400
Base Capacity (vph)	1012	992	350	1227	343	461
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.22	0.74	0.96	0.60	0.61

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1	1092	50	179	1465	173	305	1
v/c Ratio	0.01	1.09	0.05	0.80	1.19	0.81	0.61	0.00
Control Delay	68.0	82.7	11.1	63.8	102.1	87.5	49.1	50.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.0	82.7	11.1	63.8	102.1	87.5	49.1	50.0
Queue Length 50th (ft)	1	~1200	18	172	~1697	165	251	1
Queue Length 95th (ft)	8	#1355	34	m152	m#1247	232	337	6
Internal Link Dist (ft)		8784			1836	1457		148
Turn Bay Length (ft)	400		400	200			110	
Base Capacity (vph)	108	1005	985	224	1236	266	503	369
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	1.09	0.05	0.80	1.19	0.65	0.61	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	1216	120	173	1369	192	275	1	1
v/c Ratio	1.37	0.14	1.01	1.35	0.47	0.79	0.01	0.01
Control Delay	197.6	18.4	140.3	192.5	54.2	70.7	67.0	67.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	197.6	18.4	140.3	192.5	54.2	70.7	67.0	67.0
Queue Length 50th (ft)	~1570	60	~90	~1751	164	255	1	1
Queue Length 95th (ft)	m#1462	m58	#167	#1950	240	#375	8	8
Internal Link Dist (ft)	1836			201	257		1116	
Turn Bay Length (ft)		157	230			200		50
Base Capacity (vph)	886	849	171	1011	405	350	291	260
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.37	0.14	1.01	1.35	0.47	0.79	0.00	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	68	716	15	54	1080	148	232	283	157
v/c Ratio	0.71	0.77	0.02	0.56	1.20	0.17	0.58	1.17	0.34
Control Delay	105.2	31.2	14.3	90.9	131.4	16.1	52.8	159.4	45.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.2	31.2	14.3	90.9	131.4	16.1	52.8	159.4	45.1
Queue Length 50th (ft)	67	529	6	53	~1277	67	195	~329	122
Queue Length 95th (ft)	#148	721	17	#108	#1543	105	292	#520	191
Internal Link Dist (ft)		887			815		992	437	
Turn Bay Length (ft)	290		135	360		180			200
Base Capacity (vph)	96	933	923	97	900	864	400	241	456
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.77	0.02	0.56	1.20	0.17	0.58	1.17	0.34

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	63	1093	92	121	760	173	245	53
v/c Ratio	0.20	0.75	0.14	0.37	0.47	0.55	0.68	0.15
Control Delay	26.4	20.4	13.7	29.2	14.1	29.4	33.2	21.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.4	20.4	13.7	29.2	14.1	29.4	33.2	21.0
Queue Length 50th (ft)	21	176	21	42	108	61	89	17
Queue Length 95th (ft)	56	#292	54	94	183	114	155	41
Internal Link Dist (ft)		1817			2312	2104		326
Turn Bay Length (ft)	100		90	110			30	
Base Capacity (vph)	339	1635	724	323	1772	739	844	829
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.67	0.13	0.37	0.43	0.23	0.29	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	217	516	251	622	191	313	1072	460	157	527	328
v/c Ratio	0.58	0.58	0.71	0.69	0.49	1.14	0.82	0.81	0.87	0.46	0.67
Control Delay	50.7	35.1	56.7	38.3	36.7	138.6	35.4	42.4	86.8	29.6	38.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.7	35.1	56.7	38.3	36.7	138.6	35.4	42.4	86.8	29.6	38.5
Queue Length 50th (ft)	71	155	84	196	108	~251	328	267	105	143	184
Queue Length 95th (ft)	115	208	#148	256	177	#449	447	#469	#242	208	305
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	393	1168	358	1166	504	274	1400	606	181	1220	527
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.44	0.70	0.53	0.38	1.14	0.77	0.76	0.87	0.43	0.62

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	207	924	247	192	611	57	289	586	156	452
v/c Ratio	0.87	0.86	0.53	0.82	0.58	0.12	0.89	0.69	0.69	0.68
Control Delay	73.4	39.7	31.6	68.5	29.8	24.8	67.3	35.4	56.5	39.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.4	39.7	31.6	68.5	29.8	24.8	67.3	35.4	56.5	39.4
Queue Length 50th (ft)	120	259	116	111	154	24	167	164	87	129
Queue Length 95th (ft)	#273	#367	206	#251	226	56	#350	226	#189	184
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	239	1216	528	233	1200	528	326	1082	242	920
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.76	0.47	0.82	0.51	0.11	0.89	0.54	0.64	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	116	97	949	553	172	316
v/c Ratio	0.49	0.46	0.91	0.61	0.78	0.22
Control Delay	41.0	40.9	31.2	15.5	61.9	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.0	40.9	31.2	15.5	61.9	4.0
Queue Length 50th (ft)	58	48	396	170	90	39
Queue Length 95th (ft)	108	95	#748	303	#208	80
Internal Link Dist (ft)	509		199			571
Turn Bay Length (ft)	75			145	400	
Base Capacity (vph)	375	336	1102	965	221	1475
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.29	0.86	0.57	0.78	0.21

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	48	114	1438	9	13	422
v/c Ratio	0.39	0.54	0.96	0.01	0.18	0.25
Control Delay	71.1	64.5	29.9	3.8	69.8	2.1
Queue Delay	0.0	0.0	19.3	0.0	0.0	0.0
Total Delay	71.1	64.5	49.2	3.8	69.8	2.1
Queue Length 50th (ft)	42	95	1012	2	11	50
Queue Length 95th (ft)	86	160	#1645	6	36	87
Internal Link Dist (ft)	170		833			870
Turn Bay Length (ft)				65	350	
Base Capacity (vph)	265	210	1498	939	73	1664
Starvation Cap Reductn	0	0	117	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.54	1.04	0.01	0.18	0.25

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	764	85	68	1344	75	38
v/c Ratio	0.63	0.07	0.54	1.00	0.52	0.31
Control Delay	11.8	5.3	81.6	36.3	77.5	69.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.8	5.3	81.6	36.3	77.5	69.4
Queue Length 50th (ft)	312	19	63	965	70	35
Queue Length 95th (ft)	512	39	119	#1666	126	74
Internal Link Dist (ft)	669			851	978	
Turn Bay Length (ft)		420	150			50
Base Capacity (vph)	1208	1243	150	1346	198	172
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.07	0.45	1.00	0.38	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	280	775	3	1077	790	11	50	311	20	132
v/c Ratio	0.93	0.46	0.02	0.95	0.80	0.07	0.31	0.47	0.05	0.44
Control Delay	80.2	17.3	45.3	49.6	21.8	46.9	51.5	37.7	32.3	40.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.2	17.3	45.3	49.6	21.8	46.9	51.5	37.7	32.3	40.2
Queue Length 50th (ft)	176	135	2	342	368	6	30	92	11	76
Queue Length 95th (ft)	#381	301	11	#576	557	26	74	133	30	133
Internal Link Dist (ft)		116		1317			770		833	
Turn Bay Length (ft)	970		400		220			175		620
Base Capacity (vph)	302	1676	185	1134	1137	166	161	984	545	443
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.46	0.02	0.95	0.69	0.07	0.31	0.32	0.04	0.30

Intersection Summary

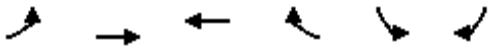
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	SBR
Lane Group Flow (vph)	121	997	1187	732
v/c Ratio	0.16	0.33	0.94	1.01
Control Delay	16.6	0.3	45.5	64.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.6	0.3	45.5	64.0
Queue Length 50th (ft)	46	0	411	~543
Queue Length 95th (ft)	82	0	#561	#814
Internal Link Dist (ft)		1317	504	
Turn Bay Length (ft)	785			
Base Capacity (vph)	774	2980	1279	728
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.16	0.33	0.93	1.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	84	851	1013	134	367	127
v/c Ratio	0.90	0.75	1.01	0.13	1.01	0.40
Control Delay	130.5	16.1	54.1	9.8	102.1	49.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	130.5	16.1	54.1	9.8	102.1	49.4
Queue Length 50th (ft)	72	387	~819	42	~318	94
Queue Length 95th (ft)	#176	562	#1149	70	#523	158
Internal Link Dist (ft)		386	8292		1387	
Turn Bay Length (ft)	420			325		100
Base Capacity (vph)	93	1141	1007	997	362	321
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.75	1.01	0.13	1.01	0.40

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	67	1093	73	11	1005	31	45	13	24	45
v/c Ratio	0.68	0.82	0.05	0.12	0.82	0.02	0.40	0.10	0.22	0.36
Control Delay	93.3	15.9	3.4	64.0	17.6	4.2	67.3	56.8	60.5	64.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.3	15.9	3.4	64.0	17.6	4.2	67.3	56.8	60.5	64.6
Queue Length 50th (ft)	53	348	8	8	468	5	34	10	18	34
Queue Length 95th (ft)	#143	#1174	28	31	823	15	79	33	50	79
Internal Link Dist (ft)		8292			6818			1075	1353	
Turn Bay Length (ft)	580		330	460		580	70			
Base Capacity (vph)	98	1326	1352	89	1318	1344	325	392	321	361
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.82	0.05	0.12	0.76	0.02	0.14	0.03	0.07	0.12

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	871	152	221	849	211	355
v/c Ratio	0.98	0.17	0.65	0.75	0.68	0.72
Control Delay	48.7	10.9	50.7	14.7	47.2	36.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.7	10.9	50.7	14.7	47.2	36.7
Queue Length 50th (ft)	463	39	64	259	116	181
Queue Length 95th (ft)	#840	82	#117	548	190	280
Internal Link Dist (ft)	6818			8784	1274	
Turn Bay Length (ft)		500	400			400
Base Capacity (vph)	885	902	342	1131	461	495
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.17	0.65	0.75	0.46	0.72

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	5	1129	75	201	1006	79	145	9	4
v/c Ratio	0.05	1.11	0.08	0.62	0.77	0.60	0.30	0.06	0.03
Control Delay	68.8	89.6	11.4	60.1	9.0	83.5	41.9	60.3	59.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.8	89.6	11.4	60.1	9.0	83.5	41.9	60.3	59.0
Queue Length 50th (ft)	5	~1254	27	205	265	76	109	8	4
Queue Length 95th (ft)	20	#1541	51	m206	m361	130	170	26	16
Internal Link Dist (ft)		8784			1836	1457		148	
Turn Bay Length (ft)	400		400	200			110		50
Base Capacity (vph)	99	1019	984	322	1311	264	480	283	301
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	1.11	0.08	0.62	0.77	0.30	0.30	0.03	0.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	3	1185	77	170	1163	57	86	1	1
v/c Ratio	0.03	1.17	0.08	0.57	1.01	0.28	0.49	0.01	0.01
Control Delay	61.7	97.4	11.2	73.8	50.6	64.3	72.5	68.0	68.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.7	97.4	11.2	73.8	50.6	64.3	72.5	68.0	68.0
Queue Length 50th (ft)	3	~1374	24	83	978	52	81	1	1
Queue Length 95th (ft)	m3	m#1207	m25	125	#1578	98	139	8	8
Internal Link Dist (ft)		1836			201	257		1116	
Turn Bay Length (ft)	200		157	230			200		50
Base Capacity (vph)	92	1014	1020	297	1148	206	174	285	255
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	1.17	0.08	0.57	1.01	0.28	0.49	0.00	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	91	960	37	108	900	321	172	153	72
v/c Ratio	0.73	0.97	0.04	0.88	0.91	0.33	0.62	0.85	0.26
Control Delay	86.9	46.2	9.9	109.1	35.5	12.5	53.3	82.3	42.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.9	46.2	9.9	109.1	35.5	12.5	53.3	82.3	42.0
Queue Length 50th (ft)	71	701	11	85	599	118	120	112	46
Queue Length 95th (ft)	#148	#945	24	#184	#847	164	184	#204	85
Internal Link Dist (ft)		887			815		992	437	
Turn Bay Length (ft)	290		135	360		180			200
Base Capacity (vph)	124	991	979	123	992	971	318	207	316
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.97	0.04	0.88	0.91	0.33	0.54	0.74	0.23

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	24	546	73	148	1530	103	88	83
v/c Ratio	0.08	0.29	0.09	0.46	0.62	0.36	0.31	0.27
Control Delay	23.7	11.2	11.0	28.1	9.8	26.0	24.8	24.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.7	11.2	11.0	28.1	9.8	26.0	24.8	24.1
Queue Length 50th (ft)	7	64	14	43	128	29	25	23
Queue Length 95th (ft)	30	110	39	114	#398	84	74	70
Internal Link Dist (ft)		1817			2312	2104		326
Turn Bay Length (ft)	100		90	110			30	
Base Capacity (vph)	331	2264	991	433	2460	767	781	830
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.24	0.07	0.34	0.62	0.13	0.11	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	217	629	401	443	103	158	359	190	101	814	337
v/c Ratio	0.57	0.71	0.87	0.45	0.23	0.81	0.30	0.37	0.60	0.72	0.70
Control Delay	49.3	37.7	63.1	30.6	29.0	76.3	25.5	28.1	60.5	34.1	38.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.3	37.7	63.1	30.6	29.0	76.3	25.5	28.1	60.5	34.1	38.8
Queue Length 50th (ft)	69	194	133	124	51	102	87	90	64	236	184
Queue Length 95th (ft)	114	255	#241	171	95	#234	136	165	#143	336	313
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	419	1220	463	1299	574	194	1295	560	171	1234	528
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.52	0.87	0.34	0.18	0.81	0.28	0.34	0.59	0.66	0.64

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	136	490	239	188	890	76	330	350	79	447
v/c Ratio	0.77	0.49	0.57	0.90	0.84	0.16	0.94	0.32	0.41	0.68
Control Delay	69.3	28.1	32.9	82.9	37.0	24.0	73.1	24.7	45.9	38.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.3	28.1	32.9	82.9	37.0	24.0	73.1	24.7	45.9	38.0
Queue Length 50th (ft)	75	116	111	104	237	30	182	79	42	120
Queue Length 95th (ft)	#194	177	200	#262	338	68	#398	125	94	180
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	177	1220	520	209	1289	579	351	1283	205	970
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.40	0.46	0.90	0.69	0.13	0.94	0.27	0.39	0.46

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	555	183	348	115	149	666
v/c Ratio	0.84	0.32	0.70	0.26	0.62	0.74
Control Delay	33.5	17.8	30.2	21.2	44.0	21.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.5	17.8	30.2	21.2	44.0	21.0
Queue Length 50th (ft)	198	51	133	38	61	225
Queue Length 95th (ft)	#414	112	214	76	#158	346
Internal Link Dist (ft)	509		199			571
Turn Bay Length (ft)	75			145	400	
Base Capacity (vph)	806	705	784	686	248	1198
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.26	0.44	0.17	0.60	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	14	21	393	52	112	1051
v/c Ratio	0.05	0.06	0.36	0.06	0.31	0.60
Control Delay	18.8	12.0	8.5	7.1	18.7	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.8	12.0	8.5	7.1	18.7	3.8
Queue Length 50th (ft)	2	3	44	5	16	0
Queue Length 95th (ft)	20	19	155	26	86	356
Internal Link Dist (ft)	170		833			870
Turn Bay Length (ft)				65	350	
Base Capacity (vph)	750	416	1524	1259	458	1763
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.05	0.26	0.04	0.24	0.60

Intersection Summary

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1244	57	1019	228	66
v/c Ratio	1.05	0.70	0.79	1.04	0.33
Control Delay	60.6	108.2	13.1	132.7	65.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	60.6	108.2	13.1	132.7	65.4
Queue Length 50th (ft)	~1340	56	438	~243	60
Queue Length 95th (ft)	#1482	#122	544	#391	106
Internal Link Dist (ft)	669		851	978	
Turn Bay Length (ft)		150			50
Base Capacity (vph)	1184	82	1317	219	198
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.05	0.70	0.77	1.04	0.33

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	107	987	7	915	347	11	30	776	17	369
v/c Ratio	0.55	0.71	0.03	0.83	0.35	0.05	0.15	0.78	0.03	0.80
Control Delay	53.8	25.2	41.2	35.8	7.3	42.6	43.5	36.1	26.4	46.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.8	25.2	41.2	35.8	7.3	42.6	43.5	36.1	26.4	46.0
Queue Length 50th (ft)	67	248	4	290	84	7	18	237	8	222
Queue Length 95th (ft)	#138	#437	17	#386	124	23	45	295	24	#357
Internal Link Dist (ft)		116		1317			770		833	
Turn Bay Length (ft)	970		400		220			175		620
Base Capacity (vph)	196	1504	225	1266	1042	203	200	1191	639	547
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.66	0.03	0.72	0.33	0.05	0.15	0.65	0.03	0.67

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	SBR
Lane Group Flow (vph)	477	1116	1192	96
v/c Ratio	0.90	0.41	0.72	0.19
Control Delay	49.7	1.2	17.9	19.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	49.7	1.2	17.9	19.3
Queue Length 50th (ft)	235	20	244	35
Queue Length 95th (ft)	#401	26	327	71
Internal Link Dist (ft)		1317	504	
Turn Bay Length (ft)	785			
Base Capacity (vph)	567	2718	1657	534
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.84	0.41	0.72	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	241	930	1033	439	94	106
v/c Ratio	0.96	0.71	0.99	0.42	0.53	0.68
Control Delay	109.7	9.7	50.7	14.0	71.8	82.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.7	9.7	50.7	14.0	71.8	82.8
Queue Length 50th (ft)	229	305	899	186	85	97
Queue Length 95th (ft)	#423	548	#1340	288	146	164
Internal Link Dist (ft)		386	8292		1387	
Turn Bay Length (ft)	420			325		100
Base Capacity (vph)	250	1317	1044	1044	245	217
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.71	0.99	0.42	0.38	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	38	1016	28	27	1388	27	80	35	38	70
v/c Ratio	0.48	0.81	0.02	0.33	1.13	0.03	0.59	0.24	0.29	0.46
Control Delay	84.7	17.8	4.8	75.5	89.5	5.0	76.1	60.0	62.1	66.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.7	17.8	4.8	75.5	89.5	5.0	76.1	60.0	62.1	66.8
Queue Length 50th (ft)	33	528	5	23	~1429	5	68	29	32	59
Queue Length 95th (ft)	#76	818	15	56	#1679	14	117	61	66	105
Internal Link Dist (ft)		8292			6818			1075	1353	
Turn Bay Length (ft)	580		330	460		580	70			
Base Capacity (vph)	79	1249	1167	81	1225	1068	293	312	282	333
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.81	0.02	0.33	1.13	0.03	0.27	0.11	0.13	0.21

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	754	214	259	1179	205	280
v/c Ratio	0.75	0.22	0.77	0.96	0.76	0.61
Control Delay	22.7	11.2	70.8	33.0	69.1	44.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.7	11.2	70.8	33.0	69.1	44.9
Queue Length 50th (ft)	405	71	106	739	161	195
Queue Length 95th (ft)	638	121	#171	#1293	246	290
Internal Link Dist (ft)	6818			8784	1274	
Turn Bay Length (ft)		500	400			400
Base Capacity (vph)	1012	992	350	1227	343	461
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.22	0.74	0.96	0.60	0.61

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1	1092	50	179	1465	173	305	1
v/c Ratio	0.01	1.09	0.05	0.80	1.19	0.81	0.61	0.00
Control Delay	68.0	82.7	11.1	63.8	102.1	87.5	49.1	50.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.0	82.7	11.1	63.8	102.1	87.5	49.1	50.0
Queue Length 50th (ft)	1	~1200	18	172	~1697	165	251	1
Queue Length 95th (ft)	8	#1355	34	m152	m#1247	232	337	6
Internal Link Dist (ft)		8784			1836	1457		148
Turn Bay Length (ft)	400		400	200			110	
Base Capacity (vph)	108	1005	985	224	1236	266	503	369
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	1.09	0.05	0.80	1.19	0.65	0.61	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	1216	120	173	1369	192	275	1	1
v/c Ratio	1.37	0.14	1.01	1.35	0.47	0.79	0.01	0.01
Control Delay	197.6	18.4	140.3	192.5	54.2	70.7	67.0	67.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	197.6	18.4	140.3	192.5	54.2	70.7	67.0	67.0
Queue Length 50th (ft)	~1570	60	~90	~1751	164	255	1	1
Queue Length 95th (ft)	m#1462	m58	#167	#1950	240	#375	8	8
Internal Link Dist (ft)	1836			201	257		1116	
Turn Bay Length (ft)		157	230			200		50
Base Capacity (vph)	886	849	171	1011	405	350	291	260
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.37	0.14	1.01	1.35	0.47	0.79	0.00	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	66	716	15	54	1080	144	232	279	154
v/c Ratio	0.69	0.77	0.02	0.56	1.20	0.17	0.57	1.16	0.34
Control Delay	102.8	31.2	14.3	90.9	131.4	16.0	52.5	153.9	45.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	102.8	31.2	14.3	90.9	131.4	16.0	52.5	153.9	45.0
Queue Length 50th (ft)	65	529	6	53	~1277	65	195	~321	120
Queue Length 95th (ft)	#142	721	17	#108	#1543	103	291	#512	188
Internal Link Dist (ft)		887			815		992	437	
Turn Bay Length (ft)	290		135	360		180			200
Base Capacity (vph)	96	933	923	97	900	864	404	241	456
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.77	0.02	0.56	1.20	0.17	0.57	1.16	0.34

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	63	1093	94	127	760	176	252	53
v/c Ratio	0.20	0.75	0.15	0.40	0.47	0.55	0.69	0.15
Control Delay	26.6	20.6	14.0	29.8	14.3	29.4	33.4	20.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.6	20.6	14.0	29.8	14.3	29.4	33.4	20.9
Queue Length 50th (ft)	21	178	21	44	109	62	92	17
Queue Length 95th (ft)	57	#298	55	99	185	115	159	41
Internal Link Dist (ft)		1817			2312	2104		326
Turn Bay Length (ft)	100		90	110			30	
Base Capacity (vph)	338	1629	721	321	1766	734	841	826
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.67	0.13	0.40	0.43	0.24	0.30	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	217	516	251	622	191	313	1073	460	157	528	328
v/c Ratio	0.58	0.58	0.71	0.69	0.49	1.14	0.82	0.81	0.87	0.47	0.67
Control Delay	50.7	35.1	56.7	38.4	36.7	138.6	35.4	42.3	86.8	29.7	38.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.7	35.1	56.7	38.4	36.7	138.6	35.4	42.3	86.8	29.7	38.5
Queue Length 50th (ft)	71	155	84	196	108	~251	328	267	105	144	184
Queue Length 95th (ft)	115	208	#148	256	177	#449	447	#469	#242	208	305
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	393	1167	358	1165	504	274	1400	605	181	1220	526
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.44	0.70	0.53	0.38	1.14	0.77	0.76	0.87	0.43	0.62

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	208	926	251	191	612	57	292	585	156	454
v/c Ratio	1.10	0.83	0.51	1.00	0.55	0.12	1.36	0.71	0.75	0.57
Control Delay	132.8	32.4	26.8	106.3	24.6	20.6	221.7	32.6	60.8	29.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	132.8	32.4	26.8	106.3	24.6	20.6	221.7	32.6	60.8	29.4
Queue Length 50th (ft)	~119	217	99	~97	128	20	~194	137	76	102
Queue Length 95th (ft)	#287	321	185	#262	197	50	#395	206	#200	158
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	189	1385	603	191	1385	609	214	1118	207	1096
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.10	0.67	0.42	1.00	0.44	0.09	1.36	0.52	0.75	0.41

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	115	98	951	552	173	318
v/c Ratio	0.49	0.47	0.91	0.61	0.79	0.23
Control Delay	41.1	41.2	31.2	15.4	62.6	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.1	41.2	31.2	15.4	62.6	4.0
Queue Length 50th (ft)	57	49	397	169	90	39
Queue Length 95th (ft)	108	96	#750	302	#209	80
Internal Link Dist (ft)	509		199			571
Turn Bay Length (ft)	75			145	400	
Base Capacity (vph)	375	335	1101	963	220	1473
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.29	0.86	0.57	0.79	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	48	114	1438	9	13	423
v/c Ratio	0.39	0.54	0.96	0.01	0.18	0.25
Control Delay	71.1	64.5	29.9	3.8	69.8	2.1
Queue Delay	0.0	0.0	19.3	0.0	0.0	0.0
Total Delay	71.1	64.5	49.2	3.8	69.8	2.1
Queue Length 50th (ft)	42	95	1012	2	11	50
Queue Length 95th (ft)	86	160	#1645	6	36	87
Internal Link Dist (ft)	170		833			870
Turn Bay Length (ft)				65	350	
Base Capacity (vph)	265	210	1498	939	73	1664
Starvation Cap Reductn	0	0	117	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.54	1.04	0.01	0.18	0.25

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	762	85	68	1341	75	38
v/c Ratio	0.63	0.07	0.54	1.00	0.52	0.31
Control Delay	11.7	5.3	81.6	35.7	77.5	69.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.7	5.3	81.6	35.7	77.5	69.4
Queue Length 50th (ft)	310	19	63	950	70	35
Queue Length 95th (ft)	509	39	119	#1660	126	74
Internal Link Dist (ft)	669			851	978	
Turn Bay Length (ft)		420	150			50
Base Capacity (vph)	1208	1243	150	1346	198	172
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.07	0.45	1.00	0.38	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	278	773	3	1075	792	11	50	314	20	129
v/c Ratio	0.92	0.46	0.02	0.95	0.80	0.07	0.31	0.47	0.05	0.43
Control Delay	79.1	17.3	45.3	49.4	21.9	46.9	51.5	37.8	32.3	39.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.1	17.3	45.3	49.4	21.9	46.9	51.5	37.8	32.3	39.9
Queue Length 50th (ft)	175	135	2	342	369	6	30	93	11	74
Queue Length 95th (ft)	#380	301	11	#575	558	26	74	134	30	130
Internal Link Dist (ft)		116		1317			770		833	
Turn Bay Length (ft)	970		400		220			175		620
Base Capacity (vph)	302	1674	185	1134	1136	166	161	984	544	443
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.46	0.02	0.95	0.70	0.07	0.31	0.32	0.04	0.29

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	SBR
Lane Group Flow (vph)	121	998	1187	732
v/c Ratio	0.16	0.33	0.94	1.01
Control Delay	16.6	0.3	45.5	64.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.6	0.3	45.5	64.0
Queue Length 50th (ft)	46	0	411	~543
Queue Length 95th (ft)	82	0	#561	#814
Internal Link Dist (ft)		1317	504	
Turn Bay Length (ft)	785			
Base Capacity (vph)	774	2980	1279	728
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.16	0.33	0.93	1.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	84	852	1013	134	367	127
v/c Ratio	0.90	0.75	1.01	0.13	1.01	0.40
Control Delay	130.5	16.2	54.1	9.8	102.1	49.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	130.5	16.2	54.1	9.8	102.1	49.4
Queue Length 50th (ft)	72	388	~819	42	~318	94
Queue Length 95th (ft)	#176	564	#1149	70	#523	158
Internal Link Dist (ft)		386	8292		1387	
Turn Bay Length (ft)	420			325		100
Base Capacity (vph)	93	1141	1007	997	362	321
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.75	1.01	0.13	1.01	0.40

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	67	1094	73	11	1005	31	45	13	24	45
v/c Ratio	0.69	0.82	0.05	0.12	0.82	0.02	0.40	0.10	0.22	0.36
Control Delay	93.5	16.0	3.4	64.0	17.5	4.2	67.4	56.8	60.5	64.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.5	16.0	3.4	64.0	17.5	4.2	67.4	56.8	60.5	64.6
Queue Length 50th (ft)	53	350	8	8	468	5	34	10	18	34
Queue Length 95th (ft)	#143	#1176	28	31	823	15	79	33	50	79
Internal Link Dist (ft)		8292			6818			1075	1353	
Turn Bay Length (ft)	580		330	460		580	70			
Base Capacity (vph)	97	1323	1349	88	1315	1341	324	391	321	360
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.83	0.05	0.13	0.76	0.02	0.14	0.03	0.07	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	872	152	221	849	211	355
v/c Ratio	0.99	0.17	0.65	0.75	0.68	0.72
Control Delay	49.0	10.9	50.7	14.7	47.2	36.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.0	10.9	50.7	14.7	47.2	36.7
Queue Length 50th (ft)	465	39	64	259	116	181
Queue Length 95th (ft)	#841	82	#117	548	190	280
Internal Link Dist (ft)	6818			8784	1274	
Turn Bay Length (ft)		500	400			400
Base Capacity (vph)	885	902	342	1131	461	495
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.17	0.65	0.75	0.46	0.72

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	5	1130	75	201	1006	79	145	9	4
v/c Ratio	0.05	1.11	0.08	0.62	0.77	0.60	0.30	0.06	0.03
Control Delay	68.8	90.0	11.4	60.1	9.0	83.5	41.9	60.3	59.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.8	90.0	11.4	60.1	9.0	83.5	41.9	60.3	59.0
Queue Length 50th (ft)	5	~1257	27	205	265	76	109	8	4
Queue Length 95th (ft)	20	#1543	51	m206	m361	130	170	26	16
Internal Link Dist (ft)		8784			1836	1457		148	
Turn Bay Length (ft)	400		400	200			110		50
Base Capacity (vph)	99	1019	984	322	1311	264	480	283	301
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	1.11	0.08	0.62	0.77	0.30	0.30	0.03	0.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	3	1186	77	170	1163	57	86	1	1
v/c Ratio	0.03	1.17	0.08	0.57	1.01	0.28	0.49	0.01	0.01
Control Delay	61.7	97.8	11.2	73.8	50.6	64.3	72.5	68.0	68.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.7	97.8	11.2	73.8	50.6	64.3	72.5	68.0	68.0
Queue Length 50th (ft)	3	~1375	24	83	978	52	81	1	1
Queue Length 95th (ft)	m3	m#1207	m25	125	#1578	98	139	8	8
Internal Link Dist (ft)		1836			201	257		1116	
Turn Bay Length (ft)	200		157	230			200		50
Base Capacity (vph)	92	1014	1020	297	1148	206	174	285	255
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	1.17	0.08	0.57	1.01	0.28	0.49	0.00	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	88	964	37	108	901	320	172	150	70
v/c Ratio	0.71	0.97	0.04	0.88	0.91	0.33	0.63	0.84	0.26
Control Delay	84.3	46.2	9.8	109.4	35.1	12.4	53.7	82.2	41.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.3	46.2	9.8	109.4	35.1	12.4	53.7	82.2	41.9
Queue Length 50th (ft)	68	~702	11	84	595	116	119	109	45
Queue Length 95th (ft)	#143	#951	24	#184	#848	164	184	#199	84
Internal Link Dist (ft)		887			815		992	437	
Turn Bay Length (ft)	290		135	360		180			200
Base Capacity (vph)	124	990	979	123	991	970	319	206	316
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.97	0.04	0.88	0.91	0.33	0.54	0.73	0.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	24	544	70	142	1529	102	87	83
v/c Ratio	0.08	0.29	0.09	0.45	0.62	0.36	0.30	0.27
Control Delay	23.7	11.1	10.9	27.9	9.7	26.0	24.8	24.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.7	11.1	10.9	27.9	9.7	26.0	24.8	24.1
Queue Length 50th (ft)	7	63	14	41	128	29	24	23
Queue Length 95th (ft)	30	108	37	110	#395	84	73	70
Internal Link Dist (ft)		1817			2312	2104		326
Turn Bay Length (ft)	100		90	110			30	
Base Capacity (vph)	329	2268	993	430	2462	760	775	825
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.24	0.07	0.33	0.62	0.13	0.11	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	217	629	402	443	103	158	360	190	101	815	337
v/c Ratio	0.57	0.71	0.87	0.45	0.23	0.81	0.30	0.37	0.60	0.72	0.70
Control Delay	49.3	37.7	63.4	30.6	29.0	76.3	25.5	28.1	60.5	34.1	38.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.3	37.7	63.4	30.6	29.0	76.3	25.5	28.1	60.5	34.1	38.8
Queue Length 50th (ft)	69	194	134	124	51	102	87	90	64	236	184
Queue Length 95th (ft)	114	255	#242	171	95	#234	137	165	#143	336	313
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	419	1219	463	1298	574	194	1294	560	171	1234	528
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.52	0.87	0.34	0.18	0.81	0.28	0.34	0.59	0.66	0.64

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	136	489	238	190	888	76	327	352	79	450
v/c Ratio	0.77	0.49	0.56	0.91	0.84	0.16	0.93	0.32	0.41	0.68
Control Delay	69.3	28.1	32.9	84.7	37.1	24.0	71.5	24.7	46.0	38.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.3	28.1	32.9	84.7	37.1	24.0	71.5	24.7	46.0	38.0
Queue Length 50th (ft)	75	116	111	106	237	30	180	80	42	121
Queue Length 95th (ft)	#195	176	199	#264	338	68	#394	126	94	181
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	177	1219	519	209	1288	579	351	1283	205	970
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.40	0.46	0.91	0.69	0.13	0.93	0.27	0.39	0.46

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	556	182	348	115	149	670
v/c Ratio	0.84	0.31	0.70	0.26	0.62	0.75
Control Delay	33.5	17.7	30.3	21.2	44.1	21.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.5	17.7	30.3	21.2	44.1	21.2
Queue Length 50th (ft)	199	51	133	38	61	227
Queue Length 95th (ft)	#415	112	214	76	#158	350
Internal Link Dist (ft)	509		199			571
Turn Bay Length (ft)	75			145	400	
Base Capacity (vph)	805	704	783	685	248	1197
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.26	0.44	0.17	0.60	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	14	21	399	52	112	1055
v/c Ratio	0.05	0.06	0.36	0.06	0.31	0.60
Control Delay	18.9	12.1	8.6	7.1	18.8	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.9	12.1	8.6	7.1	18.8	3.8
Queue Length 50th (ft)	2	3	45	5	16	0
Queue Length 95th (ft)	20	19	158	26	86	359
Internal Link Dist (ft)	170		833			870
Turn Bay Length (ft)				65	350	
Base Capacity (vph)	747	415	1574	1300	457	1763
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.05	0.25	0.04	0.25	0.60

Intersection Summary

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1245	57	1017	228	66
v/c Ratio	1.05	0.70	0.79	1.04	0.33
Control Delay	60.9	108.2	13.0	132.7	65.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	60.9	108.2	13.0	132.7	65.4
Queue Length 50th (ft)	~1342	56	435	~243	60
Queue Length 95th (ft)	#1484	#122	542	#391	106
Internal Link Dist (ft)	669		851	978	
Turn Bay Length (ft)		150			50
Base Capacity (vph)	1184	82	1317	219	198
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.05	0.70	0.77	1.04	0.33

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	110	986	7	911	349	11	30	777	17	372
v/c Ratio	0.60	0.68	0.03	0.89	0.37	0.06	0.16	0.81	0.03	0.84
Control Delay	56.6	24.3	41.2	40.6	7.7	42.6	43.7	38.4	26.4	50.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.6	24.3	41.2	40.6	7.7	42.6	43.7	38.4	26.4	50.4
Queue Length 50th (ft)	69	248	4	288	84	7	18	238	8	224
Queue Length 95th (ft)	#143	#437	17	#383	125	23	45	295	24	#361
Internal Link Dist (ft)		116		1317			770		833	
Turn Bay Length (ft)	970		400		220			175		620
Base Capacity (vph)	184	1448	212	1191	1009	191	188	1120	601	514
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.68	0.03	0.76	0.35	0.06	0.16	0.69	0.03	0.72

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	SBR
Lane Group Flow (vph)	477	1116	1191	96
v/c Ratio	0.90	0.41	0.72	0.19
Control Delay	49.7	1.2	17.9	19.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	49.7	1.2	17.9	19.3
Queue Length 50th (ft)	235	20	244	35
Queue Length 95th (ft)	#401	26	326	71
Internal Link Dist (ft)		1317	504	
Turn Bay Length (ft)	785			
Base Capacity (vph)	567	2718	1657	534
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.84	0.41	0.72	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	241	930	1032	439	94	106
v/c Ratio	0.96	0.71	0.99	0.42	0.53	0.68
Control Delay	109.7	9.7	50.4	14.0	71.8	82.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.7	9.7	50.4	14.0	71.8	82.8
Queue Length 50th (ft)	229	305	895	186	85	97
Queue Length 95th (ft)	#423	548	#1338	288	146	164
Internal Link Dist (ft)		386	8292		1387	
Turn Bay Length (ft)	420			325		100
Base Capacity (vph)	250	1317	1044	1044	245	217
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.71	0.99	0.42	0.38	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	38	1016	28	27	1387	27	80	35	38	70
v/c Ratio	0.48	0.81	0.02	0.33	1.13	0.03	0.59	0.24	0.29	0.46
Control Delay	84.7	17.8	4.8	75.5	89.2	5.0	76.1	60.0	62.1	66.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.7	17.8	4.8	75.5	89.2	5.0	76.1	60.0	62.1	66.8
Queue Length 50th (ft)	33	528	5	23	~1428	5	68	29	32	59
Queue Length 95th (ft)	#76	818	15	56	#1677	14	117	61	66	105
Internal Link Dist (ft)		8292			6818			1075	1353	
Turn Bay Length (ft)	580		330	460		580	70			
Base Capacity (vph)	79	1249	1167	81	1225	1068	293	312	282	333
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.81	0.02	0.33	1.13	0.03	0.27	0.11	0.13	0.21

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	754	214	259	1178	205	280
v/c Ratio	0.75	0.22	0.77	0.96	0.76	0.61
Control Delay	22.7	11.2	70.8	32.8	69.1	44.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.7	11.2	70.8	32.8	69.1	44.9
Queue Length 50th (ft)	405	71	106	738	161	195
Queue Length 95th (ft)	638	121	#171	#1293	246	290
Internal Link Dist (ft)	6818			8784	1274	
Turn Bay Length (ft)		500	400			400
Base Capacity (vph)	1012	992	350	1227	343	461
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.22	0.74	0.96	0.60	0.61

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1	1092	50	179	1464	173	305	1
v/c Ratio	0.01	1.09	0.05	0.80	1.18	0.81	0.61	0.00
Control Delay	68.0	82.7	11.1	63.8	101.7	87.5	49.1	50.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.0	82.7	11.1	63.8	101.7	87.5	49.1	50.0
Queue Length 50th (ft)	1	~1200	18	172	~1695	165	251	1
Queue Length 95th (ft)	8	#1355	34	m152	m#1247	232	337	6
Internal Link Dist (ft)		8784			1836	1457		148
Turn Bay Length (ft)	400		400	200			110	
Base Capacity (vph)	108	1005	985	224	1236	266	503	369
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	1.09	0.05	0.80	1.18	0.65	0.61	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	1216	120	173	1368	192	275	1	1
v/c Ratio	1.37	0.14	1.01	1.35	0.47	0.79	0.01	0.01
Control Delay	197.6	18.4	140.3	192.1	54.2	70.7	67.0	67.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	197.6	18.4	140.3	192.1	54.2	70.7	67.0	67.0
Queue Length 50th (ft)	~1570	60	~90	~1749	164	255	1	1
Queue Length 95th (ft)	m#1462	m58	#167	#1948	240	#375	8	8
Internal Link Dist (ft)	1836			201	257		1116	
Turn Bay Length (ft)		157	230			200		50
Base Capacity (vph)	886	849	171	1011	405	350	291	260
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.37	0.14	1.01	1.35	0.47	0.79	0.00	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	65	717	15	55	1082	145	232	276	154
v/c Ratio	0.68	0.77	0.02	0.57	1.20	0.17	0.57	1.15	0.34
Control Delay	101.7	31.3	14.3	91.7	132.3	16.1	52.3	149.9	45.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	101.7	31.3	14.3	91.7	132.3	16.1	52.3	149.9	45.0
Queue Length 50th (ft)	64	531	6	54	~1281	65	195	~315	120
Queue Length 95th (ft)	#140	722	17	#112	#1545	104	290	#503	188
Internal Link Dist (ft)		887			815		992	437	
Turn Bay Length (ft)	290		135	360		180			200
Base Capacity (vph)	96	933	923	97	900	864	407	241	456
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.77	0.02	0.57	1.20	0.17	0.57	1.15	0.34

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	63	1092	91	121	759	172	245	53
v/c Ratio	0.20	0.75	0.14	0.37	0.47	0.55	0.68	0.15
Control Delay	26.4	20.3	13.7	29.2	14.1	29.4	33.2	21.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.4	20.3	13.7	29.2	14.1	29.4	33.2	21.0
Queue Length 50th (ft)	21	176	20	42	107	60	89	17
Queue Length 95th (ft)	56	#292	54	94	183	113	155	41
Internal Link Dist (ft)		1817			2312	2104		326
Turn Bay Length (ft)	100		90	110			30	
Base Capacity (vph)	339	1635	724	323	1772	739	844	829
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.67	0.13	0.37	0.43	0.23	0.29	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	217	516	252	622	191	313	1073	461	157	528	328
v/c Ratio	0.58	0.58	0.71	0.69	0.49	1.14	0.82	0.81	0.87	0.47	0.67
Control Delay	50.7	35.1	56.9	38.4	36.7	138.6	35.4	42.5	86.8	29.7	38.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.7	35.1	56.9	38.4	36.7	138.6	35.4	42.5	86.8	29.7	38.5
Queue Length 50th (ft)	71	155	85	196	108	~251	328	268	105	144	184
Queue Length 95th (ft)	115	208	#149	256	177	#449	447	#470	#242	208	305
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	393	1167	358	1165	504	274	1400	605	181	1220	526
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.44	0.70	0.53	0.38	1.14	0.77	0.76	0.87	0.43	0.62

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	207	923	247	193	610	57	289	589	156	454
v/c Ratio	1.10	0.82	0.51	1.01	0.55	0.12	1.35	0.71	0.75	0.56
Control Delay	131.3	32.4	26.7	108.7	24.6	20.6	217.3	32.7	60.8	29.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	131.3	32.4	26.7	108.7	24.6	20.6	217.3	32.7	60.8	29.3
Queue Length 50th (ft)	~118	216	97	~100	127	20	~191	138	76	102
Queue Length 95th (ft)	#286	320	182	#265	197	50	#390	207	#200	158
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	189	1384	602	191	1384	609	214	1117	207	1096
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.10	0.67	0.41	1.01	0.44	0.09	1.35	0.53	0.75	0.41

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	116	97	953	553	172	319
v/c Ratio	0.50	0.46	0.91	0.61	0.79	0.23
Control Delay	41.2	41.0	31.4	15.4	62.5	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	41.0	31.4	15.4	62.5	4.0
Queue Length 50th (ft)	58	48	400	170	90	40
Queue Length 95th (ft)	108	95	#753	303	#208	80
Internal Link Dist (ft)	509		199			571
Turn Bay Length (ft)	75			145	400	
Base Capacity (vph)	373	334	1097	960	219	1468
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.29	0.87	0.58	0.79	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	48	114	1443	9	13	429
v/c Ratio	0.39	0.54	0.96	0.01	0.18	0.26
Control Delay	71.1	64.5	30.5	3.8	69.8	2.1
Queue Delay	0.0	0.0	20.0	0.0	0.0	0.0
Total Delay	71.1	64.5	50.5	3.8	69.8	2.1
Queue Length 50th (ft)	42	95	1025	2	11	51
Queue Length 95th (ft)	86	160	#1655	6	36	89
Internal Link Dist (ft)	170		833			870
Turn Bay Length (ft)				65	350	
Base Capacity (vph)	265	210	1498	939	73	1664
Starvation Cap Reductn	0	0	116	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.54	1.04	0.01	0.18	0.26

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	762	85	68	1343	75	38
v/c Ratio	0.63	0.07	0.54	1.00	0.52	0.31
Control Delay	11.7	5.3	81.6	36.1	77.5	69.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.7	5.3	81.6	36.1	77.5	69.4
Queue Length 50th (ft)	310	19	63	959	70	35
Queue Length 95th (ft)	509	39	119	#1664	126	74
Internal Link Dist (ft)	669			851	978	
Turn Bay Length (ft)		420	150			50
Base Capacity (vph)	1208	1243	150	1346	198	172
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.07	0.45	1.00	0.38	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	283	770	7	1074	790	11	50	315	20	135
v/c Ratio	0.94	0.46	0.04	0.95	0.80	0.07	0.31	0.48	0.05	0.45
Control Delay	82.2	17.2	45.5	49.2	21.8	46.9	51.5	37.8	32.3	40.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.2	17.2	45.5	49.2	21.8	46.9	51.5	37.8	32.3	40.5
Queue Length 50th (ft)	178	133	4	341	368	6	30	94	11	78
Queue Length 95th (ft)	#387	299	19	#574	557	26	74	135	30	136
Internal Link Dist (ft)		116		1317			770		833	
Turn Bay Length (ft)	970		400		220			175		620
Base Capacity (vph)	302	1675	185	1134	1137	166	161	984	544	443
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.46	0.04	0.95	0.69	0.07	0.31	0.32	0.04	0.30

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	SBR
Lane Group Flow (vph)	121	996	1187	732
v/c Ratio	0.16	0.33	0.94	1.01
Control Delay	16.6	0.3	45.5	64.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.6	0.3	45.5	64.0
Queue Length 50th (ft)	46	0	411	~543
Queue Length 95th (ft)	82	0	#561	#814
Internal Link Dist (ft)		1317	504	
Turn Bay Length (ft)	785			
Base Capacity (vph)	774	2980	1279	728
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.16	0.33	0.93	1.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	84	849	1013	134	367	127
v/c Ratio	0.90	0.74	1.01	0.13	1.01	0.40
Control Delay	130.5	16.1	54.1	9.8	102.1	49.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	130.5	16.1	54.1	9.8	102.1	49.4
Queue Length 50th (ft)	72	386	~819	42	~318	94
Queue Length 95th (ft)	#176	557	#1149	70	#523	158
Internal Link Dist (ft)		386	8292		1387	
Turn Bay Length (ft)	420			325		100
Base Capacity (vph)	93	1141	1007	997	362	321
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.74	1.01	0.13	1.01	0.40

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	67	1092	73	11	1005	31	45	13	24	45
v/c Ratio	0.68	0.82	0.05	0.12	0.82	0.02	0.40	0.10	0.22	0.36
Control Delay	93.1	15.9	3.4	64.0	17.6	4.2	67.3	56.8	60.5	64.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.1	15.9	3.4	64.0	17.6	4.2	67.3	56.8	60.5	64.6
Queue Length 50th (ft)	53	347	8	8	468	5	34	10	18	34
Queue Length 95th (ft)	#143	#1172	28	31	823	15	79	33	50	79
Internal Link Dist (ft)		8292			6818			1075	1353	
Turn Bay Length (ft)	580		330	460		580	70			
Base Capacity (vph)	98	1328	1354	89	1321	1347	325	393	322	362
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.82	0.05	0.12	0.76	0.02	0.14	0.03	0.07	0.12

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	870	152	221	849	211	355
v/c Ratio	0.98	0.17	0.65	0.75	0.68	0.72
Control Delay	48.4	10.9	50.7	14.7	47.2	36.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.4	10.9	50.7	14.7	47.2	36.7
Queue Length 50th (ft)	462	39	64	259	116	181
Queue Length 95th (ft)	#839	82	#117	548	190	280
Internal Link Dist (ft)	6818			8784	1274	
Turn Bay Length (ft)		500	400			400
Base Capacity (vph)	885	902	342	1131	461	495
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.17	0.65	0.75	0.46	0.72

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	5	1128	75	201	1006	79	145	9	4
v/c Ratio	0.05	1.11	0.08	0.62	0.77	0.60	0.30	0.06	0.03
Control Delay	68.8	89.3	11.4	60.1	9.0	83.5	41.9	60.3	59.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.8	89.3	11.4	60.1	9.0	83.5	41.9	60.3	59.0
Queue Length 50th (ft)	5	~1252	27	205	265	76	109	8	4
Queue Length 95th (ft)	20	#1539	51	m206	m361	130	170	26	16
Internal Link Dist (ft)		8784			1836	1457		148	
Turn Bay Length (ft)	400		400	200			110		50
Base Capacity (vph)	99	1019	984	322	1311	264	480	283	301
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	1.11	0.08	0.62	0.77	0.30	0.30	0.03	0.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	3	1184	77	170	1163	57	86	1	1
v/c Ratio	0.03	1.17	0.08	0.57	1.01	0.28	0.49	0.01	0.01
Control Delay	61.7	97.0	11.1	73.8	50.6	64.3	72.5	68.0	68.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.7	97.0	11.1	73.8	50.6	64.3	72.5	68.0	68.0
Queue Length 50th (ft)	3	~1371	24	83	978	52	81	1	1
Queue Length 95th (ft)	m3	m#1207	m25	125	#1578	98	139	8	8
Internal Link Dist (ft)		1836			201	257		1116	
Turn Bay Length (ft)	200		157	230			200		50
Base Capacity (vph)	92	1014	1020	297	1148	206	174	285	255
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	1.17	0.08	0.57	1.01	0.28	0.49	0.00	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	106	991	38	108	943	350	181	165	79
v/c Ratio	0.87	1.01	0.04	0.90	0.97	0.37	0.64	0.89	0.28
Control Delay	107.7	56.6	10.0	114.8	44.8	13.2	54.1	89.3	42.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	107.7	56.6	10.0	114.8	44.8	13.2	54.1	89.3	42.1
Queue Length 50th (ft)	83	~823	11	85	669	131	127	123	51
Queue Length 95th (ft)	#179	#993	25	#185	#916	181	195	#231	93
Internal Link Dist (ft)		887			815		992	437	
Turn Bay Length (ft)	290		135	360		180			200
Base Capacity (vph)	122	977	966	120	977	956	306	200	311
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	1.01	0.04	0.90	0.97	0.37	0.59	0.82	0.25

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	26	572	74	152	1602	108	90	86
v/c Ratio	0.09	0.38	0.11	0.48	0.75	0.41	0.32	0.28
Control Delay	30.3	12.5	10.6	33.4	13.3	32.2	30.3	29.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.3	12.5	10.6	33.4	13.3	32.2	30.3	29.3
Queue Length 50th (ft)	7	67	15	44	139	30	24	23
Queue Length 95th (ft)	36	123	41	133	435	101	85	81
Internal Link Dist (ft)		1817			2312	2104		326
Turn Bay Length (ft)	100		90	110			30	
Base Capacity (vph)	313	2400	1050	467	2711	699	737	797
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.24	0.07	0.33	0.59	0.15	0.12	0.11

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	237	687	437	485	112	172	391	208	110	887	367
v/c Ratio	0.61	0.75	0.92	0.47	0.25	0.93	0.33	0.41	0.67	0.79	0.76
Control Delay	51.4	39.9	70.3	31.4	29.5	97.7	26.9	29.9	67.8	37.8	43.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.4	39.9	70.3	31.4	29.5	97.7	26.9	29.9	67.8	37.8	43.6
Queue Length 50th (ft)	78	219	151	139	57	116	101	106	73	280	218
Queue Length 95th (ft)	124	285	#265	190	104	#265	152	185	#165	382	#381
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	434	1133	476	1207	534	185	1238	535	164	1180	504
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.61	0.92	0.40	0.21	0.93	0.32	0.39	0.67	0.75	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	148	535	260	206	972	82	356	382	85	488
v/c Ratio	0.82	0.51	0.58	1.04	0.89	0.17	1.07	0.35	0.45	0.71
Control Delay	75.9	28.6	33.5	118.4	41.6	24.9	107.6	26.0	48.7	39.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.9	28.6	33.5	118.4	41.6	24.9	107.6	26.0	48.7	39.9
Queue Length 50th (ft)	88	133	126	~137	278	34	~242	95	48	143
Queue Length 95th (ft)	#210	199	223	#296	#424	75	#448	137	100	196
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	181	1156	492	198	1194	537	333	1215	202	919
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.46	0.53	1.04	0.81	0.15	1.07	0.31	0.42	0.53

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	608	198	377	125	163	727
v/c Ratio	0.88	0.33	0.74	0.28	0.72	0.82
Control Delay	37.5	18.2	32.7	21.6	52.3	25.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.5	18.2	32.7	21.6	52.3	25.7
Queue Length 50th (ft)	237	58	153	44	71	272
Queue Length 95th (ft)	#474	121	234	81	#177	397
Internal Link Dist (ft)	509		199			571
Turn Bay Length (ft)	75			145	400	
Base Capacity (vph)	748	654	728	637	231	1113
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.30	0.52	0.20	0.71	0.65

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	15	22	427	58	123	1150
v/c Ratio	0.06	0.07	0.37	0.06	0.35	0.65
Control Delay	22.6	14.2	8.6	7.0	21.2	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.6	14.2	8.6	7.0	21.2	4.3
Queue Length 50th (ft)	3	4	53	6	21	0
Queue Length 95th (ft)	24	22	180	29	103	440
Internal Link Dist (ft)	170		833			870
Turn Bay Length (ft)				65	350	
Base Capacity (vph)	671	443	1626	1343	495	1776
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.05	0.26	0.04	0.25	0.65

Intersection Summary

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1293	64	1069	229	67
v/c Ratio	1.11	0.79	0.82	1.08	0.35
Control Delay	81.0	123.1	14.8	144.5	66.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	81.0	123.1	14.8	144.5	66.5
Queue Length 50th (ft)	~1435	63	493	~249	61
Queue Length 95th (ft)	#1573	#140	618	#398	108
Internal Link Dist (ft)	669		851	978	
Turn Bay Length (ft)		150			50
Base Capacity (vph)	1170	81	1301	212	191
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.11	0.79	0.82	1.08	0.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	120	1024	14	970	363	14	50	864	25	383
v/c Ratio	0.71	0.73	0.07	0.94	0.39	0.08	0.29	0.90	0.05	0.87
Control Delay	67.6	27.1	41.9	49.2	8.4	43.1	47.2	47.6	26.7	55.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.6	27.1	41.9	49.2	8.4	43.1	47.2	47.6	26.7	55.4
Queue Length 50th (ft)	76	263	8	316	89	8	30	273	12	233
Queue Length 95th (ft)	#159	#463	26	#424	131	27	65	#362	30	#377
Internal Link Dist (ft)		116		1317			770		833	
Turn Bay Length (ft)	970		400		220			175		620
Base Capacity (vph)	168	1405	193	1086	965	174	175	1022	549	469
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.73	0.07	0.89	0.38	0.08	0.29	0.85	0.05	0.82

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	SBR
Lane Group Flow (vph)	477	1228	1275	96
v/c Ratio	0.90	0.45	0.77	0.19
Control Delay	49.7	1.4	19.4	19.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	49.7	1.4	19.4	19.3
Queue Length 50th (ft)	235	22	274	35
Queue Length 95th (ft)	#401	31	365	71
Internal Link Dist (ft)		1317	504	
Turn Bay Length (ft)	785			
Base Capacity (vph)	567	2718	1657	534
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.84	0.45	0.77	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	259	1019	1109	439	96	109
v/c Ratio	1.04	0.77	1.06	0.42	0.53	0.69
Control Delay	127.7	12.3	71.8	14.1	71.9	83.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	127.7	12.3	71.8	14.1	71.9	83.5
Queue Length 50th (ft)	~264	391	~1150	187	87	100
Queue Length 95th (ft)	#467	712	#1493	287	149	168
Internal Link Dist (ft)		386	8292		1387	
Turn Bay Length (ft)	420			325		100
Base Capacity (vph)	248	1315	1044	1044	245	217
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.04	0.77	1.06	0.42	0.39	0.50

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	38	1114	28	31	1486	29	83	39	38	70
v/c Ratio	0.49	0.89	0.02	0.38	1.22	0.03	0.60	0.26	0.29	0.45
Control Delay	85.0	24.4	4.9	78.3	124.4	5.1	76.2	60.4	61.7	66.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.0	24.4	4.9	78.3	124.4	5.1	76.2	60.4	61.7	66.1
Queue Length 50th (ft)	33	707	6	27	~1616	6	71	32	32	59
Queue Length 95th (ft)	#76	#1185	15	62	#1866	16	123	66	66	105
Internal Link Dist (ft)		8292			6818			1075	1353	
Turn Bay Length (ft)	580		330	460		580	70			
Base Capacity (vph)	78	1246	1164	81	1222	1066	292	313	280	333
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.89	0.02	0.38	1.22	0.03	0.28	0.12	0.14	0.21

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	793	265	279	1260	219	298
v/c Ratio	0.76	0.26	0.81	1.00	0.84	0.67
Control Delay	24.4	12.0	83.0	43.4	87.7	55.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.4	12.0	83.0	43.4	87.7	55.5
Queue Length 50th (ft)	527	107	139	~1303	208	254
Queue Length 95th (ft)	721	154	#204	#1569	#327	362
Internal Link Dist (ft)	6818			8784	1274	
Turn Bay Length (ft)		500	400			400
Base Capacity (vph)	1044	1024	360	1255	290	450
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.26	0.78	1.00	0.76	0.66

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1	1178	50	179	1709	173	305	1
v/c Ratio	0.01	1.19	0.05	0.76	1.39	0.79	0.59	0.00
Control Delay	68.0	123.7	11.8	63.2	194.5	85.0	47.3	49.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.0	123.7	11.8	63.2	194.5	85.0	47.3	49.0
Queue Length 50th (ft)	1	~1394	19	171	~2196	164	247	1
Queue Length 95th (ft)	8	#1542	35	m137	m#1379	228	331	6
Internal Link Dist (ft)		8784			1836	1457		148
Turn Bay Length (ft)	400		400	200			110	
Base Capacity (vph)	120	990	970	236	1232	283	518	392
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	1.19	0.05	0.76	1.39	0.61	0.59	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	1303	120	174	1581	210	278	1	1
v/c Ratio	1.45	0.14	1.02	1.55	0.53	0.82	0.01	0.01
Control Delay	231.3	18.0	141.5	276.7	56.8	74.7	67.0	67.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	231.3	18.0	141.5	276.7	56.8	74.7	67.0	67.0
Queue Length 50th (ft)	~1737	57	~92	~2171	183	261	1	1
Queue Length 95th (ft)	m#1443	m52	#167	#2357	264	#391	8	8
Internal Link Dist (ft)	1836			201	257		1116	
Turn Bay Length (ft)		157	230			200		50
Base Capacity (vph)	897	859	171	1021	393	340	291	260
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.45	0.14	1.02	1.55	0.53	0.82	0.00	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	76	735	15	54	1106	163	239	305	167
v/c Ratio	0.79	0.81	0.02	0.56	1.26	0.19	0.58	1.20	0.35
Control Delay	116.7	34.9	15.1	90.9	156.3	17.4	51.2	166.3	43.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	116.7	34.9	15.1	90.9	156.3	17.4	51.2	166.3	43.8
Queue Length 50th (ft)	75	575	6	53	~1351	77	199	~360	128
Queue Length 95th (ft)	#168	781	18	#108	#1617	120	296	#555	198
Internal Link Dist (ft)		887			815		992	437	
Turn Bay Length (ft)	290		135	360		180			200
Base Capacity (vph)	96	912	902	97	879	844	414	254	477
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.81	0.02	0.56	1.26	0.19	0.58	1.20	0.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	65	1146	97	131	797	181	260	54
v/c Ratio	0.21	0.76	0.15	0.43	0.48	0.58	0.72	0.15
Control Delay	27.2	21.4	14.2	30.9	14.6	30.0	35.2	20.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.2	21.4	14.2	30.9	14.6	30.0	35.2	20.8
Queue Length 50th (ft)	22	194	22	46	117	64	95	17
Queue Length 95th (ft)	58	#353	58	103	199	118	165	42
Internal Link Dist (ft)		1817			2312	2104		326
Turn Bay Length (ft)	100		90	110			30	
Base Capacity (vph)	321	1550	686	306	1691	699	800	786
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.74	0.14	0.43	0.47	0.26	0.33	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	237	564	273	680	208	342	1169	502	171	574	357
v/c Ratio	0.65	0.60	0.79	0.72	0.51	1.30	0.92	0.91	0.90	0.51	0.73
Control Delay	54.7	35.4	64.6	39.1	37.0	195.7	45.4	55.9	91.3	31.4	42.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.7	35.4	64.6	39.1	37.0	195.7	45.4	55.9	91.3	31.4	42.6
Queue Length 50th (ft)	81	173	95	218	119	~305	397	323	118	166	215
Queue Length 95th (ft)	126	228	#169	283	192	#500	#561	#552	#258	230	#346
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	378	1124	345	1122	485	264	1313	568	191	1175	507
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.50	0.79	0.61	0.43	1.30	0.89	0.88	0.90	0.49	0.70

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	226	1010	269	210	669	62	314	641	170	494
v/c Ratio	1.05	0.91	0.56	0.96	0.60	0.13	1.06	0.75	0.73	0.68
Control Delay	117.0	44.5	32.8	96.7	30.4	25.2	110.6	38.5	59.0	38.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	117.0	44.5	32.8	96.7	30.4	25.2	110.6	38.5	59.0	38.1
Queue Length 50th (ft)	~152	302	133	128	176	26	~214	188	99	143
Queue Length 95th (ft)	#316	#460	230	#290	253	61	#405	252	#202	196
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	216	1158	503	218	1158	509	295	1033	254	951
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.05	0.87	0.53	0.96	0.58	0.12	1.06	0.62	0.67	0.52

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	127	105	1038	603	187	346
v/c Ratio	0.56	0.51	0.95	0.63	0.89	0.24
Control Delay	48.3	47.7	36.2	16.1	81.9	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.3	47.7	36.2	16.1	81.9	4.0
Queue Length 50th (ft)	73	60	522	210	113	48
Queue Length 95th (ft)	130	112	#923	365	#256	94
Internal Link Dist (ft)	509		199			571
Turn Bay Length (ft)	75			145	400	
Base Capacity (vph)	326	292	1136	994	211	1488
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.36	0.91	0.61	0.89	0.23

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	52	124	1572	9	14	463
v/c Ratio	0.42	0.58	1.05	0.01	0.19	0.28
Control Delay	71.8	66.4	54.5	3.9	70.5	2.3
Queue Delay	0.0	0.0	20.1	0.0	0.0	0.0
Total Delay	71.8	66.4	74.6	3.9	70.5	2.3
Queue Length 50th (ft)	46	105	~1564	2	12	58
Queue Length 95th (ft)	92	172	#1909	6	38	100
Internal Link Dist (ft)	170		833			870
Turn Bay Length (ft)				65	350	
Base Capacity (vph)	264	212	1496	938	73	1661
Starvation Cap Reductn	0	0	73	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.58	1.10	0.01	0.19	0.28

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	784	85	76	1372	75	45
v/c Ratio	0.66	0.07	0.58	1.02	0.52	0.36
Control Delay	13.3	5.6	82.8	42.0	77.5	71.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.3	5.6	82.8	42.0	77.5	71.5
Queue Length 50th (ft)	335	19	71	~1371	70	41
Queue Length 95th (ft)	550	40	129	#1725	126	84
Internal Link Dist (ft)	669			851	978	
Turn Bay Length (ft)		420	150			50
Base Capacity (vph)	1179	1213	157	1346	198	172
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.07	0.48	1.02	0.38	0.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	286	813	3	1101	802	17	60	327	34	145
v/c Ratio	0.88	0.45	0.02	0.91	0.81	0.11	0.40	0.55	0.10	0.54
Control Delay	73.1	15.7	50.0	43.7	23.1	52.1	59.2	44.3	38.2	48.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.1	15.7	50.0	43.7	23.1	52.1	59.2	44.3	38.2	48.7
Queue Length 50th (ft)	197	142	2	369	410	11	40	111	21	96
Queue Length 95th (ft)	#405	316	12	#600	603	37	91	155	49	160
Internal Link Dist (ft)		116		1317			770		833	
Turn Bay Length (ft)	970		400		220			175		620
Base Capacity (vph)	325	1788	171	1255	1138	154	150	914	505	412
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.45	0.02	0.88	0.70	0.11	0.40	0.36	0.07	0.35

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	SBR
Lane Group Flow (vph)	121	1047	1231	732
v/c Ratio	0.16	0.35	0.95	1.03
Control Delay	17.3	0.3	45.8	71.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	17.3	0.3	45.8	71.8
Queue Length 50th (ft)	47	0	430	~584
Queue Length 95th (ft)	84	0	#585	#825
Internal Link Dist (ft)		1317	504	
Turn Bay Length (ft)	785			
Base Capacity (vph)	754	2980	1298	710
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.16	0.35	0.95	1.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	86	887	1044	134	372	132
v/c Ratio	0.91	0.77	1.03	0.13	1.02	0.41
Control Delay	136.5	18.0	61.0	10.3	105.7	52.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	136.5	18.0	61.0	10.3	105.7	52.9
Queue Length 50th (ft)	80	457	~1013	45	~357	106
Queue Length 95th (ft)	#189	652	#1275	74	#561	172
Internal Link Dist (ft)		386	8292		1387	
Turn Bay Length (ft)	420			325		100
Base Capacity (vph)	94	1147	1016	1005	366	324
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.77	1.03	0.13	1.02	0.41

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	80	1149	73	14	1038	37	48	13	25	48
v/c Ratio	0.75	0.86	0.05	0.17	0.85	0.03	0.44	0.10	0.23	0.39
Control Delay	99.0	18.9	3.4	66.4	20.1	4.5	70.0	57.5	61.7	66.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	99.0	18.9	3.4	66.4	20.1	4.5	70.0	57.5	61.7	66.7
Queue Length 50th (ft)	69	420	8	12	537	7	40	11	21	40
Queue Length 95th (ft)	#165	#1287	28	36	#1015	17	83	32	51	82
Internal Link Dist (ft)		8292			6818			1075	1353	
Turn Bay Length (ft)	580		330	460		580	70			
Base Capacity (vph)	107	1329	1355	84	1245	1269	308	372	305	342
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.86	0.05	0.17	0.83	0.03	0.16	0.03	0.08	0.14

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	921	160	240	882	221	370
v/c Ratio	0.99	0.17	0.78	0.76	0.73	0.79
Control Delay	49.0	10.6	65.7	15.2	55.2	46.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.0	10.6	65.7	15.2	55.2	46.8
Queue Length 50th (ft)	561	44	81	309	140	225
Queue Length 95th (ft)	#951	86	#153	603	221	337
Internal Link Dist (ft)	6818			8784	1274	
Turn Bay Length (ft)		500	400			400
Base Capacity (vph)	933	951	307	1157	409	466
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.17	0.78	0.76	0.54	0.79

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	5	1178	75	203	1056	79	145	9	4
v/c Ratio	0.05	1.16	0.08	0.62	0.81	0.60	0.30	0.06	0.03
Control Delay	68.8	110.0	11.5	57.3	9.1	83.5	41.7	60.3	59.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.8	110.0	11.5	57.3	9.1	83.5	41.7	60.3	59.0
Queue Length 50th (ft)	5	~1357	27	205	281	76	109	8	4
Queue Length 95th (ft)	20	#1642	51	m198	m353	130	170	26	16
Internal Link Dist (ft)		8784			1836	1457		148	
Turn Bay Length (ft)	400		400	200			110		50
Base Capacity (vph)	99	1016	981	325	1311	264	483	283	301
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	1.16	0.08	0.62	0.81	0.30	0.30	0.03	0.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	3	1250	78	184	1215	57	93	1	2
v/c Ratio	0.03	1.25	0.08	0.58	1.06	0.27	0.51	0.01	0.02
Control Delay	61.3	136.2	11.8	73.2	67.2	63.3	72.6	68.0	68.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.3	136.2	11.8	73.2	67.2	63.3	72.6	68.0	68.5
Queue Length 50th (ft)	3	~1526	26	90	~1276	52	87	1	2
Queue Length 95th (ft)	m3	m#1245	m25	134	#1693	97	148	8	11
Internal Link Dist (ft)		1836			201	257		1116	
Turn Bay Length (ft)	200		157	230			200		50
Base Capacity (vph)	92	997	1004	317	1141	214	181	285	255
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	1.25	0.08	0.58	1.06	0.27	0.51	0.00	0.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	220	1102	38	116	957	537	262	229	115
v/c Ratio	1.12	1.19	0.04	1.12	1.13	0.65	0.74	1.14	0.31
Control Delay	154.0	125.7	13.0	180.3	106.1	28.3	61.4	151.8	44.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	154.0	125.7	13.0	180.3	106.1	28.3	61.4	151.8	44.1
Queue Length 50th (ft)	~229	~1208	14	~120	~1009	341	220	~242	84
Queue Length 95th (ft)	#373	#1366	30	#235	#1176	437	309	#386	135
Internal Link Dist (ft)		887			815		992	437	
Turn Bay Length (ft)	290		135	360		180			200
Base Capacity (vph)	197	925	915	104	845	827	352	201	371
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.12	1.19	0.04	1.12	1.13	0.65	0.74	1.14	0.31

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	26	686	73	152	1638	108	90	86
v/c Ratio	0.09	0.43	0.11	0.50	0.75	0.43	0.34	0.30
Control Delay	30.7	12.8	10.3	34.5	13.3	33.4	31.0	30.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.7	12.8	10.3	34.5	13.3	33.4	31.0	30.0
Queue Length 50th (ft)	7	84	14	46	145	32	26	25
Queue Length 95th (ft)	36	150	41	133	454	101	85	81
Internal Link Dist (ft)		1817			2312	2104		326
Turn Bay Length (ft)	100		90	110			30	
Base Capacity (vph)	298	2290	1002	445	2584	662	703	758
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.30	0.07	0.34	0.63	0.16	0.13	0.11

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	237	790	447	499	116	172	391	211	138	887	367
v/c Ratio	0.62	0.81	0.96	0.46	0.24	0.96	0.34	0.42	0.87	0.81	0.78
Control Delay	53.0	41.9	80.6	30.9	29.0	105.3	28.1	31.4	92.6	39.9	46.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	41.9	80.6	30.9	29.0	105.3	28.1	31.4	92.6	39.9	46.1
Queue Length 50th (ft)	80	262	159	144	59	119	104	111	95	287	224
Queue Length 95th (ft)	124	336	#273	195	106	#265	152	187	#218	382	#381
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	422	1108	464	1175	520	180	1204	521	159	1148	491
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.71	0.96	0.42	0.22	0.96	0.32	0.40	0.87	0.77	0.75

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	151	539	361	291	985	82	369	413	85	627
v/c Ratio	0.87	0.58	0.92	1.08	0.88	0.16	1.05	0.35	0.49	0.85
Control Delay	90.8	37.1	67.6	123.0	44.8	27.6	104.6	28.0	56.7	52.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.8	37.1	67.6	123.0	44.8	27.6	104.6	28.0	56.7	52.1
Queue Length 50th (ft)	107	172	245	~237	341	41	~294	116	58	221
Queue Length 95th (ft)	#230	228	#416	#408	#431	79	#479	163	109	#296
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	173	990	422	269	1187	534	351	1178	196	794
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.54	0.86	1.08	0.83	0.15	1.05	0.35	0.43	0.79

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	752	198	424	151	163	1064
v/c Ratio	1.09	0.33	0.64	0.26	0.77	1.08
Control Delay	92.9	25.5	34.4	26.4	71.4	79.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.9	25.5	34.4	26.4	71.4	79.7
Queue Length 50th (ft)	~597	96	248	75	113	~841
Queue Length 95th (ft)	#799	152	348	124	#202	#1050
Internal Link Dist (ft)	509		199			571
Turn Bay Length (ft)	75			145	400	
Base Capacity (vph)	693	606	666	583	223	986
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.09	0.33	0.64	0.26	0.73	1.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	15	22	971	58	123	1265
v/c Ratio	0.09	0.12	0.73	0.05	0.69	0.71
Control Delay	28.0	24.1	11.7	4.0	51.4	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.0	24.1	11.7	4.0	51.4	5.9
Queue Length 50th (ft)	5	7	156	5	41	0
Queue Length 95th (ft)	24	26	#624	23	#147	#795
Internal Link Dist (ft)	170		833			870
Turn Bay Length (ft)				65	350	
Base Capacity (vph)	451	178	1417	1171	178	1776
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.12	0.69	0.05	0.69	0.71

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1518	64	1119	229	67
v/c Ratio	1.29	0.79	0.86	1.08	0.35
Control Delay	160.9	123.1	17.5	144.5	66.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	160.9	123.1	17.5	144.5	66.5
Queue Length 50th (ft)	~1889	63	571	~249	61
Queue Length 95th (ft)	#2007	#140	723	#398	108
Internal Link Dist (ft)	669		851	978	
Turn Bay Length (ft)		150			50
Base Capacity (vph)	1173	81	1301	212	191
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.29	0.79	0.86	1.08	0.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	305	1065	14	1105	753	14	50	914	25	455
v/c Ratio	1.03	0.66	0.11	1.03	0.79	0.13	0.45	0.95	0.05	1.03
Control Delay	118.0	29.2	68.2	82.9	24.8	69.7	81.8	70.9	40.2	101.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	118.0	29.2	68.2	82.9	24.8	69.7	81.8	70.9	40.2	101.5
Queue Length 50th (ft)	~324	361	13	~619	465	13	48	457	18	~483
Queue Length 95th (ft)	#492	507	36	#715	598	36	92	#558	42	#665
Internal Link Dist (ft)		116		1317			770		833	
Turn Bay Length (ft)	970		400		220			175		620
Base Capacity (vph)	296	1613	122	1069	953	110	110	963	517	442
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.66	0.11	1.03	0.79	0.13	0.45	0.95	0.05	1.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	SBR
Lane Group Flow (vph)	482	1309	1740	122
v/c Ratio	1.00	0.48	1.00	0.26
Control Delay	73.7	1.5	40.4	22.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	73.7	1.5	40.4	22.8
Queue Length 50th (ft)	257	25	449	49
Queue Length 95th (ft)	#454	33	#649	94
Internal Link Dist (ft)		1317	504	
Turn Bay Length (ft)	785			
Base Capacity (vph)	483	2718	1744	468
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.00	0.48	1.00	0.26

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	261	1100	1576	439	96	122
v/c Ratio	1.36	0.84	1.45	0.40	0.51	0.72
Control Delay	238.7	16.6	232.0	12.1	69.9	86.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	238.7	16.6	232.0	12.1	69.9	86.0
Queue Length 50th (ft)	~326	522	~2043	174	87	114
Queue Length 95th (ft)	#525	933	#2392	261	149	186
Internal Link Dist (ft)		386	8292		1387	
Turn Bay Length (ft)	420			325		100
Base Capacity (vph)	192	1306	1086	1086	243	215
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.36	0.84	1.45	0.40	0.40	0.57

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	41	1197	28	31	1960	29	83	39	38	84
v/c Ratio	0.53	0.96	0.02	0.38	1.60	0.03	0.60	0.26	0.29	0.54
Control Delay	87.8	33.9	4.9	78.3	295.6	5.1	76.2	60.4	61.7	70.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.8	33.9	4.9	78.3	295.6	5.1	76.2	60.4	61.7	70.2
Queue Length 50th (ft)	36	916	6	27	~2481	6	71	32	32	72
Queue Length 95th (ft)	#84	#1338	15	62	#2722	16	123	66	66	122
Internal Link Dist (ft)		8292			6818			1075	1353	
Turn Bay Length (ft)	580		330	460		580	70			
Base Capacity (vph)	78	1246	1164	81	1222	1066	292	313	280	333
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.96	0.02	0.38	1.60	0.03	0.28	0.12	0.14	0.25

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	863	269	279	1660	244	298
v/c Ratio	0.85	0.27	0.76	1.35	0.85	0.62
Control Delay	32.9	13.6	78.1	183.4	85.4	50.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.9	13.6	78.1	183.4	85.4	50.5
Queue Length 50th (ft)	673	117	137	~2124	230	243
Queue Length 95th (ft)	#1019	171	190	#2406	#352	346
Internal Link Dist (ft)	6818			8784	1274	
Turn Bay Length (ft)		500	400			400
Base Capacity (vph)	1010	991	398	1230	326	492
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.27	0.70	1.35	0.75	0.61

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1	1253	52	179	2142	187	305	1
v/c Ratio	0.01	1.27	0.05	0.79	1.75	0.82	0.59	0.00
Control Delay	68.0	156.8	11.8	65.1	359.0	86.7	47.1	48.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.0	156.8	11.8	65.1	359.0	86.7	47.1	48.0
Queue Length 50th (ft)	1	~1546	19	176	~3097	178	247	1
Queue Length 95th (ft)	8	#1688	37	m115	m#1483	246	331	6
Internal Link Dist (ft)		8784			1836	1457		148
Turn Bay Length (ft)	400		400	200			110	
Base Capacity (vph)	120	988	968	226	1222	283	520	392
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	1.27	0.05	0.79	1.75	0.66	0.59	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	1375	123	174	1990	224	278	1	1
v/c Ratio	1.52	0.14	1.02	1.93	0.59	0.84	0.01	0.01
Control Delay	259.0	17.5	141.5	443.4	59.6	78.5	67.0	67.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	259.0	17.5	141.5	443.4	59.6	78.5	67.0	67.0
Queue Length 50th (ft)	~1872	56	~92	~2989	198	263	1	1
Queue Length 95th (ft)	m#1432	m49	#167	#3146	284	#401	8	8
Internal Link Dist (ft)	1836			201	257		1116	
Turn Bay Length (ft)		157	230			200		50
Base Capacity (vph)	907	869	171	1032	381	330	291	260
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.52	0.14	1.02	1.93	0.59	0.84	0.00	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	119	751	15	106	1201	232	259	489	267
v/c Ratio	1.20	0.97	0.02	0.95	1.54	0.31	0.66	1.53	0.47
Control Delay	210.9	62.2	20.1	142.2	278.1	24.2	49.7	287.1	40.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	210.9	62.2	20.1	142.2	278.1	24.2	49.7	287.1	40.3
Queue Length 50th (ft)	~140	699	7	105	~1644	133	212	~667	201
Queue Length 95th (ft)	#276	#985	21	#231	#1909	197	321	#892	290
Internal Link Dist (ft)		887			815		992	437	
Turn Bay Length (ft)	290		135	360		180			200
Base Capacity (vph)	99	778	769	111	781	750	395	320	573
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.20	0.97	0.02	0.95	1.54	0.31	0.66	1.53	0.47

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	65	1185	96	131	908	180	260	54
v/c Ratio	0.22	0.78	0.14	0.44	0.54	0.58	0.73	0.16
Control Delay	27.2	22.0	14.2	31.1	15.4	30.2	35.9	20.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.2	22.0	14.2	31.1	15.4	30.2	35.9	20.9
Queue Length 50th (ft)	22	203	22	46	140	63	95	17
Queue Length 95th (ft)	58	#373	57	103	233	118	165	42
Internal Link Dist (ft)		1817			2312	2104		326
Turn Bay Length (ft)	100		90	110			30	
Base Capacity (vph)	316	1524	675	301	1675	688	787	773
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.78	0.14	0.44	0.54	0.26	0.33	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	237	580	278	771	234	342	1169	511	176	574	357
v/c Ratio	0.71	0.59	0.82	0.76	0.53	1.33	0.93	0.94	0.94	0.51	0.74
Control Delay	59.5	35.1	68.2	40.0	36.9	207.4	47.2	61.0	101.2	32.0	43.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.5	35.1	68.2	40.0	36.9	207.4	47.2	61.0	101.2	32.0	43.6
Queue Length 50th (ft)	85	178	101	253	135	~319	416	348	125	174	225
Queue Length 95th (ft)	#138	235	#174	323	213	#500	#561	#567	#267	230	#346
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	338	1102	338	1132	490	258	1286	556	187	1150	496
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.53	0.82	0.68	0.48	1.33	0.91	0.92	0.94	0.50	0.72

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	235	1021	285	227	674	62	406	835	170	518
v/c Ratio	0.92	0.97	0.63	0.96	0.67	0.14	0.97	0.82	0.79	0.80
Control Delay	89.1	62.8	43.4	100.3	41.3	33.4	83.2	45.2	75.0	54.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.1	62.8	43.4	100.3	41.3	33.4	83.2	45.2	75.0	54.9
Queue Length 50th (ft)	179	404	188	174	238	35	308	310	126	197
Queue Length 95th (ft)	#341	#564	291	#341	313	73	#525	390	#232	260
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	256	1052	455	237	1009	443	417	1078	234	738
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.97	0.63	0.96	0.67	0.14	0.97	0.77	0.73	0.70

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	158	105	1334	636	187	400
v/c Ratio	0.83	0.61	1.05	0.57	1.03	0.26
Control Delay	96.8	79.4	62.5	14.1	138.7	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	96.8	79.4	62.5	14.1	138.7	3.4
Queue Length 50th (ft)	153	99	~1425	296	~196	75
Queue Length 95th (ft)	#267	167	#1691	401	#359	101
Internal Link Dist (ft)	509		199			571
Turn Bay Length (ft)	75			145	400	
Base Capacity (vph)	203	182	1272	1113	181	1566
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.58	1.05	0.57	1.03	0.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	52	124	1703	9	14	978
v/c Ratio	0.42	0.58	1.14	0.01	0.19	0.59
Control Delay	71.8	66.4	88.7	3.9	70.5	4.5
Queue Delay	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	71.8	66.4	88.8	3.9	70.5	4.5
Queue Length 50th (ft)	46	105	~1809	2	12	192
Queue Length 95th (ft)	92	172	#2159	6	38	327
Internal Link Dist (ft)	170		833			870
Turn Bay Length (ft)				65	350	
Base Capacity (vph)	264	212	1496	938	73	1661
Starvation Cap Reductn	0	0	38	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.58	1.17	0.01	0.19	0.59

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	843	85	76	1564	75	45
v/c Ratio	0.72	0.07	0.58	1.16	0.52	0.36
Control Delay	15.0	5.6	82.8	96.6	77.5	71.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.0	5.6	82.8	96.6	77.5	71.5
Queue Length 50th (ft)	389	19	71	~1748	70	41
Queue Length 95th (ft)	644	40	129	#2112	126	84
Internal Link Dist (ft)	669			851	978	
Turn Bay Length (ft)		420	150			50
Base Capacity (vph)	1179	1213	157	1346	198	172
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.07	0.48	1.16	0.38	0.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	359	936	3	1152	861	17	60	673	34	314
v/c Ratio	0.98	0.52	0.02	0.98	0.85	0.14	0.51	0.92	0.08	0.95
Control Delay	97.0	17.8	61.0	62.4	29.1	64.8	79.3	71.7	45.7	92.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	97.0	17.8	61.0	62.4	29.1	64.8	79.3	71.7	45.7	92.6
Queue Length 50th (ft)	~336	236	3	541	590	15	54	314	25	288
Queue Length 95th (ft)	#543	377	13	#701	842	41	105	#434	57	#485
Internal Link Dist (ft)		116		1317			770		833	
Turn Bay Length (ft)	970		400		220			175		620
Base Capacity (vph)	366	1808	132	1212	1018	120	117	731	405	329
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.52	0.02	0.95	0.85	0.14	0.51	0.92	0.08	0.95

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	SBR
Lane Group Flow (vph)	147	1500	1336	739
v/c Ratio	0.20	0.50	0.97	1.06
Control Delay	23.0	0.6	54.0	87.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	23.0	0.6	54.0	87.2
Queue Length 50th (ft)	78	0	611	~775
Queue Length 95th (ft)	124	0	#781	#1033
Internal Link Dist (ft)		1317	504	
Turn Bay Length (ft)	785			
Base Capacity (vph)	741	2980	1382	698
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.20	0.50	0.97	1.06

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	98	1305	1142	134	372	134
v/c Ratio	1.07	1.10	1.08	0.13	1.11	0.45
Control Delay	176.8	80.2	78.0	9.5	137.7	60.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	176.8	80.2	78.0	9.5	137.7	60.0
Queue Length 50th (ft)	~105	~1448	~1245	45	~415	118
Queue Length 95th (ft)	#230	#1713	#1511	72	#622	189
Internal Link Dist (ft)		386	8292		1387	
Turn Bay Length (ft)	420			325		100
Base Capacity (vph)	92	1182	1056	1045	334	296
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.07	1.10	1.08	0.13	1.11	0.45

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	92	1547	73	14	1132	37	48	13	25	51
v/c Ratio	0.84	1.16	0.05	0.17	0.93	0.03	0.44	0.10	0.23	0.42
Control Delay	113.0	97.5	3.4	66.6	28.2	4.6	71.0	57.8	62.2	68.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	113.0	97.5	3.4	66.6	28.2	4.6	71.0	57.8	62.2	68.7
Queue Length 50th (ft)	79	~1558	8	12	717	7	40	11	21	43
Queue Length 95th (ft)	#190	#2022	28	36	#1276	18	83	32	51	86
Internal Link Dist (ft)		8292			6818			1075	1353	
Turn Bay Length (ft)	580		330	460		580	70			
Base Capacity (vph)	109	1333	1359	83	1221	1245	303	366	300	337
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	1.16	0.05	0.17	0.93	0.03	0.16	0.04	0.08	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1300	183	240	971	227	370
v/c Ratio	1.22	0.17	1.05	0.78	0.86	0.98
Control Delay	131.0	8.9	136.9	15.3	90.7	96.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	131.0	8.9	136.9	15.3	90.7	96.8
Queue Length 50th (ft)	~1568	61	~132	491	217	358
Queue Length 95th (ft)	#1836	92	#225	707	#348	#560
Internal Link Dist (ft)	6818			8784	1274	
Turn Bay Length (ft)		500	400			400
Base Capacity (vph)	1067	1088	229	1239	287	377
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.22	0.17	1.05	0.78	0.79	0.98

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	5	1546	86	203	1142	81	145	9	4
v/c Ratio	0.05	1.51	0.09	0.64	0.87	0.61	0.30	0.06	0.03
Control Delay	68.8	260.9	11.2	58.2	10.2	83.7	42.5	60.0	58.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.8	260.9	11.2	58.2	10.2	83.7	42.5	60.0	58.8
Queue Length 50th (ft)	5	~2099	31	203	284	78	110	8	4
Queue Length 95th (ft)	20	#2365	55	m185	m336	133	174	26	16
Internal Link Dist (ft)		8784			1836	1457		148	
Turn Bay Length (ft)	400		400	200			110		50
Base Capacity (vph)	99	1022	987	317	1309	264	477	284	301
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	1.51	0.09	0.64	0.87	0.31	0.30	0.03	0.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	3	1606	90	184	1299	59	93	1	2
v/c Ratio	0.03	1.61	0.09	0.58	1.14	0.28	0.51	0.01	0.02
Control Delay	60.7	296.5	12.2	73.2	95.4	63.5	72.6	68.0	68.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.7	296.5	12.2	73.2	95.4	63.5	72.6	68.0	68.5
Queue Length 50th (ft)	3	~2252	30	90	~1447	54	87	1	2
Queue Length 95th (ft)	m3	m#1265	m22	134	#1863	100	148	8	11
Internal Link Dist (ft)		1836			201	257		1116	
Turn Bay Length (ft)	200		157	230			200		50
Base Capacity (vph)	92	997	1004	317	1141	214	181	285	255
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	1.61	0.09	0.58	1.14	0.28	0.51	0.00	0.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	217	1102	38	116	957	536	261	227	113
v/c Ratio	1.10	1.19	0.04	1.12	1.13	0.65	0.74	1.12	0.30
Control Delay	149.7	125.7	13.0	180.3	106.1	28.3	61.1	146.9	44.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	149.7	125.7	13.0	180.3	106.1	28.3	61.1	146.9	44.0
Queue Length 50th (ft)	~224	~1208	14	~120	~1009	340	219	~237	83
Queue Length 95th (ft)	#365	#1366	30	#235	#1176	436	308	#383	134
Internal Link Dist (ft)		887			815		992	437	
Turn Bay Length (ft)	290		135	360		180			200
Base Capacity (vph)	197	925	915	104	845	827	353	202	371
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.10	1.19	0.04	1.12	1.13	0.65	0.74	1.12	0.30

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	26	686	73	152	1638	108	90	86
v/c Ratio	0.09	0.43	0.11	0.50	0.75	0.43	0.34	0.30
Control Delay	30.7	12.8	10.3	34.5	13.3	33.4	31.0	30.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.7	12.8	10.3	34.5	13.3	33.4	31.0	30.0
Queue Length 50th (ft)	7	84	14	46	145	32	26	25
Queue Length 95th (ft)	36	150	41	133	454	101	85	81
Internal Link Dist (ft)		1817			2312	2104		326
Turn Bay Length (ft)	100		90	110			30	
Base Capacity (vph)	298	2290	1002	445	2584	662	703	758
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.30	0.07	0.34	0.63	0.16	0.13	0.11

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	237	791	447	499	116	172	391	211	138	887	367
v/c Ratio	0.62	0.81	0.96	0.46	0.24	0.96	0.34	0.42	0.87	0.81	0.78
Control Delay	53.0	41.9	80.6	30.9	29.0	105.3	28.1	31.4	92.6	40.0	46.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	41.9	80.6	30.9	29.0	105.3	28.1	31.4	92.6	40.0	46.1
Queue Length 50th (ft)	80	263	159	144	59	119	104	111	95	288	224
Queue Length 95th (ft)	124	336	#273	195	106	#265	152	187	#218	382	#381
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	422	1108	464	1174	520	180	1204	521	159	1148	491
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.71	0.96	0.43	0.22	0.96	0.32	0.40	0.87	0.77	0.75

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	151	538	362	294	984	82	370	414	85	628
v/c Ratio	0.87	0.58	0.92	1.10	0.88	0.16	1.05	0.35	0.49	0.85
Control Delay	91.2	37.1	67.8	126.5	44.6	27.5	105.7	28.0	56.8	52.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	91.2	37.1	67.8	126.5	44.6	27.5	105.7	28.0	56.8	52.3
Queue Length 50th (ft)	107	172	245	~242	341	41	~295	116	58	222
Queue Length 95th (ft)	#230	228	#417	#413	#430	79	#481	163	109	#297
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	173	989	422	268	1186	533	351	1178	196	794
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.54	0.86	1.10	0.83	0.15	1.05	0.35	0.43	0.79

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	753	198	426	150	163	1068
v/c Ratio	1.09	0.33	0.64	0.26	0.77	1.08
Control Delay	93.4	25.5	34.5	26.3	71.4	81.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.4	25.5	34.5	26.3	71.4	81.1
Queue Length 50th (ft)	~598	96	249	74	113	~847
Queue Length 95th (ft)	#800	152	349	122	#202	#1057
Internal Link Dist (ft)	509		199			571
Turn Bay Length (ft)	75			145	400	
Base Capacity (vph)	693	606	666	583	223	986
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.09	0.33	0.64	0.26	0.73	1.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	15	22	971	58	123	1270
v/c Ratio	0.09	0.12	0.73	0.05	0.69	0.72
Control Delay	28.1	24.2	11.6	4.0	52.2	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.1	24.2	11.6	4.0	52.2	5.9
Queue Length 50th (ft)	5	7	156	5	42	0
Queue Length 95th (ft)	24	26	#624	23	#147	#801
Internal Link Dist (ft)	170		833			870
Turn Bay Length (ft)				65	350	
Base Capacity (vph)	448	177	1415	1169	177	1776
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.12	0.69	0.05	0.69	0.72

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1516	64	1116	229	67
v/c Ratio	1.29	0.79	0.86	1.08	0.35
Control Delay	160.1	123.1	17.3	144.5	66.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	160.1	123.1	17.3	144.5	66.5
Queue Length 50th (ft)	~1885	63	565	~249	61
Queue Length 95th (ft)	#2003	#140	714	#398	108
Internal Link Dist (ft)	669		851	978	
Turn Bay Length (ft)		150			50
Base Capacity (vph)	1173	81	1301	212	191
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.29	0.79	0.86	1.08	0.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	303	1064	14	1102	754	14	50	917	25	456
v/c Ratio	1.02	0.66	0.11	1.03	0.79	0.13	0.45	0.95	0.05	1.03
Control Delay	116.5	29.2	68.2	82.1	24.9	69.7	81.8	71.4	40.2	102.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	116.5	29.2	68.2	82.1	24.9	69.7	81.8	71.4	40.2	102.1
Queue Length 50th (ft)	~320	360	13	~616	466	13	48	459	18	~485
Queue Length 95th (ft)	#486	506	36	#712	599	36	92	#561	42	#667
Internal Link Dist (ft)		116		1317			770		833	
Turn Bay Length (ft)	970		400		220			175		620
Base Capacity (vph)	296	1613	122	1069	953	110	110	963	517	442
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.66	0.11	1.03	0.79	0.13	0.45	0.95	0.05	1.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	SBR
Lane Group Flow (vph)	482	1311	1739	122
v/c Ratio	1.00	0.48	1.00	0.26
Control Delay	73.7	1.5	40.2	22.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	73.7	1.5	40.2	22.8
Queue Length 50th (ft)	257	25	448	49
Queue Length 95th (ft)	#454	33	#648	94
Internal Link Dist (ft)		1317	504	
Turn Bay Length (ft)	785			
Base Capacity (vph)	483	2718	1744	468
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.00	0.48	1.00	0.26

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	261	1102	1574	439	96	122
v/c Ratio	1.36	0.84	1.45	0.40	0.51	0.72
Control Delay	238.7	16.7	231.2	12.1	69.9	86.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	238.7	16.7	231.2	12.1	69.9	86.0
Queue Length 50th (ft)	~326	525	~2039	174	87	114
Queue Length 95th (ft)	#525	943	#2390	261	149	186
Internal Link Dist (ft)		386	8292		1387	
Turn Bay Length (ft)	420			325		100
Base Capacity (vph)	192	1306	1086	1086	243	215
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.36	0.84	1.45	0.40	0.40	0.57

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	41	1199	28	31	1959	29	83	39	38	84
v/c Ratio	0.53	0.96	0.02	0.38	1.60	0.03	0.60	0.26	0.29	0.54
Control Delay	87.8	34.2	4.9	78.3	295.3	5.1	76.2	60.4	61.7	70.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.8	34.2	4.9	78.3	295.3	5.1	76.2	60.4	61.7	70.2
Queue Length 50th (ft)	36	922	6	27	~2480	6	71	32	32	72
Queue Length 95th (ft)	#84	#1341	15	62	#2720	16	123	66	66	122
Internal Link Dist (ft)		8292			6818			1075	1353	
Turn Bay Length (ft)	580		330	460		580	70			
Base Capacity (vph)	78	1246	1164	81	1222	1066	292	313	280	333
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.96	0.02	0.38	1.60	0.03	0.28	0.12	0.14	0.25

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	865	269	279	1659	244	298
v/c Ratio	0.86	0.27	0.76	1.35	0.85	0.62
Control Delay	33.1	13.6	78.1	183.0	85.4	50.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.1	13.6	78.1	183.0	85.4	50.5
Queue Length 50th (ft)	677	117	137	~2122	230	243
Queue Length 95th (ft)	#1023	171	190	#2404	#352	346
Internal Link Dist (ft)	6818			8784	1274	
Turn Bay Length (ft)		500	400			400
Base Capacity (vph)	1010	991	398	1230	326	492
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.27	0.70	1.35	0.75	0.61

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1	1256	52	179	2141	187	305	1
v/c Ratio	0.01	1.27	0.05	0.79	1.75	0.82	0.59	0.00
Control Delay	68.0	158.1	11.8	65.1	358.6	86.7	47.1	48.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.0	158.1	11.8	65.1	358.6	86.7	47.1	48.0
Queue Length 50th (ft)	1	~1552	19	175	~3094	178	247	1
Queue Length 95th (ft)	8	#1695	37	m115	m#1483	246	331	6
Internal Link Dist (ft)		8784			1836	1457		148
Turn Bay Length (ft)	400		400	200			110	
Base Capacity (vph)	120	988	968	226	1222	283	520	392
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	1.27	0.05	0.79	1.75	0.66	0.59	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	1377	123	174	1989	224	278	1	1
v/c Ratio	1.52	0.14	1.02	1.93	0.59	0.84	0.01	0.01
Control Delay	259.9	17.5	141.5	443.0	59.6	78.5	67.0	67.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	259.9	17.5	141.5	443.0	59.6	78.5	67.0	67.0
Queue Length 50th (ft)	~1877	56	~92	~2987	198	263	1	1
Queue Length 95th (ft)	m#1432	m49	#167	#3144	284	#401	8	8
Internal Link Dist (ft)	1836			201	257		1116	
Turn Bay Length (ft)		157	230			200		50
Base Capacity (vph)	907	869	171	1032	381	330	291	260
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.52	0.14	1.02	1.93	0.59	0.84	0.00	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	118	751	15	106	1201	233	258	488	267
v/c Ratio	1.19	0.97	0.02	0.95	1.54	0.31	0.65	1.52	0.47
Control Delay	207.8	62.2	20.1	142.2	278.1	24.2	49.5	283.8	40.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	207.8	62.2	20.1	142.2	278.1	24.2	49.5	283.8	40.3
Queue Length 50th (ft)	~138	699	7	105	~1644	134	211	~664	201
Queue Length 95th (ft)	#274	#985	21	#231	#1909	197	318	#889	290
Internal Link Dist (ft)		887			815		992	437	
Turn Bay Length (ft)	290		135	360		180			200
Base Capacity (vph)	99	778	769	111	781	750	396	321	573
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.19	0.97	0.02	0.95	1.54	0.31	0.65	1.52	0.47

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	65	1185	96	131	907	180	260	54
v/c Ratio	0.22	0.78	0.14	0.44	0.54	0.58	0.73	0.16
Control Delay	27.2	22.0	14.2	31.1	15.3	30.2	35.9	20.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.2	22.0	14.2	31.1	15.3	30.2	35.9	20.9
Queue Length 50th (ft)	22	203	22	46	139	63	95	17
Queue Length 95th (ft)	58	#373	57	103	233	118	165	42
Internal Link Dist (ft)		1817			2312	2104		326
Turn Bay Length (ft)	100		90	110			30	
Base Capacity (vph)	316	1524	675	301	1675	688	787	773
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.78	0.14	0.44	0.54	0.26	0.33	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	237	580	278	771	234	342	1169	511	176	574	357
v/c Ratio	0.71	0.59	0.82	0.76	0.53	1.33	0.93	0.94	0.94	0.51	0.74
Control Delay	59.5	35.1	68.2	40.0	36.9	207.4	47.2	61.0	101.2	32.0	43.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.5	35.1	68.2	40.0	36.9	207.4	47.2	61.0	101.2	32.0	43.6
Queue Length 50th (ft)	85	178	101	253	135	~319	416	348	125	174	225
Queue Length 95th (ft)	#138	235	#174	323	213	#500	#561	#567	#267	230	#346
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	338	1102	338	1132	490	258	1286	556	187	1150	496
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.53	0.82	0.68	0.48	1.33	0.91	0.92	0.94	0.50	0.72

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	235	1020	286	228	673	62	406	837	170	518
v/c Ratio	0.92	0.97	0.63	0.96	0.67	0.14	0.97	0.82	0.79	0.80
Control Delay	89.1	62.6	43.5	101.3	41.3	33.4	83.2	45.3	75.0	54.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.1	62.6	43.5	101.3	41.3	33.4	83.2	45.3	75.0	54.9
Queue Length 50th (ft)	179	403	188	175	238	35	308	311	126	197
Queue Length 95th (ft)	#341	#563	292	#343	313	73	#525	391	#232	260
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	256	1052	455	237	1009	443	417	1078	234	738
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.97	0.63	0.96	0.67	0.14	0.97	0.78	0.73	0.70

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	158	105	1336	731	187	402
v/c Ratio	0.83	0.61	1.05	0.66	1.03	0.26
Control Delay	96.8	79.4	63.1	16.4	138.7	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	96.8	79.4	63.1	16.4	138.7	3.4
Queue Length 50th (ft)	153	99	~1429	377	~196	75
Queue Length 95th (ft)	#267	167	#1697	513	#359	102
Internal Link Dist (ft)	509		199			571
Turn Bay Length (ft)	75			145	400	
Base Capacity (vph)	203	182	1272	1113	181	1566
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.58	1.05	0.66	1.03	0.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	52	124	1705	9	14	980
v/c Ratio	0.42	0.58	1.14	0.01	0.19	0.59
Control Delay	71.8	66.4	89.2	3.9	70.5	4.5
Queue Delay	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	71.8	66.4	89.3	3.9	70.5	4.5
Queue Length 50th (ft)	46	105	~1813	2	12	192
Queue Length 95th (ft)	92	172	#2163	6	38	328
Internal Link Dist (ft)	170		833			870
Turn Bay Length (ft)				65	350	
Base Capacity (vph)	264	212	1496	938	73	1661
Starvation Cap Reductn	0	0	38	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.58	1.17	0.01	0.19	0.59

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	842	85	76	1564	75	45
v/c Ratio	0.71	0.07	0.58	1.16	0.52	0.36
Control Delay	14.9	5.6	82.8	96.6	77.5	71.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.9	5.6	82.8	96.6	77.5	71.5
Queue Length 50th (ft)	388	19	71	~1748	70	41
Queue Length 95th (ft)	643	40	129	#2112	126	84
Internal Link Dist (ft)	669			851	978	
Turn Bay Length (ft)		420	150			50
Base Capacity (vph)	1179	1213	157	1346	198	172
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.07	0.48	1.16	0.38	0.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	360	934	3	1152	862	17	60	674	34	315
v/c Ratio	0.98	0.52	0.02	0.98	0.85	0.14	0.51	0.92	0.08	0.96
Control Delay	97.6	17.8	61.0	62.4	29.2	64.8	79.3	71.9	45.7	93.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	97.6	17.8	61.0	62.4	29.2	64.8	79.3	71.9	45.7	93.2
Queue Length 50th (ft)	~339	236	3	541	592	15	54	315	25	289
Queue Length 95th (ft)	#545	375	13	#701	845	41	105	#436	57	#486
Internal Link Dist (ft)		116		1317			770		833	
Turn Bay Length (ft)	970		400		220			175		620
Base Capacity (vph)	366	1808	132	1212	1018	120	117	731	405	329
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.52	0.02	0.95	0.85	0.14	0.51	0.92	0.08	0.96

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	SBR
Lane Group Flow (vph)	146	1500	1337	739
v/c Ratio	0.20	0.50	0.97	1.06
Control Delay	23.0	0.6	54.2	87.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	23.0	0.6	54.2	87.2
Queue Length 50th (ft)	77	0	612	~775
Queue Length 95th (ft)	124	0	#782	#1033
Internal Link Dist (ft)		1317	504	
Turn Bay Length (ft)	785			
Base Capacity (vph)	741	2980	1382	698
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.20	0.50	0.97	1.06

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	98	1305	1143	134	372	134
v/c Ratio	1.07	1.10	1.08	0.13	1.11	0.45
Control Delay	176.8	80.2	78.3	9.5	137.7	60.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	176.8	80.2	78.3	9.5	137.7	60.0
Queue Length 50th (ft)	~105	~1448	~1248	45	~415	118
Queue Length 95th (ft)	#230	#1713	#1513	72	#622	189
Internal Link Dist (ft)		386	8292		1387	
Turn Bay Length (ft)	420			325		100
Base Capacity (vph)	92	1182	1056	1045	334	296
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.07	1.10	1.08	0.13	1.11	0.45

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	92	1547	73	14	1133	37	48	13	25	51
v/c Ratio	0.84	1.16	0.05	0.17	0.93	0.03	0.44	0.10	0.23	0.42
Control Delay	113.0	97.5	3.4	66.6	28.3	4.6	71.0	57.8	62.2	68.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	113.0	97.5	3.4	66.6	28.3	4.6	71.0	57.8	62.2	68.7
Queue Length 50th (ft)	79	~1558	8	12	720	7	40	11	21	43
Queue Length 95th (ft)	#190	#2022	28	36	#1278	18	83	32	51	86
Internal Link Dist (ft)		8292			6818			1075	1353	
Turn Bay Length (ft)	580		330	460		580	70			
Base Capacity (vph)	109	1333	1359	83	1221	1245	303	366	300	337
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	1.16	0.05	0.17	0.93	0.03	0.16	0.04	0.08	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1300	183	240	972	227	370
v/c Ratio	1.22	0.17	1.05	0.78	0.86	0.98
Control Delay	131.0	8.9	136.9	15.4	90.7	96.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	131.0	8.9	136.9	15.4	90.7	96.8
Queue Length 50th (ft)	~1568	61	~132	493	217	358
Queue Length 95th (ft)	#1836	92	#225	708	#348	#560
Internal Link Dist (ft)	6818			8784	1274	
Turn Bay Length (ft)		500	400			400
Base Capacity (vph)	1067	1088	229	1239	287	377
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.22	0.17	1.05	0.78	0.79	0.98

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	5	1546	86	203	1143	81	145	9	4
v/c Ratio	0.05	1.51	0.09	0.64	0.87	0.61	0.30	0.06	0.03
Control Delay	68.8	260.9	11.2	58.2	10.3	83.7	42.5	60.0	58.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.8	260.9	11.2	58.2	10.3	83.7	42.5	60.0	58.8
Queue Length 50th (ft)	5	~2099	31	203	284	78	110	8	4
Queue Length 95th (ft)	20	#2365	55	m185	m336	133	174	26	16
Internal Link Dist (ft)		8784			1836	1457		148	
Turn Bay Length (ft)	400		400	200			110		50
Base Capacity (vph)	99	1022	987	317	1309	264	477	284	301
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	1.51	0.09	0.64	0.87	0.31	0.30	0.03	0.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	3	1606	90	184	1300	59	93	1	2
v/c Ratio	0.03	1.61	0.09	0.58	1.14	0.28	0.51	0.01	0.02
Control Delay	60.7	296.5	12.2	73.2	95.7	63.5	72.6	68.0	68.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.7	296.5	12.2	73.2	95.7	63.5	72.6	68.0	68.5
Queue Length 50th (ft)	3	~2252	30	90	~1449	54	87	1	2
Queue Length 95th (ft)	m3	m#1265	m22	134	#1867	100	148	8	11
Internal Link Dist (ft)		1836			201	257		1116	
Turn Bay Length (ft)	200		157	230			200		50
Base Capacity (vph)	92	997	1004	317	1141	214	181	285	255
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	1.61	0.09	0.58	1.14	0.28	0.51	0.00	0.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	198	569	364	402	93	143	326	173	91	739	307
v/c Ratio	0.52	0.66	0.74	0.40	0.21	0.40	0.26	0.32	0.51	0.67	0.65
Control Delay	46.7	35.4	50.2	28.3	27.2	45.7	24.4	27.0	54.0	31.6	35.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.7	35.4	50.2	28.3	27.2	45.7	24.4	27.0	54.0	31.6	35.7
Queue Length 50th (ft)	60	167	111	105	44	43	76	79	54	198	156
Queue Length 95th (ft)	107	231	#201	153	86	82	126	152	#126	298	280
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	408	1259	530	1418	627	364	1376	595	182	1350	577
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.45	0.69	0.28	0.15	0.39	0.24	0.29	0.50	0.55	0.53

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	123	446	216	172	806	68	297	317	71	404
v/c Ratio	0.61	0.45	0.52	0.72	0.76	0.14	0.67	0.38	0.31	0.59
Control Delay	47.6	22.3	26.2	50.6	27.3	18.9	39.6	25.1	34.5	29.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.6	22.3	26.2	50.6	27.3	18.9	39.6	25.1	34.5	29.3
Queue Length 50th (ft)	50	81	76	71	160	21	62	62	28	81
Queue Length 95th (ft)	#149	132	149	#201	244	52	#140	110	75	139
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	200	1533	654	239	1620	729	446	1215	232	1182
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.29	0.33	0.72	0.50	0.09	0.67	0.26	0.31	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	197	467	228	564	173	285	974	418	143	479	298
v/c Ratio	0.54	0.56	0.62	0.65	0.46	0.63	0.77	0.76	0.68	0.39	0.56
Control Delay	49.0	34.8	51.3	36.9	35.8	47.9	33.2	39.1	59.9	26.1	32.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.0	34.8	51.3	36.9	35.8	47.9	33.2	39.1	59.9	26.1	32.0
Queue Length 50th (ft)	60	134	71	166	92	87	276	225	86	116	147
Queue Length 95th (ft)	107	186	#124	225	157	143	406	#424	#190	185	269
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	371	1231	371	1267	547	516	1353	586	224	1294	558
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.38	0.61	0.45	0.32	0.55	0.72	0.71	0.64	0.37	0.53

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	188	839	224	173	553	52	262	531	142	408
v/c Ratio	0.86	0.78	0.48	0.78	0.52	0.11	0.63	0.68	0.66	0.53
Control Delay	71.4	30.6	26.2	61.4	24.2	20.6	42.1	31.8	52.0	28.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.4	30.6	26.2	61.4	24.2	20.6	42.1	31.8	52.0	28.5
Queue Length 50th (ft)	88	187	85	80	111	18	61	119	65	87
Queue Length 95th (ft)	#245	281	163	#221	175	46	#130	188	#177	144
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	219	1428	622	221	1428	628	415	1108	214	1100
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.59	0.36	0.78	0.39	0.08	0.63	0.48	0.66	0.37

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	198	569	364	402	93	143	326	173	91	740	307
v/c Ratio	0.52	0.66	0.74	0.40	0.21	0.40	0.26	0.32	0.51	0.67	0.65
Control Delay	46.8	35.4	50.2	28.4	27.2	45.8	24.4	27.0	54.0	31.6	35.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.8	35.4	50.2	28.4	27.2	45.8	24.4	27.0	54.0	31.6	35.7
Queue Length 50th (ft)	60	167	112	105	44	43	76	79	54	198	156
Queue Length 95th (ft)	107	231	#201	153	86	82	126	152	#126	298	280
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	408	1258	530	1417	627	364	1375	595	182	1349	577
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.45	0.69	0.28	0.15	0.39	0.24	0.29	0.50	0.55	0.53

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	123	446	217	171	807	68	300	317	71	405
v/c Ratio	0.61	0.45	0.52	0.72	0.76	0.14	0.67	0.37	0.31	0.59
Control Delay	47.7	22.3	26.2	51.1	27.5	18.9	39.9	25.1	34.5	29.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.7	22.3	26.2	51.1	27.5	18.9	39.9	25.1	34.5	29.3
Queue Length 50th (ft)	50	81	77	71	161	21	63	62	28	81
Queue Length 95th (ft)	#148	132	150	#200	245	52	#142	110	75	140
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	200	1531	653	237	1613	725	445	1218	231	1185
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.29	0.33	0.72	0.50	0.09	0.67	0.26	0.31	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	197	467	228	564	173	285	976	418	143	480	298
v/c Ratio	0.54	0.56	0.62	0.65	0.46	0.63	0.77	0.76	0.68	0.39	0.56
Control Delay	49.0	34.8	51.3	36.9	35.8	47.9	33.2	39.1	59.9	26.1	32.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.0	34.8	51.3	36.9	35.8	47.9	33.2	39.1	59.9	26.1	32.0
Queue Length 50th (ft)	60	134	71	166	92	87	277	225	86	116	147
Queue Length 95th (ft)	107	186	#124	225	157	143	407	#424	#190	186	269
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	371	1231	371	1267	547	516	1353	586	224	1294	558
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.38	0.61	0.45	0.32	0.55	0.72	0.71	0.64	0.37	0.53

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	189	840	229	172	554	52	265	530	142	409
v/c Ratio	0.86	0.78	0.49	0.79	0.52	0.11	0.64	0.68	0.66	0.53
Control Delay	71.4	30.5	26.3	61.8	24.2	20.5	42.1	31.8	51.8	28.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.4	30.5	26.3	61.8	24.2	20.5	42.1	31.8	51.8	28.5
Queue Length 50th (ft)	88	186	87	79	111	17	61	118	65	87
Queue Length 95th (ft)	#247	281	166	#221	175	46	#132	188	#177	144
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	220	1437	625	219	1432	630	416	1112	214	1103
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.58	0.37	0.79	0.39	0.08	0.64	0.48	0.66	0.37

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	198	569	365	402	93	143	327	173	91	741	307
v/c Ratio	0.52	0.66	0.74	0.40	0.21	0.40	0.26	0.32	0.51	0.67	0.65
Control Delay	46.8	35.4	50.3	28.4	27.2	45.8	24.4	27.0	54.0	31.6	35.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.8	35.4	50.3	28.4	27.2	45.8	24.4	27.0	54.0	31.6	35.7
Queue Length 50th (ft)	60	167	112	105	44	43	76	79	54	198	156
Queue Length 95th (ft)	107	231	#202	153	86	82	126	152	#126	298	280
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	408	1258	530	1417	627	364	1375	595	182	1349	577
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.45	0.69	0.28	0.15	0.39	0.24	0.29	0.50	0.55	0.53

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	123	445	216	173	805	68	297	319	71	407
v/c Ratio	0.61	0.45	0.52	0.72	0.76	0.14	0.67	0.38	0.31	0.60
Control Delay	47.7	22.4	26.3	50.9	27.4	18.9	39.6	25.1	34.5	29.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.7	22.4	26.3	50.9	27.4	18.9	39.6	25.1	34.5	29.3
Queue Length 50th (ft)	50	81	76	71	160	21	62	62	28	82
Queue Length 95th (ft)	#148	132	149	#201	244	52	#141	110	75	140
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	200	1531	653	239	1618	728	445	1212	231	1180
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.29	0.33	0.72	0.50	0.09	0.67	0.26	0.31	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	197	467	229	564	173	285	976	419	143	480	298
v/c Ratio	0.54	0.56	0.62	0.65	0.46	0.63	0.77	0.76	0.68	0.39	0.56
Control Delay	49.0	34.9	51.4	36.9	35.8	48.0	33.2	39.2	59.9	26.1	32.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.0	34.9	51.4	36.9	35.8	48.0	33.2	39.2	59.9	26.1	32.0
Queue Length 50th (ft)	60	134	71	167	92	87	277	226	86	116	147
Queue Length 95th (ft)	107	186	#125	225	157	143	407	#426	#190	186	269
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	371	1231	371	1266	547	515	1353	586	224	1294	558
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.38	0.62	0.45	0.32	0.55	0.72	0.72	0.64	0.37	0.53

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	188	838	224	174	552	52	262	534	142	410
v/c Ratio	0.86	0.79	0.48	0.79	0.52	0.11	0.63	0.68	0.66	0.53
Control Delay	71.4	30.6	26.3	61.9	24.3	20.6	42.1	31.8	52.0	28.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.4	30.6	26.3	61.9	24.3	20.6	42.1	31.8	52.0	28.5
Queue Length 50th (ft)	88	187	85	81	111	18	61	120	65	88
Queue Length 95th (ft)	#245	281	163	#224	175	46	#130	190	#178	144
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	219	1428	621	221	1428	628	415	1108	214	1100
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.59	0.36	0.79	0.39	0.08	0.63	0.48	0.66	0.37

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	217	629	401	443	103	158	359	190	101	813	337
v/c Ratio	0.54	0.70	0.80	0.43	0.23	0.46	0.32	0.26	0.58	0.75	0.50
Control Delay	47.1	36.5	54.9	29.4	28.2	47.7	26.5	15.1	58.6	34.7	20.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.1	36.5	54.9	29.4	28.2	47.7	26.5	15.1	58.6	34.7	20.0
Queue Length 50th (ft)	67	187	127	117	49	49	87	62	62	233	132
Queue Length 95th (ft)	113	257	#232	174	97	89	138	120	#145	334	226
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	467	1221	513	1301	575	353	1334	743	177	1308	707
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.52	0.78	0.34	0.18	0.45	0.27	0.26	0.57	0.62	0.48

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	136	490	238	189	889	76	327	350	79	446
v/c Ratio	0.71	0.47	0.53	0.84	0.79	0.15	0.77	0.41	0.36	0.63
Control Delay	56.5	22.6	26.5	66.8	29.0	19.2	47.5	26.3	37.9	31.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.5	22.6	26.5	66.8	29.0	19.2	47.5	26.3	37.9	31.0
Queue Length 50th (ft)	60	93	88	85	189	24	74	72	33	96
Queue Length 95th (ft)	#177	148	168	#239	283	57	#172	124	85	159
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	192	1454	620	225	1527	687	423	1157	220	1125
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.34	0.38	0.84	0.58	0.11	0.77	0.30	0.36	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	32	52	21	402	1240	51
v/c Ratio	0.10	0.20	0.08	0.15	0.45	0.04
Control Delay	15.0	16.5	4.7	2.9	4.3	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.0	16.5	4.7	2.9	4.3	3.3
Queue Length 50th (ft)	8	13	1	15	65	3
Queue Length 95th (ft)	19	28	8	31	114	12
Internal Link Dist (ft)	194			870	111	
Turn Bay Length (ft)			40			100
Base Capacity (vph)	709	592	250	2730	2730	1172
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.09	0.08	0.15	0.45	0.04

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	217	516	251	622	191	313	1072	460	157	527	328
v/c Ratio	0.58	0.58	0.70	0.69	0.49	0.69	0.86	0.64	0.76	0.44	0.46
Control Delay	50.7	35.0	56.6	38.2	36.7	51.4	39.1	24.0	68.2	28.0	20.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.7	35.0	56.6	38.2	36.7	51.4	39.1	24.0	68.2	28.0	20.2
Queue Length 50th (ft)	71	156	85	196	108	103	340	206	103	141	135
Queue Length 95th (ft)	115	208	#149	257	177	157	#490	339	#219	205	228
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	395	1166	360	1164	503	500	1341	721	217	1269	716
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.44	0.70	0.53	0.38	0.63	0.80	0.64	0.72	0.42	0.46

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	207	924	247	192	611	57	289	586	156	452
v/c Ratio	0.75	0.86	0.53	0.74	0.59	0.12	0.70	0.75	0.68	0.56
Control Delay	56.1	39.2	31.8	56.9	30.5	25.9	50.0	39.6	56.4	33.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.1	39.2	31.8	56.9	30.5	25.9	50.0	39.6	56.4	33.5
Queue Length 50th (ft)	120	272	122	112	164	25	88	174	91	126
Queue Length 95th (ft)	#235	365	206	#223	230	57	#150	240	#188	178
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	313	1265	549	292	1216	535	436	958	249	995
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.73	0.45	0.66	0.50	0.11	0.66	0.61	0.63	0.45

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	31	33	32	1495	380	23
v/c Ratio	0.11	0.13	0.05	0.52	0.14	0.02
Control Delay	18.6	19.0	2.8	4.0	2.3	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.6	19.0	2.8	4.0	2.3	2.6
Queue Length 50th (ft)	7	8	2	78	13	1
Queue Length 95th (ft)	24	25	8	142	26	6
Internal Link Dist (ft)	194			870	79	
Turn Bay Length (ft)			40			100
Base Capacity (vph)	723	647	705	2870	2788	1310
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.05	0.05	0.52	0.14	0.02

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	217	629	401	443	103	158	359	190	101	814	337
v/c Ratio	0.54	0.70	0.80	0.43	0.23	0.46	0.32	0.26	0.58	0.75	0.50
Control Delay	47.1	36.5	55.0	29.4	28.2	47.8	26.5	15.1	58.6	34.8	20.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.1	36.5	55.0	29.4	28.2	47.8	26.5	15.1	58.6	34.8	20.0
Queue Length 50th (ft)	67	187	127	117	49	49	87	62	62	233	132
Queue Length 95th (ft)	113	257	#232	174	97	89	138	120	#145	335	226
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	467	1220	513	1300	575	353	1333	743	177	1307	707
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.52	0.78	0.34	0.18	0.45	0.27	0.26	0.57	0.62	0.48

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	136	490	239	188	890	76	330	350	79	447
v/c Ratio	0.72	0.48	0.55	0.84	0.82	0.16	0.60	0.35	0.38	0.65
Control Delay	61.4	26.4	31.1	70.0	33.9	23.0	38.2	25.5	43.7	35.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.4	26.4	31.1	70.0	33.9	23.0	38.2	25.5	43.7	35.4
Queue Length 50th (ft)	70	108	103	97	220	28	82	78	39	112
Queue Length 95th (ft)	#194	177	200	#262	338	68	142	125	94	180
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	190	1312	559	225	1386	623	733	1376	220	1043
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.37	0.43	0.84	0.64	0.12	0.45	0.25	0.36	0.43

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	32	52	21	405	1239	51
v/c Ratio	0.10	0.20	0.08	0.15	0.45	0.04
Control Delay	15.0	16.5	4.7	2.9	4.3	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.0	16.5	4.7	2.9	4.3	3.3
Queue Length 50th (ft)	8	13	1	15	65	3
Queue Length 95th (ft)	19	28	8	31	114	12
Internal Link Dist (ft)	194			870	90	
Turn Bay Length (ft)			40			100
Base Capacity (vph)	709	592	250	2730	2730	1172
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.09	0.08	0.15	0.45	0.04

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	217	516	251	622	191	313	1073	460	157	528	328
v/c Ratio	0.58	0.58	0.70	0.69	0.49	0.69	0.86	0.64	0.76	0.44	0.46
Control Delay	50.7	35.0	56.7	38.2	36.7	51.4	39.1	23.9	68.2	28.1	20.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.7	35.0	56.7	38.2	36.7	51.4	39.1	23.9	68.2	28.1	20.2
Queue Length 50th (ft)	71	156	85	196	108	103	340	206	103	142	135
Queue Length 95th (ft)	115	208	#149	257	177	157	#490	339	#219	205	228
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	395	1166	360	1163	503	500	1341	722	217	1268	716
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.44	0.70	0.53	0.38	0.63	0.80	0.64	0.72	0.42	0.46

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	208	926	251	191	612	57	292	585	156	454
v/c Ratio	0.75	0.86	0.53	0.73	0.59	0.12	0.69	0.75	0.69	0.57
Control Delay	55.6	39.1	31.9	56.5	30.5	25.9	49.5	39.4	56.8	33.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.6	39.1	31.9	56.5	30.5	25.9	49.5	39.4	56.8	33.9
Queue Length 50th (ft)	120	271	124	111	163	25	88	173	91	126
Queue Length 95th (ft)	#235	365	209	#221	230	57	#150	238	#191	180
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	315	1271	552	292	1218	535	445	963	245	986
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.73	0.45	0.65	0.50	0.11	0.66	0.61	0.64	0.46

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	31	33	32	1495	381	23
v/c Ratio	0.11	0.13	0.05	0.52	0.14	0.02
Control Delay	18.6	19.0	2.8	4.0	2.3	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.6	19.0	2.8	4.0	2.3	2.6
Queue Length 50th (ft)	7	8	2	78	13	1
Queue Length 95th (ft)	24	25	8	142	26	6
Internal Link Dist (ft)	194			870	87	
Turn Bay Length (ft)			40			100
Base Capacity (vph)	723	647	705	2870	2788	1310
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.05	0.05	0.52	0.14	0.02

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	217	629	402	443	103	158	360	190	101	815	337
v/c Ratio	0.54	0.70	0.81	0.43	0.23	0.46	0.32	0.26	0.58	0.75	0.50
Control Delay	47.1	36.5	55.1	29.4	28.2	47.8	26.6	15.1	58.7	34.8	20.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.1	36.5	55.1	29.4	28.2	47.8	26.6	15.1	58.7	34.8	20.0
Queue Length 50th (ft)	67	187	128	117	49	49	88	62	62	234	132
Queue Length 95th (ft)	113	257	#233	174	97	89	138	120	#145	336	226
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	467	1220	513	1300	575	352	1333	743	177	1307	707
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.52	0.78	0.34	0.18	0.45	0.27	0.26	0.57	0.62	0.48

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	136	489	238	190	888	76	327	352	79	450
v/c Ratio	0.71	0.47	0.53	0.84	0.79	0.15	0.77	0.41	0.36	0.64
Control Delay	56.6	22.6	26.6	67.6	29.0	19.3	47.6	26.3	38.0	31.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.6	22.6	26.6	67.6	29.0	19.3	47.6	26.3	38.0	31.1
Queue Length 50th (ft)	60	93	88	85	189	24	74	73	33	97
Queue Length 95th (ft)	#177	148	168	#240	283	58	#172	125	85	161
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	192	1452	620	225	1525	686	422	1156	220	1124
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.34	0.38	0.84	0.58	0.11	0.77	0.30	0.36	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	36	56	30	401	1239	56
v/c Ratio	0.11	0.21	0.12	0.15	0.46	0.05
Control Delay	14.7	16.2	5.4	3.0	4.4	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.7	16.2	5.4	3.0	4.4	3.4
Queue Length 50th (ft)	9	14	2	15	66	4
Queue Length 95th (ft)	20	28	11	31	116	13
Internal Link Dist (ft)	194			870	84	
Turn Bay Length (ft)			40			100
Base Capacity (vph)	713	595	247	2713	2713	1165
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.09	0.12	0.15	0.46	0.05

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	217	516	252	622	191	313	1073	461	157	528	328
v/c Ratio	0.58	0.58	0.71	0.69	0.49	0.69	0.86	0.64	0.76	0.44	0.46
Control Delay	50.7	35.0	56.8	38.2	36.7	51.4	39.1	24.0	68.2	28.1	20.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.7	35.0	56.8	38.2	36.7	51.4	39.1	24.0	68.2	28.1	20.2
Queue Length 50th (ft)	71	156	85	196	108	103	340	206	103	142	135
Queue Length 95th (ft)	115	208	#150	257	177	157	#490	340	#219	205	228
Internal Link Dist (ft)		847		999			769			575	
Turn Bay Length (ft)	230		210		110	200		200	120		60
Base Capacity (vph)	395	1166	360	1163	503	500	1341	722	217	1268	716
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.44	0.70	0.53	0.38	0.63	0.80	0.64	0.72	0.42	0.46

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	207	923	247	193	610	57	289	589	156	454
v/c Ratio	0.75	0.86	0.53	0.74	0.58	0.12	0.70	0.76	0.68	0.57
Control Delay	56.2	39.4	31.9	56.7	30.5	25.9	50.1	39.7	56.5	33.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.2	39.4	31.9	56.7	30.5	25.9	50.1	39.7	56.5	33.5
Queue Length 50th (ft)	120	272	122	113	164	25	88	175	92	126
Queue Length 95th (ft)	#235	365	206	#223	229	57	#150	241	#188	180
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	312	1258	546	293	1213	533	435	955	248	995
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.73	0.45	0.66	0.50	0.11	0.66	0.62	0.63	0.46

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	35	41	38	1494	379	23
v/c Ratio	0.12	0.16	0.05	0.52	0.14	0.02
Control Delay	18.4	19.0	2.9	4.1	2.4	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.4	19.0	2.9	4.1	2.4	2.8
Queue Length 50th (ft)	10	12	2	83	13	1
Queue Length 95th (ft)	25	28	10	147	27	6
Internal Link Dist (ft)	194			870	75	
Turn Bay Length (ft)			40			100
Base Capacity (vph)	715	639	706	2871	2789	1310
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.06	0.05	0.52	0.14	0.02

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	237	535	152	437	485	112	172	391	208	110	887	367
v/c Ratio	0.55	0.61	0.42	0.69	0.56	0.29	0.33	0.29	0.26	0.32	0.75	0.50
Control Delay	44.8	34.0	33.7	46.5	33.4	31.2	42.6	23.0	13.9	44.0	32.2	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.8	34.0	33.7	46.5	33.4	31.2	42.6	23.0	13.9	44.0	32.2	17.6
Queue Length 50th (ft)	70	151	78	89	134	55	34	87	62	31	236	127
Queue Length 95th (ft)	120	210	138	#145	195	107	63	146	131	65	362	236
Internal Link Dist (ft)		847			999			769			575	
Turn Bay Length (ft)	230			210		110	200		200	120		60
Base Capacity (vph)	526	1395	583	669	1305	577	536	1420	817	358	1382	773
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.38	0.26	0.65	0.37	0.19	0.32	0.28	0.25	0.31	0.64	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	148	535	260	206	972	82	356	382	85	488
v/c Ratio	0.43	0.47	0.53	0.59	0.84	0.16	0.78	0.42	0.40	0.67
Control Delay	39.6	22.9	26.8	43.3	32.8	20.4	48.5	26.8	40.8	33.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.6	22.9	26.8	43.3	32.8	20.4	48.5	26.8	40.8	33.3
Queue Length 50th (ft)	36	107	103	51	228	28	89	86	40	117
Queue Length 95th (ft)	71	167	189	#101	334	64	#180	134	91	174
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	343	1354	578	350	1367	615	455	1103	225	1044
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.40	0.45	0.59	0.71	0.13	0.78	0.35	0.38	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	34	56	22	439	1355	55
v/c Ratio	0.11	0.22	0.10	0.16	0.50	0.05
Control Delay	15.0	16.8	5.4	3.0	4.7	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.0	16.8	5.4	3.0	4.7	3.4
Queue Length 50th (ft)	9	15	2	17	76	4
Queue Length 95th (ft)	20	29	9	34	132	13
Internal Link Dist (ft)	194			870	83	
Turn Bay Length (ft)			40			100
Base Capacity (vph)	681	568	212	2729	2729	1172
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.10	0.10	0.16	0.50	0.05

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	15	22	427	58	123	1150
v/c Ratio	0.06	0.07	0.20	0.06	0.35	0.65
Control Delay	22.6	14.2	6.6	7.0	21.2	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.6	14.2	6.6	7.0	21.2	4.3
Queue Length 50th (ft)	3	4	24	6	21	0
Queue Length 95th (ft)	24	22	77	29	103	440
Internal Link Dist (ft)	170		833			870
Turn Bay Length (ft)				65	350	
Base Capacity (vph)	671	443	3090	1343	495	1776
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.05	0.14	0.04	0.25	0.65

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	237	447	117	273	680	208	342	1169	502	171	574	357
v/c Ratio	0.64	0.45	0.27	0.54	0.71	0.50	0.63	0.91	0.69	0.50	0.46	0.49
Control Delay	53.9	32.0	30.7	49.8	38.3	36.3	50.9	43.9	25.8	51.2	27.9	20.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.9	32.0	30.7	49.8	38.3	36.3	50.9	43.9	25.8	51.2	27.9	20.3
Queue Length 50th (ft)	80	130	61	63	217	118	80	390	237	57	156	149
Queue Length 95th (ft)	126	176	109	96	281	191	116	#555	377	96	218	244
Internal Link Dist (ft)		847			999			769			575	
Turn Bay Length (ft)	230			210		110	200		200	120		60
Base Capacity (vph)	384	1206	522	509	1159	501	558	1346	730	343	1311	730
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.37	0.22	0.54	0.59	0.42	0.61	0.87	0.69	0.50	0.44	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	226	1010	269	210	669	62	314	641	170	494
v/c Ratio	0.67	0.87	0.53	0.62	0.57	0.12	0.80	0.76	0.81	0.58
Control Delay	48.9	35.7	27.6	46.3	25.6	21.0	53.8	35.1	67.8	29.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.9	35.7	27.6	46.3	25.6	21.0	53.8	35.1	67.8	29.9
Queue Length 50th (ft)	62	257	113	57	150	22	87	168	92	123
Queue Length 95th (ft)	#118	#367	199	#105	218	53	#165	229	#215	172
Internal Link Dist (ft)		2312			827			858		500
Turn Bay Length (ft)	200		100	160		160	130		150	
Base Capacity (vph)	336	1313	571	339	1313	577	394	1047	210	1051
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.77	0.47	0.62	0.51	0.11	0.80	0.61	0.81	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	33	36	34	1634	417	25
v/c Ratio	0.12	0.15	0.05	0.56	0.15	0.02
Control Delay	21.4	21.9	2.6	4.0	2.1	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.4	21.9	2.6	4.0	2.1	2.5
Queue Length 50th (ft)	10	11	2	96	15	2
Queue Length 95th (ft)	27	29	9	170	29	7
Internal Link Dist (ft)	194			870	80	
Turn Bay Length (ft)			40			100
Base Capacity (vph)	665	595	677	2859	2777	1304
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.06	0.05	0.57	0.15	0.02

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	52	124	1572	9	14	463
v/c Ratio	0.19	0.32	0.67	0.01	0.07	0.30
Control Delay	27.4	20.4	11.1	6.8	28.5	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	20.4	11.1	6.8	28.5	3.3
Queue Length 50th (ft)	18	35	232	1	5	51
Queue Length 95th (ft)	49	79	338	7	21	94
Internal Link Dist (ft)	170		833			870
Turn Bay Length (ft)				65	350	
Base Capacity (vph)	680	390	2574	849	189	1592
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.32	0.61	0.01	0.07	0.29

Intersection Summary

J: Road Segment LOS Calculations

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	JO
Agency or Company:	Mott MacDonald
Date Performed:	12/21/17
Analysis Time Period:	Weekday AM
Freeway/Direction:	#1. SR 68 / EB
From/To:	SR 1 / End Freeway
Jurisdiction:	Caltrans / Monterey
Analysis Year:	2016
Description:	Monterey Regional Airport

Flow Inputs and Adjustments

Volume, V	983	veh/h
Peak-hour factor, PHF	0.86	
Peak 15-min volume, v15	286	v
Trucks and buses	2	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.990	
Driver population factor, fp	1.00	
Flow rate, vp	577	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	577	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	10.5	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	JO
Agency or Company:	Mott MacDonald
Date Performed:	12/21/17
Analysis Time Period:	Weekday PM
Freeway/Direction:	#1. SR 68 / EB
From/To:	SR 1 / End Freeway
Jurisdiction:	Caltrans / Monterey
Analysis Year:	2016
Description:	Monterey Regional Airport

Flow Inputs and Adjustments

Volume, V	794	veh/h
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v15	209	v
Trucks and buses	2	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.990	
Driver population factor, fp	1.00	
Flow rate, vp	422	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	422	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	7.7	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	JO
Agency or Company:	Mott MacDonald
Date Performed:	12/21/17
Analysis Time Period:	Weekday AM
Freeway/Direction:	#1. SR 68 / WB
From/To:	Begin Freeway / SR 1
Jurisdiction:	Caltrans / Monterey
Analysis Year:	2016
Description:	Monterey Regional Airport

Flow Inputs and Adjustments

Volume, V	979	veh/h
Peak-hour factor, PHF	0.86	
Peak 15-min volume, v15	285	v
Trucks and buses	2	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.990	
Driver population factor, fp	1.00	
Flow rate, vp	575	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	575	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	10.5	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	JO
Agency or Company:	Mott MacDonald
Date Performed:	12/21/17
Analysis Time Period:	Weekday PM
Freeway/Direction:	#1. SR 68 / WB
From/To:	Begin Freeway / SR 1
Jurisdiction:	Caltrans / Monterey
Analysis Year:	2016
Description:	Monterey Regional Airport

Flow Inputs and Adjustments

Volume, V	1217	veh/h
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v15	320	v
Trucks and buses	2	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.990	
Driver population factor, fp	1.00	
Flow rate, vp	647	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	647	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	11.8	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday AM
Highway	#2. SR 68 / EB
From/To	End Freeway / Josselyn Cyn Rd
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.86	
Shoulder width	6.0	ft	% Trucks and buses	2	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	15	/mi

Analysis direction volume, Vd 983 veh/h
Opposing direction volume, Vo 979 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1143	pc/h	1138	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.8	mi/h
Free-flow speed, FFSd	51.3	mi/h
Adjustment for no-passing zones, fnp	1.0	mi/h
Average travel speed, ATSd	32.5	mi/h
Percent Free Flow Speed, PFFS	63.5	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1143 pc/h	1138 pc/h
Base percent time-spent-following,(note-4) BPTSFd	82.5 %	
Adjustment for no-passing zones, fnp	14.8	
Percent time-spent-following, PTSFd	89.9 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.67	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	32.5	mi/h
Percent time-spent-following, PTSFd (from above)	89.9	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1143.0
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	2.93
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday PM
Highway	#2. SR 68 / EB
From/To	End Freeway / Josselyn Cyn Rd
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.95	
Shoulder width	6.0	ft	% Trucks and buses	2	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	15	/mi

Analysis direction volume, Vd 794 veh/h
Opposing direction volume, Vo 1217 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.1		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.998		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	837	pc/h	1281	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.8	mi/h
Free-flow speed, FFSd	51.3	mi/h
Adjustment for no-passing zones, fnp	0.9	mi/h
Average travel speed, ATSd	33.9	mi/h
Percent Free Flow Speed, PFFS	66.1	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	836 pc/h	1281 pc/h
Base percent time-spent-following,(note-4) BPTSFd	75.9 %	
Adjustment for no-passing zones, fnp	15.8	
Percent time-spent-following, PTSFd	82.1 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.49	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	33.9	mi/h
Percent time-spent-following, PTSFd (from above)	82.1	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	835.8
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	2.77
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday AM
Highway	#2. SR 68 / WB
From/To	Josselyn Cyn Rd/Begin Freeway
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.86	
Shoulder width	6.0	ft	% Trucks and buses	4	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	15	/mi

Analysis direction volume, Vd 979 veh/h
Opposing direction volume, Vo 983 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1138	pc/h	1143	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.8	mi/h
Free-flow speed, FFSd	51.3	mi/h
Adjustment for no-passing zones, fnp	1.0	mi/h
Average travel speed, ATSd	32.5	mi/h
Percent Free Flow Speed, PFFS	63.5	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1138 pc/h	1143 pc/h
Base percent time-spent-following,(note-4) BPTSFd	83.0 %	
Adjustment for no-passing zones, fnp	14.8	
Percent time-spent-following, PTSFd	90.4 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.67	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	32.5	mi/h
Percent time-spent-following, PTSFd (from above)	90.4	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1138.4
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	3.45
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday PM
Highway	#2. SR 68 / WB
From/To	Josselyn Cyn Rd/Begin Freeway
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.95	
Shoulder width	6.0	ft	% Trucks and buses	2	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	15	/mi

Analysis direction volume, Vd 1217 veh/h
Opposing direction volume, Vo 794 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.1	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		0.998	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1281	pc/h	837	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	3.8	mi/h
Free-flow speed, FFSd	51.3	mi/h
Adjustment for no-passing zones, fnp	1.3	mi/h
Average travel speed, ATSd	33.5	mi/h
Percent Free Flow Speed, PFFS	65.4	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1281 pc/h	836 pc/h
Base percent time-spent-following,(note-4) BPTSFd	83.0 %	
Adjustment for no-passing zones, fnp	15.8	
Percent time-spent-following, PTSFd	92.6 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.75	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	33.5	mi/h
Percent time-spent-following, PTSFd (from above)	92.6	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1281.1
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	2.99
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday AM
Highway	#3. SR 68 / EB
From/To	Josselyn Cyn Rd / Olmsted Rd
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.86	
Shoulder width	6.0	ft	% Trucks and buses	2	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	16	/mi

Analysis direction volume, Vd 929 veh/h
Opposing direction volume, Vo 843 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1080	pc/h	980	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	4.0	mi/h
Free-flow speed, FFSd	51.0	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATSd	33.9	mi/h
Percent Free Flow Speed, PFFS	66.5	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1080	pc/h	980	pc/h
Base percent time-spent-following,(note-4) BPTSFd	79.9	%		
Adjustment for no-passing zones, fnp	17.6			
Percent time-spent-following, PTSFd	89.1	%		

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.64	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	33.9	mi/h
Percent time-spent-following, PTSFd (from above)	89.1	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1080.2
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	2.90
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday AM
Highway	#3. SR 68 / EB
From/To	Josselyn Cyn Rd / Olmsted Rd
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.94	
Shoulder width	6.0	ft	% Trucks and buses	2	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	16	/mi

Analysis direction volume, Vd 752 veh/h
Opposing direction volume, Vo 1196 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.1		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.998		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	802	pc/h	1272	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	4.0	mi/h
Free-flow speed, FFSd	51.0	mi/h
Adjustment for no-passing zones, fnp	0.9	mi/h
Average travel speed, ATSd	34.0	mi/h
Percent Free Flow Speed, PFFS	66.6	%

Percent Time-Spent-Following

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		1.000	
Grade adjustment factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	800	pc/h	1272	pc/h
Base percent time-spent-following,(note-4) BPTSFd	74.3	%		
Adjustment for no-passing zones, fnp	16.2			
Percent time-spent-following, PTSFd	80.6	%		

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.47	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	34.0	mi/h
Percent time-spent-following, PTSFd (from above)	80.6	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	800.0
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	2.75
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday AM
Highway	#3. SR 68 / WB
From/To	Olmsted Rd / Josselyn Cyn Rd
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.86	
Shoulder width	6.0	ft	% Trucks and buses	4	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	16	/mi

Analysis direction volume, Vd	843	veh/h
Opposing direction volume, Vo	929	veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	980	pc/h	1080	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	4.0	mi/h
Free-flow speed, FFSd	51.0	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATSd	34.0	mi/h
Percent Free Flow Speed, PFFS	66.6	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	980 pc/h	1080 pc/h
Base percent time-spent-following,(note-4) BPTSFd	78.1 %	
Adjustment for no-passing zones, fnp	17.6	
Percent time-spent-following, PTSFd	86.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.58	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	34.0	mi/h
Percent time-spent-following, PTSFd (from above)	86.5	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	980.2
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	3.37
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday PM
Highway	#3. SR 68 / WB
From/To	Olmsted Rd / Josselyn Cyn Rd
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.86	
Shoulder width	6.0	ft	% Trucks and buses	2	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	16	/mi

Analysis direction volume, Vd 1196 veh/h
Opposing direction volume, Vo 752 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1391	pc/h	874	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	4.0	mi/h
Free-flow speed, FFSd	51.0	mi/h
Adjustment for no-passing zones, fnp	1.2	mi/h
Average travel speed, ATSd	32.2	mi/h
Percent Free Flow Speed, PFFS	63.1	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1391 pc/h	874 pc/h
Base percent time-spent-following,(note-4) BPTSFd	85.0 %	
Adjustment for no-passing zones, fnp	14.2	
Percent time-spent-following, PTSFd	93.7 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.82	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	32.2	mi/h
Percent time-spent-following, PTSFd (from above)	93.7	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1390.7
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	3.03
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday AM
Highway	#4. SR 68 / EB
From/To	Olmsted Rd / SR 218
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.87	
Shoulder width	6.0	ft	% Trucks and buses	4	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	3	/mi

Analysis direction volume, Vd 972 veh/h
Opposing direction volume, Vo 1119 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1117	pc/h	1286	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	0.8	mi/h
Free-flow speed, FFSd	54.3	mi/h
Adjustment for no-passing zones, fnp	1.0	mi/h
Average travel speed, ATSd	34.7	mi/h
Percent Free Flow Speed, PFFS	63.9	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1117 pc/h	1286 pc/h
Base percent time-spent-following,(note-4) BPTSFd	83.6 %	
Adjustment for no-passing zones, fnp	12.9	
Percent time-spent-following, PTSFd	89.6 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.66	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	34.7	mi/h
Percent time-spent-following, PTSFd (from above)	89.6	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1117.2
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	3.44
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday PM
Highway	#4. SR 68 / EB
From/To	Olmsted Rd / SR 218
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.92	
Shoulder width	6.0	ft	% Trucks and buses	2	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	3	/mi

Analysis direction volume, Vd 1080 veh/h
Opposing direction volume, Vo 1163 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1174	pc/h	1264	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	0.8	mi/h
Free-flow speed, FFSd	54.3	mi/h
Adjustment for no-passing zones, fnp	1.0	mi/h
Average travel speed, ATSd	34.4	mi/h
Percent Free Flow Speed, PFFS	63.4	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1174 pc/h	1264 pc/h
Base percent time-spent-following,(note-4) BPTSFd	84.4 %	
Adjustment for no-passing zones, fnp	12.5	
Percent time-spent-following, PTSFd	90.4 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.69	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	34.4	mi/h
Percent time-spent-following, PTSFd (from above)	90.4	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1173.9
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	2.94
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	1/23/2017
Analysis Time Period	Weekday AM
Highway	#4. SR 68 / WB
From/To	SR 218 / Olmsted Rd
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.87	
Shoulder width	6.0	ft	% Trucks and buses	3	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	3	/mi

Analysis direction volume, Vd 1119 veh/h
Opposing direction volume, Vo 972 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1286	pc/h	1117	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	0.8	mi/h
Free-flow speed, FFSd	54.3	mi/h
Adjustment for no-passing zones, fnp	1.0	mi/h
Average travel speed, ATSd	34.6	mi/h
Percent Free Flow Speed, PFFS	63.7	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1286 pc/h	1117 pc/h
Base percent time-spent-following,(note-4) BPTSFd	85.6 %	
Adjustment for no-passing zones, fnp	12.9	
Percent time-spent-following, PTSFd	92.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.76	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	34.6	mi/h
Percent time-spent-following, PTSFd (from above)	92.5	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1286.2
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	3.24
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday PM
Highway	#4. SR 68 / WB
From/To	SR 218 / Olmsted Rd
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.92	
Shoulder width	6.0	ft	% Trucks and buses	2	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	3	/mi

Analysis direction volume, Vd 1163 veh/h
Opposing direction volume, Vo 1080 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1264	pc/h	1174	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	0.8	mi/h
Free-flow speed, FFSd	54.3	mi/h
Adjustment for no-passing zones, fnp	1.0	mi/h
Average travel speed, ATSd	34.3	mi/h
Percent Free Flow Speed, PFFS	63.3	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1264 pc/h	1174 pc/h
Base percent time-spent-following,(note-4) BPTSFd	85.5 %	
Adjustment for no-passing zones, fnp	12.5	
Percent time-spent-following, PTSFd	92.0 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.74	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	34.3	mi/h
Percent time-spent-following, PTSFd (from above)	92.0	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1264.1
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	2.98
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	JO
Agency/Co:	Mott MacDonald
Date:	12/21/17
Analysis Period:	Weekday AM
Highway:	#5 SR 68 EB & WB
From/To:	SR 218 / Ragsdale Dr
Jurisdiction:	Caltrans / Monterey
Analysis Year:	2016
Project ID:	Monterey Regional Airport

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	1368	vph	1006	vph
Peak-hour factor, PHF	0.93		0.93	
Peak 15-minute volume, v15	368		270	
Trucks and buses	4	%	3	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.980		0.985	
Flow rate, vp	750	pcphpl	548	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	750	pcphpl	548	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	B		A	
Density, D	13.6	pc/mi/ln	10.0	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	735.5	540.9
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	3.23	2.80
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:	JO
Agency/Co:	Mott MacDonald
Date:	12/21/17
Analysis Period:	Weekday PM
Highway:	#5 SR 68 EB & WB
From/To:	SR 218 / Ragsdale Dr
Jurisdiction:	Caltrans / Monterey
Analysis Year:	2016
Project ID:	Monterey Regional Airport

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	55.0	mph	55.0	mph

VOLUME

Direction	1		2	
Volume, V	975	vph	1639	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	271		455	
Trucks and buses	2	%	2	%
Recreational vehicles	0	%	0	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.990		0.990	
Flow rate, vp	547	pcphpl	919	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	547	pcphpl	919	pcphpl
Free-flow speed, FFS	55.0	mph	55.0	mph
Avg. passenger-car travel speed, S	55.0	mph	55.0	mph
Level of service, LOS	A		B	
Density, D	9.9	pc/mi/ln	16.7	pc/mi/ln

_____ Bicycle Level of Service _____

Posted speed limit, Sp	55	55
Percent of segment with occupied on-highway parking	0	0
Pavement rating, P	3	3
Flow rate in outside lane, vOL	541.7	910.6
Effective width of outside lane, We	24.00	24.00
Effective speed factor, St	4.79	4.79
Bicycle LOS Score, BLOS	2.55	2.81
Bicycle LOS	C	C

Overall results are not computed when free-flow speed is less than 45 mph.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday AM
Highway	#6. SR 68 / EB
From/To	Ragsdale Dr / Laureles Grade
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.86	
Shoulder width	6.0	ft	% Trucks and buses	3	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	2	/mi

Analysis direction volume, Vd 969 veh/h
Opposing direction volume, Vo 1256 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1127	pc/h	1460	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	0.5	mi/h
Free-flow speed, FFSd	54.5	mi/h
Adjustment for no-passing zones, fnp	0.8	mi/h
Average travel speed, ATSd	33.6	mi/h
Percent Free Flow Speed, PFFS	61.6	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1127 pc/h	1460 pc/h
Base percent time-spent-following,(note-4) BPTSFd	84.7 %	
Adjustment for no-passing zones, fnp	10.4	
Percent time-spent-following, PTSFd	89.2 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.66	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	33.6	mi/h
Percent time-spent-following, PTSFd (from above)	89.2	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1126.7
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	3.17
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday PM
Highway	#6. SR 68 / EB
From/To	Ragsdale Dr / Laureles Grade
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.90	
Shoulder width	6.0	ft	% Trucks and buses	2	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	2	/mi

Analysis direction volume, Vd 1114 veh/h
Opposing direction volume, Vo 1009 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1238	pc/h	1121	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	0.5	mi/h
Free-flow speed, FFSd	54.5	mi/h
Adjustment for no-passing zones, fnp	1.0	mi/h
Average travel speed, ATSd	35.2	mi/h
Percent Free Flow Speed, PFFS	64.5	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1238 pc/h	1121 pc/h
Base percent time-spent-following,(note-4) BPTSFd	84.7 %	
Adjustment for no-passing zones, fnp	13.6	
Percent time-spent-following, PTSFd	91.8 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.73	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	35.2	mi/h
Percent time-spent-following, PTSFd (from above)	91.8	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1237.8
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	2.97
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday AM
Highway	#6. SR 68 / WB
From/To	Laureles Grade / Ragsdale Dr
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.86	
Shoulder width	6.0	ft	% Trucks and buses	3	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	2	/mi

Analysis direction volume, Vd 1256 veh/h
Opposing direction volume, Vo 969 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1460	pc/h	1127	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	0.5	mi/h
Free-flow speed, FFSd	54.5	mi/h
Adjustment for no-passing zones, fnp	1.0	mi/h
Average travel speed, ATSd	33.4	mi/h
Percent Free Flow Speed, PFFS	61.3	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1460 pc/h	1127 pc/h
Base percent time-spent-following,(note-4) BPTSFd	88.2 %	
Adjustment for no-passing zones, fnp	10.4	
Percent time-spent-following, PTSFd	94.1 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.86	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	33.4	mi/h
Percent time-spent-following, PTSFd (from above)	94.1	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1460.5
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	3.30
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday PM
Highway	#6. SR 68 / WB
From/To	Laureles Grade / Ragsdale Dr
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.90	
Shoulder width	6.0	ft	% Trucks and buses	2	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	2	/mi

Analysis direction volume, Vd	1009	veh/h
Opposing direction volume, Vo	1114	veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1121	pc/h	1238	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	0.5	mi/h
Free-flow speed, FFSd	54.5	mi/h
Adjustment for no-passing zones, fnp	1.0	mi/h
Average travel speed, ATSd	35.2	mi/h
Percent Free Flow Speed, PFFS	64.6	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1121 pc/h	1238 pc/h
Base percent time-spent-following,(note-4) BPTSFd	83.3 %	
Adjustment for no-passing zones, fnp	13.6	
Percent time-spent-following, PTSFd	89.8 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.66	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	35.2	mi/h
Percent time-spent-following, PTSFd (from above)	89.8	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1121.1
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	2.92
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday AM
Highway	#7. SR 68 / EB
From/To	Laureles Grd/Corral De Tierra
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.86	
Shoulder width	6.0	ft	% Trucks and buses	3	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	6	/mi

Analysis direction volume, Vd 937 veh/h
Opposing direction volume, Vo 1223 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1090	pc/h	1422	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	1.5	mi/h
Free-flow speed, FFSd	53.5	mi/h
Adjustment for no-passing zones, fnp	0.8	mi/h
Average travel speed, ATSd	33.2	mi/h
Percent Free Flow Speed, PFFS	62.0	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1090 pc/h	1422 pc/h
Base percent time-spent-following,(note-4) BPTSFd	83.6 %	
Adjustment for no-passing zones, fnp	11.3	
Percent time-spent-following, PTSFd	88.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.64	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	33.2	mi/h
Percent time-spent-following, PTSFd (from above)	88.5	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1089.5
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	3.16
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday PM
Highway	#7. SR 68 / EB
From/To	Laureles Grd/Corral De Tierra
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.96	
Shoulder width	6.0	ft	% Trucks and buses	3	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	6	/mi

Analysis direction volume, Vd 1181 veh/h
Opposing direction volume, Vo 971 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1230	pc/h	1011	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	1.5	mi/h
Free-flow speed, FFSd	53.5	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATSd	35.0	mi/h
Percent Free Flow Speed, PFFS	65.4	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1230 pc/h	1011 pc/h
Base percent time-spent-following,(note-4) BPTSFd	83.2 %	
Adjustment for no-passing zones, fnp	14.9	
Percent time-spent-following, PTSFd	91.4 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.72	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	35.0	mi/h
Percent time-spent-following, PTSFd (from above)	91.4	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1230.2
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	3.22
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday AM
Highway	#7. SR 68 / WB
From/To	Corral De Tierra/Laureles Grd
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.86	
Shoulder width	6.0	ft	% Trucks and buses	3	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	6	/mi

Analysis direction volume, Vd 1223 veh/h
Opposing direction volume, Vo 937 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1422	pc/h	1090	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	1.5	mi/h
Free-flow speed, FFSd	53.5	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATSd	33.0	mi/h
Percent Free Flow Speed, PFFS	61.6	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1422 pc/h	1090 pc/h
Base percent time-spent-following,(note-4) BPTSFd	87.3 %	
Adjustment for no-passing zones, fnp	11.3	
Percent time-spent-following, PTSFd	93.7 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.84	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	33.0	mi/h
Percent time-spent-following, PTSFd (from above)	93.7	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1422.1
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	3.29
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday PM
Highway	#7. SR 68 / WB
From/To	Corral De Tierra/Laureles Grd
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.96	
Shoulder width	6.0	ft	% Trucks and buses	2	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	6	/mi

Analysis direction volume, Vd 971 veh/h
Opposing direction volume, Vo 1181 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1011	pc/h	1230	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	1.5	mi/h
Free-flow speed, FFSd	53.5	mi/h
Adjustment for no-passing zones, fnp	1.0	mi/h
Average travel speed, ATSd	35.1	mi/h
Percent Free Flow Speed, PFFS	65.7	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1011 pc/h	1230 pc/h
Base percent time-spent-following,(note-4) BPTSFd	80.7 %	
Adjustment for no-passing zones, fnp	14.9	
Percent time-spent-following, PTSFd	87.4 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.59	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	35.1	mi/h
Percent time-spent-following, PTSFd (from above)	87.4	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1011.5
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	2.87
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday AM
Highway	#8. SR 68 / EB
From/To	Corral De Tierra / Torero Dr
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.85	
Shoulder width	6.0	ft	% Trucks and buses	4	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	3	/mi

Analysis direction volume, Vd 1234 veh/h
Opposing direction volume, Vo 1170 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1452	pc/h	1376	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	0.8	mi/h
Free-flow speed, FFSd	54.3	mi/h
Adjustment for no-passing zones, fnp	0.9	mi/h
Average travel speed, ATSd	31.4	mi/h
Percent Free Flow Speed, PFFS	57.9	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1452 pc/h	1376 pc/h
Base percent time-spent-following,(note-4) BPTSFd	89.9 %	
Adjustment for no-passing zones, fnp	8.9	
Percent time-spent-following, PTSFd	94.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.85	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	31.4	mi/h
Percent time-spent-following, PTSFd (from above)	94.5	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1451.8
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	3.57
Bicycle LOS	D

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday PM
Highway	#8. SR 68 / EB
From/To	Corral De Tierra / Torero Dr
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.96	
Shoulder width	6.0	ft	% Trucks and buses	2	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	3	/mi

Analysis direction volume, Vd 1231 veh/h
Opposing direction volume, Vo 1177 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1282	pc/h	1226	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	0.8	mi/h
Free-flow speed, FFSd	54.3	mi/h
Adjustment for no-passing zones, fnp	1.0	mi/h
Average travel speed, ATSd	33.8	mi/h
Percent Free Flow Speed, PFFS	62.3	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1282 pc/h	1226 pc/h
Base percent time-spent-following,(note-4) BPTSFd	86.5 %	
Adjustment for no-passing zones, fnp	11.6	
Percent time-spent-following, PTSFd	92.4 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.75	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	33.8	mi/h
Percent time-spent-following, PTSFd (from above)	92.4	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1282.3
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	2.99
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday AM
Highway	#8. SR 68 / WB
From/To	Corral De Tierra / Torero Dr
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.85	
Shoulder width	6.0	ft	% Trucks and buses	4	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	3	/mi

Analysis direction volume, Vd 1170 veh/h
Opposing direction volume, Vo 1234 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1376	pc/h	1452	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	0.8	mi/h
Free-flow speed, FFSd	54.3	mi/h
Adjustment for no-passing zones, fnp	0.8	mi/h
Average travel speed, ATSd	31.5	mi/h
Percent Free Flow Speed, PFFS	58.0	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1376 pc/h	1452 pc/h
Base percent time-spent-following,(note-4) BPTSFd	89.0 %	
Adjustment for no-passing zones, fnp	8.9	
Percent time-spent-following, PTSFd	93.3 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.81	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	31.5	mi/h
Percent time-spent-following, PTSFd (from above)	93.3	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1376.5
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	3.54
Bicycle LOS	D

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday PM
Highway	#8. SR 68 / WB
From/To	Corral De Tierra / Torero Dr
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.96	
Shoulder width	6.0	ft	% Trucks and buses	2	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	3	/mi

Analysis direction volume, Vd 1177 veh/h
Opposing direction volume, Vo 1231 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1226	pc/h	1282	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	0.8	mi/h
Free-flow speed, FFSd	54.3	mi/h
Adjustment for no-passing zones, fnp	1.0	mi/h
Average travel speed, ATSd	33.8	mi/h
Percent Free Flow Speed, PFFS	62.4	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1226 pc/h	1282 pc/h
Base percent time-spent-following,(note-4) BPTSFd	85.8 %	
Adjustment for no-passing zones, fnp	11.6	
Percent time-spent-following, PTSFd	91.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.72	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	33.8	mi/h
Percent time-spent-following, PTSFd (from above)	91.5	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1226.0
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	2.96
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday AM
Highway	#9. SR 68 / EB
From/To	Torero Dr / Begin Freeway
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.85	
Shoulder width	6.0	ft	% Trucks and buses	4	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	0	/mi

Analysis direction volume, Vd 1197 veh/h
Opposing direction volume, Vo 676 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.1	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		0.996	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1408	pc/h	798	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	0.0	mi/h
Free-flow speed, FFSd	55.0	mi/h
Adjustment for no-passing zones, fnp	1.4	mi/h
Average travel speed, ATSd	36.5	mi/h
Percent Free Flow Speed, PFFS	66.3	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1408 pc/h	795 pc/h
Base percent time-spent-following,(note-4) BPTSFd	85.1 %	
Adjustment for no-passing zones, fnp	14.7	
Percent time-spent-following, PTSFd	94.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.83	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	36.5	mi/h
Percent time-spent-following, PTSFd (from above)	94.5	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1408.2
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	3.56
Bicycle LOS	D

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday PM
Highway	#9. SR 68 / EB
From/To	Torero Dr / Begin Freeway
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.96	
Shoulder width	6.0	ft	% Trucks and buses	2	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	0	/mi

Analysis direction volume, Vd 1167 veh/h
Opposing direction volume, Vo 1180 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1216	pc/h	1229	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	0.0	mi/h
Free-flow speed, FFSd	55.0	mi/h
Adjustment for no-passing zones, fnp	1.0	mi/h
Average travel speed, ATSd	35.0	mi/h
Percent Free Flow Speed, PFFS	63.7	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1216 pc/h	1229 pc/h
Base percent time-spent-following,(note-4) BPTSFd	85.3 %	
Adjustment for no-passing zones, fnp	12.5	
Percent time-spent-following, PTSFd	91.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.72	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	35.0	mi/h
Percent time-spent-following, PTSFd (from above)	91.5	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1215.6
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	2.96
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday AM
Highway	#9. SR 68 / WB
From/To	End Freeway / Torero Dr
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.85	
Shoulder width	6.0	ft	% Trucks and buses	4	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	0	/mi

Analysis direction volume, Vd 676 veh/h
Opposing direction volume, Vo 1197 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.1		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.996		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	798	pc/h	1408	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	0.0	mi/h
Free-flow speed, FFSd	55.0	mi/h
Adjustment for no-passing zones, fnp	0.9	mi/h
Average travel speed, ATSd	37.0	mi/h
Percent Free Flow Speed, PFFS	67.3	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	795 pc/h	1408 pc/h
Base percent time-spent-following,(note-4) BPTSFd	75.2 %	
Adjustment for no-passing zones, fnp	14.7	
Percent time-spent-following, PTSFd	80.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.47	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	37.0	mi/h
Percent time-spent-following, PTSFd (from above)	80.5	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	795.3
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	3.27
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	JO
Agency/Co.	Mott MacDonald
Date Performed	12/21/17
Analysis Time Period	Weekday PM
Highway	#9. SR 68 / WB
From/To	Begin Freeway / Torero Dr
Jurisdiction	Caltrans / Monterey
Analysis Year	2016
Description	Monterey Regional Airport

Input Data

Highway class	Class 2		Peak hour factor, PHF	0.96	
Shoulder width	6.0	ft	% Trucks and buses	2	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	0	/mi

Analysis direction volume, Vd	1180	veh/h
Opposing direction volume, Vo	1167	veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	1.000		1.000	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	1229	pc/h	1216	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	0.0	mi/h
Adj. for access point density,(note-3) fA	0.0	mi/h
Free-flow speed, FFSd	55.0	mi/h
Adjustment for no-passing zones, fnp	1.0	mi/h
Average travel speed, ATSd	35.0	mi/h
Percent Free Flow Speed, PFFS	63.7	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	1.00
Directional flow rate,(note-2) vi	1229 pc/h	1216 pc/h
Base percent time-spent-following,(note-4) BPTSFd	85.2 %	
Adjustment for no-passing zones, fnp	12.5	
Percent time-spent-following, PTSFd	91.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.72	
Peak 15-min vehicle-miles of travel, VMT15	0	veh-mi
Peak-hour vehicle-miles of travel, VMT60	0	veh-mi
Peak 15-min total travel time, TT15	0.0	veh-h
Capacity from ATS, CdATS	0	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	35.0	mi/h
Percent time-spent-following, PTSFd (from above)	91.5	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	A	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1229.2
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	2.97
Bicycle LOS	C

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

K: TAMC Bicycle and Pedestrian Master Plan Map

Appendix K
Monterey County Bike Map

LEGEND / Leyenda

Separated Bike Path
Closed to cars and motorcycles
Camino separados para bicicletas
Cerrado a los carros y motocicletas

Bike Lane
Separate lane on roadway
Carril de Bicicleta
Carril separado en la calle

Bike Route
Cyclists share roadway on lower traffic street
Ruta de Bicicleta
Ciclistas comparten la calle en áreas con menos tráfico

Unofficial Bike Routes
Roads with narrow lane widths and/or higher speed traffic, use caution
Rutas de bicicleta no oficiales
Calles con carriles angostos y/o mayor tráfico de alta velocidad , sea precavido

Cross County Bike Routes
High speed roadway, bikes allowed on highways
Rutas de Bicicleta Cruza Condados
Carreteras de alta velocidad, bicis permitidas en autopistasv

Regional Bike Routes
Paths, lanes and routes connecting cities
Rutas de Bicicleta Regionales
Caminos, carriles y rutas que conectan ciudades

Unpaved Trails
Separate, dirt paths
Caminos Sin Pavimentar
Caminos de tierra separados

Uphill Bikeway
Indicates climb
Pendiente pronunciada
Indica cuesta

Parks
Parques

Bodies of Water
Cuerpos de Agua

Bike Shop
Tienda de Bicicletas

Library
Biblioteca

Railroad
Ferrocarril

School
Escuela

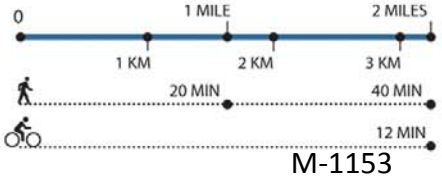
University or College
Universidad o Colegio

Airport
Aerpuerto

City Hall
Palacio Municipal

Park and Ride Lot
Estacionamiento para Viajeros

Transit Centers
Centro de transporte público



L: CONA Neighborhood Road Segment Traffic Count Data Summary

Appendix L
24-Hour Machine Count Summary
Conducted Between November 2016 and June 2017

November 2016						May 2017						June 2017						ADT All Count Periods
Location / Count Date	Direction		Directional Split		ADT	Location / Count Date	Direction		Directional Split		ADT	Location / Count Date	Direction		Directional Split		ADT	
1. Airport Rd N/O Fairground Rd	NB	SB	NB	SB	4,787													4,787
Tue, 11/8/16	2,920	1,989																
Wed, 11/9/16	2,818	1,892	60%	40%														
Thu, 11/3/16	2,825	1,916																
2. Airport Rd S/O Fairground Rd	NB	SB	NB	SB	3,227	2. Airport Rd S/O Fairground Rd	NB	SB	NB	SB	3,219							3,223
Tue, 11/8/16	1,563	1,887				Tue, 5/23/17	1,546	1,665										
Wed, 11/9/16	1,350	1,732	44%	56%		Wed, 5/24/17	1,539	1,616	48%	52%								
Thu, 11/3/16	1,389	1,761				Thu, 5/25/17	1,580	1,710										
3. Airport Rd W/O Mitcher St	EB	WB	EB	WB	2,405													2,405
Tue, 11/8/16	1,199	1,330																
Wed, 11/9/16	1,048	1,294	46%	54%														
Thu, 11/3/16	1,066	1,277																
4. Airport Rd W/O Euclid Ave	EB	WB	EB	WB	1,753													1,753
Tue, 11/8/16	728	714																
Wed, 11/9/16	845	1,082	46%	54%														
Thu, 11/3/16	844	1,046																
5. Airport Rd S/O Euclid Ave	NB	SB	NB	SB	1,349													1,349
Tue, 11/8/16	705	678																
Wed, 11/9/16	665	659	51%	49%														
Thu, 11/3/16	679	661																
6. Ramona Ave S/O Littleness Ave	NB	SB	NB	SB	985													985
Tue, 11/8/16	496	484																
Wed, 11/9/16	501	493	50%	50%														
Thu, 11/3/16	474	507																
7. Cassanova Ave N/O Melway Cir	NB	SB	NB	SB	5,473	7. Casanova Ave N/O Melway Cir	NB	SB	NB	SB	6,739	7. Casanova Ave N/O Melway Cir	NB	SB	NB	SB	3,537	5,250
Tue, 11/8/16	3,329	2,276				Tue, 5/23/17	2,146	3,940										
Wed, 11/9/16	3,410	2,125	60%	40%		Wed, 5/24/17	2,567	4,608	36%	64%		Wed, 6/7/17	1,805	1,732	51%	49%		
Thu, 11/3/16	3,142	2,136				Thu, 5/25/17	2,574	4,382										
8. Olmsted Rd N/O Garden Rd	NB	SB	NB	SB	2,331													2,331
Tue, 11/8/16	1,117	973																
Wed, 11/9/16	1,234	1,097	54%	46%														
Thu, 11/3/16	1,396	1,176																
9. Skypark Dr @ Airport Access	NB	SB	NB	SB	379													379
Tue, 11/8/16	174	180																
Wed, 11/9/16	203	187	50%	50%														
Thu, 11/3/16	191	203																
10. Henderson Wy @ Airport Access	NB	SB	NB	SB	408													408
Tue, 11/8/16	109	228																
Wed, 11/9/16	131	257	36%	64%														
Thu, 11/3/16	201	299																
						11. Ramona Ave N/O Bruce Ln	NB	SB	NB	SB	2,406							2,406
						Tue, 5/23/17	1,310	1,085										
						Wed, 5/24/17	1,313	1,136	54%	46%								
						Thu, 5/25/17	1,287	1,087										
						12. Fairground Rd W/O Airport Rd	EB	WB	EB	WB	5,798							5,798
						Tue, 5/23/17	3,196	1,551										
						Wed, 5/24/17	2,851	2,356	62%	38%								
						Thu, 5/25/17	4,770	2,671										
						13. Airport Rd N/O Bruce Ln	NB	SB	NB	SB	4,177							4,177
						Tue, 5/23/17	2,377	1,597										
						Wed, 5/24/17	2,431	1,597	60%	40%								
						Thu, 5/25/17	2,684	1,845										

M: Road Segment Traffic Count Data

Vehicle Classification Report Summary

Location: Airport Rd N/O Fairground Rd
Count Direction: Northbound / Southbound
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

	FHWA Vehicle Classification													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total														
Northbound	120	15,510	1,796	3	466	170	0	2	5	4	0	0	3	18,079
Percent	0.7%	85.8%	9.9%	0.0%	2.6%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	433	10,406	1,437	1	143	100	0	5	3	7	0	0	6	12,541
Percent	3.5%	83.0%	11.5%	0.0%	1.1%	0.8%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	100%
Total	553	25,916	3,233	4	609	270	0	7	8	11	0	0	9	30,620
Percent	1.8%	84.6%	10.6%	0.0%	2.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Thursday, November 3, 2016
Southbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	11	0	0	0	0	0	0	0	0	0	0	0	**11**
1:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	**7**
5:00 AM	2	18	2	0	2	0	0	0	0	0	0	0	0	**24**
6:00 AM	0	41	5	0	1	1	0	0	0	0	0	0	0	**48**
7:00 AM	0	130	17	0	2	4	0	0	1	0	0	0	0	**154**
8:00 AM	1	139	11	0	2	2	0	0	0	0	0	0	0	**155**
9:00 AM	0	107	20	0	1	1	0	0	0	0	0	0	0	**129**
10:00 AM	1	49	16	0	0	0	0	0	0	0	0	0	0	**66**
11:00 AM	3	114	14	0	3	0	0	1	0	0	0	0	0	**135**
12:00 PM	0	117	15	0	2	0	0	0	0	0	0	0	0	**134**
1:00 PM	3	108	22	0	3	1	0	0	1	0	0	0	0	**138**
2:00 PM	0	110	15	0	5	0	0	0	0	0	0	0	0	**130**
3:00 PM	1	80	20	0	1	0	0	0	0	0	0	0	0	**102**
4:00 PM	2	149	17	0	1	1	0	0	0	0	0	0	0	**170**
5:00 PM	8	157	39	1	3	3	0	0	0	0	0	0	1	**212**
6:00 PM	3	85	14	0	1	0	0	0	0	0	0	0	0	**103**
7:00 PM	0	60	4	0	0	0	0	0	0	0	0	0	0	**64**
8:00 PM	1	33	3	0	0	0	0	0	0	0	0	0	0	**37**
9:00 PM	0	38	3	0	1	0	0	0	0	0	0	0	0	**42**
10:00 PM	0	30	4	0	0	0	0	0	0	0	0	0	0	**34**
11:00 PM	0	12	0	0	0	0	0	0	0	0	0	0	0	**12**
Total	**25**	**1,603**	**242**	**1**	**28**	**13**	**0**	**1**	**2**	**0**	**0**	**0**	**1**	**1,916**
Percent	**1.3%**	**83.7%**	**12.6%**	**0.1%**	**1.5%**	**0.7%**	**0.0%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Friday, November 4, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	12	0	0	0	0	0	0	0	0	0	0	0	12
1:00 AM	0	19	1	0	0	0	0	0	0	0	0	0	0	20
2:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	3	2	0	0	0	0	0	0	0	0	0	0	5
4:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	0	8
5:00 AM	0	9	3	0	1	0	0	0	0	0	0	0	0	13
6:00 AM	0	28	7	0	1	1	0	0	0	0	0	0	0	37
7:00 AM	0	104	13	0	5	1	0	0	0	0	0	0	0	123
8:00 AM	3	124	23	0	8	0	0	0	0	0	0	0	0	158
9:00 AM	2	141	17	0	8	2	0	0	0	0	0	0	0	170
10:00 AM	1	158	18	0	10	2	0	0	0	0	0	0	0	189
11:00 AM	2	208	32	0	6	2	0	0	0	0	0	0	0	250
12:00 PM	2	221	25	0	2	0	0	0	0	0	0	0	0	250
1:00 PM	2	205	20	0	12	0	0	0	0	0	0	0	0	239
2:00 PM	1	189	26	0	10	0	0	0	0	0	0	0	0	226
3:00 PM	1	221	29	0	5	2	0	0	0	0	0	0	0	258
4:00 PM	2	263	28	0	6	3	0	0	0	0	0	0	0	302
5:00 PM	1	223	20	0	7	2	0	0	0	0	0	0	0	253
6:00 PM	0	140	11	0	1	1	0	0	0	0	0	0	0	153
7:00 PM	2	95	8	0	2	2	0	0	0	0	0	0	0	109
8:00 PM	0	74	10	0	0	1	0	0	0	0	0	0	0	85
9:00 PM	0	55	1	0	0	2	0	0	0	0	0	0	0	58
10:00 PM	0	47	1	0	1	0	0	0	0	0	0	0	0	49
11:00 PM	0	23	2	0	0	1	0	0	0	0	0	0	0	26
Total	**19**	**2,571**	**298**	**0**	**85**	**22**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,995**
Percent	**0.6%**	**85.8%**	**9.9%**	**0.0%**	**2.8%**	**0.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Friday, November 4, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	16	0	0	0	0	0	0	0	0	0	0	0	16
1:00 AM	1	5	0	0	0	0	0	0	0	0	0	0	0	6
2:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
3:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	0	10	2	0	0	0	0	0	0	0	0	0	0	12
6:00 AM	0	52	3	0	1	0	0	0	0	0	0	0	0	56
7:00 AM	0	130	17	0	0	0	0	0	0	1	0	0	0	148
8:00 AM	3	130	18	0	2	2	0	0	0	0	0	0	0	155
9:00 AM	1	139	19	0	1	0	0	0	0	0	0	0	0	160
10:00 AM	1	124	20	0	1	2	0	0	0	0	0	0	0	148
11:00 AM	1	127	21	0	3	1	0	0	0	0	0	0	0	153
12:00 PM	0	189	34	0	2	2	0	0	0	0	0	0	0	227
1:00 PM	2	141	31	0	1	1	0	0	0	0	0	0	0	176
2:00 PM	4	167	40	0	3	2	0	0	0	0	0	0	0	216
3:00 PM	1	125	15	0	2	1	0	0	0	0	0	0	0	144
4:00 PM	5	148	27	0	0	5	0	0	0	1	0	0	1	187
5:00 PM	10	159	15	0	0	5	0	0	0	0	0	0	0	189
6:00 PM	13	69	5	0	0	1	0	0	0	0	0	0	0	88
7:00 PM	10	53	5	0	0	1	0	0	0	0	0	0	0	69
8:00 PM	6	37	2	0	0	0	0	0	0	0	0	0	0	45
9:00 PM	8	38	0	0	0	3	0	0	0	0	0	0	0	49
10:00 PM	3	21	1	0	0	0	0	0	0	0	0	0	0	25
11:00 PM	2	14	1	0	0	0	0	0	0	0	0	0	0	17
Total	**71**	**1,904**	**277**	**0**	**16**	**26**	**0**	**0**	**0**	**2**	**0**	**0**	**1**	**2,297**
Percent	**3.1%**	**82.9%**	**12.1%**	**0.0%**	**0.7%**	**1.1%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Saturday, November 5, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	16	0	0	0	0	0	0	0	0	0	0	0	16
1:00 AM	0	10	1	0	1	0	0	0	0	0	0	0	0	12
2:00 AM	0	7	0	0	0	0	0	0	0	0	0	0	0	7
3:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
4:00 AM	0	13	1	0	0	0	0	0	0	0	0	0	0	14
5:00 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	7
6:00 AM	0	15	3	0	2	0	0	0	0	0	0	0	0	20
7:00 AM	0	35	2	0	1	0	0	0	1	0	0	0	0	39
8:00 AM	2	60	12	0	3	1	0	0	0	0	0	0	0	78
9:00 AM	0	116	13	0	1	0	0	0	0	0	0	0	1	131
10:00 AM	3	120	13	0	4	1	0	0	0	0	0	0	0	141
11:00 AM	1	164	21	0	2	2	0	0	0	0	0	0	0	190
12:00 PM	0	163	17	0	5	1	0	0	0	0	0	0	0	186
1:00 PM	0	131	15	0	5	4	0	0	0	0	0	0	0	155
2:00 PM	1	116	12	0	2	1	0	0	0	0	0	0	0	132
3:00 PM	1	121	15	0	3	5	0	0	0	1	0	0	0	146
4:00 PM	0	123	15	0	1	0	0	0	0	0	0	0	0	139
5:00 PM	0	116	6	0	1	0	0	0	0	0	0	0	0	123
6:00 PM	0	102	5	0	0	2	0	0	0	0	0	0	0	109
7:00 PM	1	69	3	0	1	2	0	0	0	0	0	0	0	76
8:00 PM	0	52	0	0	2	0	0	0	0	0	0	0	0	54
9:00 PM	1	71	1	0	0	1	0	0	0	0	0	0	0	74
10:00 PM	1	52	2	0	1	0	0	0	0	0	0	0	0	56
11:00 PM	0	37	1	0	1	0	0	0	0	0	0	0	0	39
Total	**11**	**1,718**	**160**	**0**	**36**	**20**	**0**	**0**	**1**	**1**	**0**	**0**	**1**	**1,948**
Percent	**0.6%**	**88.2%**	**8.2%**	**0.0%**	**1.8%**	**1.0%**	**0.0%**	**0.0%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.1%**	

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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Saturday, November 5, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	11	0	0	0	0	0	0	0	0	0	0	0	11
1:00 AM	1	7	0	0	0	0	0	0	0	0	0	0	0	8
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
4:00 AM	1	7	0	0	0	0	0	0	0	0	0	0	0	8
5:00 AM	1	5	1	0	0	0	0	0	0	0	0	0	0	7
6:00 AM	1	16	0	0	0	0	0	0	0	0	0	0	0	17
7:00 AM	7	32	0	0	0	0	0	0	0	0	0	0	0	39
8:00 AM	8	28	4	0	0	2	0	0	0	0	0	0	0	42
9:00 AM	17	50	4	0	0	2	0	0	0	0	0	0	0	73
10:00 AM	32	52	3	0	0	5	0	0	0	0	0	0	0	92
11:00 AM	26	65	2	0	0	1	0	0	0	0	0	0	0	94
12:00 PM	50	65	6	0	0	3	0	0	0	0	0	0	0	124
1:00 PM	33	52	9	0	0	2	0	1	0	0	0	0	0	97
2:00 PM	51	54	1	0	0	8	0	2	0	0	0	0	0	116
3:00 PM	31	47	7	0	0	0	0	1	0	0	0	0	0	86
4:00 PM	1	96	7	0	1	1	0	0	0	0	0	0	0	106
5:00 PM	0	76	9	0	1	0	0	0	0	0	0	0	0	86
6:00 PM	0	50	11	0	0	0	0	0	0	0	0	0	0	61
7:00 PM	0	46	3	0	0	0	0	0	0	0	0	0	0	49
8:00 PM	0	26	2	0	2	0	0	0	0	0	0	0	0	30
9:00 PM	1	24	2	0	0	0	0	0	0	0	0	0	0	27
10:00 PM	0	36	1	0	0	0	0	0	0	0	0	0	0	37
11:00 PM	0	26	3	0	1	0	0	0	0	0	0	0	0	30
Total	**261**	**877**	**75**	**0**	**5**	**24**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**1,246**
Percent	**20.9%**	**70.4%**	**6.0%**	**0.0%**	**0.4%**	**1.9%**	**0.0%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Sunday, November 6, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	21	1	0	0	0	0	0	0	0	0	0	0	22
1:00 AM	0	15	1	0	0	0	0	0	0	0	0	0	0	16
2:00 AM	0	10	1	0	0	0	0	0	0	0	0	0	0	11
3:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
4:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
6:00 AM	0	7	0	0	1	0	0	0	0	0	0	0	0	8
7:00 AM	0	15	1	0	0	1	0	0	0	0	0	0	0	17
8:00 AM	0	45	0	0	0	0	0	0	0	0	0	0	0	45
9:00 AM	0	60	7	0	1	0	0	0	0	0	0	0	0	68
10:00 AM	0	129	14	0	1	0	0	0	0	0	0	0	0	144
11:00 AM	1	127	7	0	2	1	0	0	0	0	0	0	0	138
12:00 PM	0	138	11	0	1	1	0	0	0	0	0	0	0	151
1:00 PM	0	126	12	0	1	0	0	0	0	0	0	0	0	139
2:00 PM	0	134	14	0	3	0	0	0	0	0	0	0	0	151
3:00 PM	0	120	10	0	0	0	0	0	0	0	0	0	0	130
4:00 PM	0	105	10	0	2	2	0	0	0	0	0	0	0	119
5:00 PM	1	79	6	0	3	0	0	0	0	0	0	0	0	89
6:00 PM	0	124	10	0	0	0	0	0	0	0	0	0	0	134
7:00 PM	0	93	8	0	0	1	0	0	0	0	0	0	0	102
8:00 PM	0	49	2	0	0	2	0	0	0	0	0	0	0	53
9:00 PM	0	43	3	0	0	0	0	0	0	0	0	0	0	46
10:00 PM	0	31	4	0	0	0	0	0	0	0	0	0	0	35
11:00 PM	0	29	2	0	0	1	0	0	0	0	0	0	0	32
Total	**2**	**1,512**	**125**	**0**	**15**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,663**
Percent	**0.1%**	**90.9%**	**7.5%**	**0.0%**	**0.9%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Sunday, November 6, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	13	0	0	0	0	0	0	0	0	0	0	0	13
1:00 AM	0	7	0	0	0	0	0	0	0	0	0	0	0	7
2:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	5
3:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	5
6:00 AM	0	10	2	0	0	0	0	0	0	0	0	0	0	12
7:00 AM	0	17	2	0	0	0	0	0	0	0	0	0	0	19
8:00 AM	0	32	1	0	1	0	0	0	0	0	0	0	0	34
9:00 AM	0	51	3	0	1	0	0	0	0	0	0	0	0	55
10:00 AM	0	53	5	0	0	0	0	0	0	0	0	0	0	58
11:00 AM	0	51	5	0	0	1	0	0	0	0	0	0	0	57
12:00 PM	2	68	10	0	1	0	0	0	0	0	0	0	0	81
1:00 PM	0	69	12	0	1	0	0	0	0	0	0	0	0	82
2:00 PM	1	61	8	0	2	0	0	0	0	0	0	0	0	72
3:00 PM	0	55	15	0	1	2	0	0	0	0	0	0	0	73
4:00 PM	0	56	10	0	2	0	0	0	0	0	0	0	0	68
5:00 PM	0	62	10	0	2	1	0	0	0	0	0	0	0	75
6:00 PM	0	70	5	0	0	0	0	0	0	0	0	0	0	75
7:00 PM	1	36	4	0	0	1	0	0	0	0	0	0	0	42
8:00 PM	0	32	4	0	1	0	0	0	0	0	0	0	0	37
9:00 PM	0	29	5	0	0	0	0	0	0	0	0	0	0	34
10:00 PM	0	19	1	0	1	0	0	0	0	0	0	0	0	21
11:00 PM	0	25	0	0	0	1	0	0	0	0	0	0	0	26
Total	**4**	**829**	**104**	**0**	**13**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**956**
Percent	**0.4%**	**86.7%**	**10.9%**	**0.0%**	**1.4%**	**0.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Monday, November 7, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	13	2	0	0	0	0	0	0	0	0	0	0	15
1:00 AM	0	10	0	0	0	0	0	0	0	0	0	0	0	10
2:00 AM	0	28	1	0	0	1	0	0	0	0	0	0	0	30
3:00 AM	0	10	2	0	0	0	0	0	0	0	0	0	0	12
4:00 AM	0	11	1	0	0	0	0	0	0	0	0	0	0	12
5:00 AM	0	7	0	0	0	0	0	0	0	0	0	0	0	7
6:00 AM	0	8	3	0	1	0	0	0	0	0	0	0	0	12
7:00 AM	1	30	8	0	2	0	0	0	0	0	0	0	0	41
8:00 AM	0	95	25	0	6	0	0	0	1	0	0	0	0	127
9:00 AM	0	110	22	0	12	1	0	0	0	0	0	0	0	145
10:00 AM	2	122	31	0	3	1	0	0	0	0	0	0	0	159
11:00 AM	0	143	28	0	8	2	0	0	0	0	0	0	0	181
12:00 PM	4	238	35	0	7	3	0	0	0	1	0	0	0	288
1:00 PM	1	267	22	0	1	2	0	0	0	0	0	0	0	293
2:00 PM	4	159	21	0	6	1	0	0	0	0	0	0	0	191
3:00 PM	3	211	22	0	3	0	0	0	0	0	0	0	0	239
4:00 PM	2	195	29	0	9	2	0	0	0	0	0	0	0	237
5:00 PM	3	268	21	0	8	1	0	0	0	0	0	0	0	301
6:00 PM	3	239	21	0	1	0	0	0	0	0	0	0	0	264
7:00 PM	1	121	7	0	2	0	0	0	0	0	0	0	0	131
8:00 PM	0	80	4	0	0	0	0	0	0	0	0	0	0	84
9:00 PM	1	61	4	0	0	0	0	0	0	0	0	0	0	66
10:00 PM	0	32	4	1	1	0	0	0	0	0	0	0	0	38
11:00 PM	0	24	3	0	0	0	0	0	0	0	0	0	0	27
Total	**25**	**2,482**	**316**	**1**	**70**	**14**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**2,910**
Percent	**0.9%**	**85.3%**	**10.9%**	**0.0%**	**2.4%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Monday, November 7, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	14	1	0	0	0	0	0	0	0	0	0	0	15
1:00 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	9
2:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
3:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	8	2	0	0	0	0	0	0	0	0	0	0	10
6:00 AM	1	14	6	0	0	0	0	0	0	0	0	0	0	21
7:00 AM	0	64	7	0	0	0	0	0	0	0	0	0	0	71
8:00 AM	4	165	27	0	1	1	0	0	0	0	0	0	0	198
9:00 AM	4	162	21	0	5	0	0	0	0	0	0	0	0	192
10:00 AM	2	120	11	0	1	1	0	0	0	0	0	0	0	135
11:00 AM	0	121	24	0	3	0	0	0	0	0	0	0	0	148
12:00 PM	0	138	18	0	2	0	0	0	0	0	0	0	0	158
1:00 PM	0	172	17	0	2	0	0	0	0	0	0	0	0	191
2:00 PM	2	114	16	0	3	0	0	0	0	0	0	0	0	135
3:00 PM	1	97	15	0	2	2	0	0	0	0	0	0	0	117
4:00 PM	1	119	34	0	1	0	0	0	0	1	0	0	0	156
5:00 PM	1	170	29	0	0	2	0	0	0	0	0	0	3	205
6:00 PM	3	220	21	0	0	4	0	0	0	0	0	0	0	248
7:00 PM	1	64	11	0	0	1	0	0	0	0	0	0	0	77
8:00 PM	0	44	7	0	0	0	0	0	0	0	0	0	0	51
9:00 PM	0	47	2	0	1	0	0	0	0	0	0	0	0	50
10:00 PM	0	25	2	0	0	0	0	0	0	0	0	0	0	27
11:00 PM	0	19	0	0	0	0	0	0	0	0	0	0	0	19
Total	**20**	**1,918**	**271**	**0**	**21**	**11**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	**2,245**
Percent	**0.9%**	**85.4%**	**12.1%**	**0.0%**	**0.9%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Tuesday, November 8, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	17	1	0	0	0	0	0	0	0	0	0	0	18
1:00 AM	0	3	0	0	1	0	0	0	0	0	0	0	0	4
2:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	5
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
5:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	0	8
6:00 AM	0	7	3	0	0	0	0	0	0	0	0	0	0	10
7:00 AM	0	33	5	0	6	1	0	0	0	0	0	0	0	45
8:00 AM	0	116	21	0	10	1	0	0	0	0	0	0	0	148
9:00 AM	1	132	25	0	8	2	0	0	1	0	0	0	0	169
10:00 AM	2	125	26	0	5	1	0	0	0	0	0	0	0	159
11:00 AM	0	157	29	0	6	0	0	0	0	0	0	0	0	192
12:00 PM	1	189	19	0	9	1	0	0	0	0	0	0	0	219
1:00 PM	1	188	28	0	5	1	0	0	0	0	0	0	0	223
2:00 PM	4	170	22	0	11	0	0	1	0	0	0	0	0	208
3:00 PM	0	181	15	0	2	2	0	0	0	0	0	0	0	200
4:00 PM	1	228	23	0	7	2	0	0	0	0	0	0	0	261
5:00 PM	4	296	30	0	2	5	0	0	0	0	0	0	0	337
6:00 PM	2	246	31	0	3	3	0	0	0	0	0	0	1	286
7:00 PM	2	144	13	0	2	1	0	0	0	0	0	0	0	162
8:00 PM	1	102	9	0	1	2	0	0	0	0	0	0	0	115
9:00 PM	0	66	0	0	0	1	0	0	0	0	0	0	0	67
10:00 PM	0	33	4	0	0	1	0	0	0	0	0	0	0	38
11:00 PM	0	39	1	0	0	0	0	0	0	0	0	0	0	40
Total	**19**	**2,490**	**306**	**0**	**78**	**24**	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**2,920**
Percent	**0.7%**	**85.3%**	**10.5%**	**0.0%**	**2.7%**	**0.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Tuesday, November 8, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
1:00 AM	0	7	0	0	0	0	0	0	0	0	0	0	0	7
2:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	8	1	0	0	0	0	0	0	0	0	0	0	9
6:00 AM	1	22	4	0	0	0	0	0	0	0	0	0	0	27
7:00 AM	0	57	7	0	1	0	0	0	0	0	0	0	0	65
8:00 AM	4	179	28	0	2	1	0	0	0	0	0	0	0	214
9:00 AM	4	151	23	0	0	0	0	0	0	0	0	0	0	178
10:00 AM	0	126	18	0	5	1	0	0	0	0	0	0	0	150
11:00 AM	5	102	17	0	2	0	0	0	0	0	0	0	0	126
12:00 PM	0	82	19	0	5	0	0	0	0	0	0	0	0	106
1:00 PM	3	140	14	0	5	0	0	0	0	0	0	0	0	162
2:00 PM	4	103	17	0	2	1	0	0	0	0	0	0	0	127
3:00 PM	2	97	17	0	2	1	0	0	0	0	0	0	0	119
4:00 PM	2	130	21	0	1	0	0	0	0	0	0	0	0	154
5:00 PM	0	120	19	0	0	1	0	0	0	0	0	0	0	140
6:00 PM	1	128	10	0	2	2	0	0	0	1	0	0	0	144
7:00 PM	0	71	10	0	1	0	0	0	0	0	0	0	0	82
8:00 PM	0	64	7	0	0	0	0	0	0	0	0	0	0	71
9:00 PM	0	33	2	0	0	0	0	0	0	0	0	0	0	35
10:00 PM	0	26	3	0	0	0	0	0	0	0	0	0	0	29
11:00 PM	0	32	1	0	0	1	0	0	0	0	0	0	0	34
Total	**26**	**1,688**	**238**	**0**	**28**	**8**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1,989**
Percent	**1.3%**	**84.9%**	**12.0%**	**0.0%**	**1.4%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Wednesday, November 9, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	13	2	0	0	0	0	0	0	0	0	0	0	15
1:00 AM	0	7	1	0	1	1	0	0	0	0	0	0	0	10
2:00 AM	0	7	1	0	0	0	0	0	0	0	0	0	0	8
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	10	0	0	0	0	0	0	0	0	0	0	0	10
5:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
6:00 AM	0	15	1	0	3	0	0	0	0	0	0	0	0	19
7:00 AM	0	23	8	0	3	0	0	0	0	0	0	0	0	34
8:00 AM	1	110	24	0	10	2	0	0	0	0	0	0	0	147
9:00 AM	1	109	22	0	11	2	0	0	0	0	0	0	0	145
10:00 AM	1	107	19	0	12	2	0	0	0	0	0	0	0	141
11:00 AM	0	114	26	0	5	0	0	0	0	0	0	0	0	145
12:00 PM	1	154	22	0	3	1	0	0	0	0	0	0	0	181
1:00 PM	7	189	25	1	9	3	0	0	0	0	0	0	0	234
2:00 PM	4	183	30	0	9	1	0	0	0	0	0	0	0	227
3:00 PM	0	154	23	0	8	1	0	0	0	0	0	0	0	186
4:00 PM	1	201	23	0	8	1	0	0	0	0	0	0	0	234
5:00 PM	2	295	21	0	7	6	0	0	0	0	0	0	0	331
6:00 PM	3	288	24	0	1	0	0	0	0	0	0	0	1	317
7:00 PM	0	148	12	0	6	1	0	0	0	0	0	0	0	167
8:00 PM	0	94	11	0	1	0	0	0	0	0	0	0	0	106
9:00 PM	1	53	5	0	0	0	0	0	0	0	0	0	0	59
10:00 PM	0	61	4	0	0	0	0	0	0	0	0	0	0	65
11:00 PM	1	31	1	0	0	1	0	0	0	0	0	0	0	34
Total	**23**	**2,369**	**305**	**1**	**97**	**22**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2,818**
Percent	**0.8%**	**84.1%**	**10.8%**	**0.0%**	**3.4%**	**0.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Wednesday, November 9, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	11	0	0	0	0	0	0	0	0	0	0	0	11
1:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
2:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
6:00 AM	2	20	5	0	0	0	0	0	0	0	0	0	0	27
7:00 AM	0	65	9	0	1	1	0	0	0	0	0	0	0	76
8:00 AM	2	151	26	0	3	0	0	0	0	0	0	0	0	182
9:00 AM	3	130	21	0	3	0	0	0	1	1	0	0	0	159
10:00 AM	0	106	21	0	3	1	0	0	0	0	0	0	0	131
11:00 AM	3	85	11	0	1	3	0	0	0	0	0	0	0	103
12:00 PM	1	90	14	0	2	0	0	0	0	0	0	0	0	107
1:00 PM	1	126	21	0	5	1	0	0	0	0	0	0	0	154
2:00 PM	5	126	15	0	4	0	0	0	0	0	0	0	0	150
3:00 PM	1	92	19	0	5	0	0	0	0	0	0	0	0	117
4:00 PM	3	102	17	0	1	1	0	0	0	1	0	0	0	125
5:00 PM	1	114	18	0	2	1	0	0	0	0	0	0	0	136
6:00 PM	2	172	12	0	0	4	0	0	0	1	0	0	1	192
7:00 PM	1	67	8	0	2	0	0	0	0	0	0	0	0	78
8:00 PM	0	44	5	0	0	0	0	0	0	0	0	0	0	49
9:00 PM	0	31	5	0	0	0	0	0	0	0	0	0	0	36
10:00 PM	1	26	2	0	0	0	0	0	0	0	0	0	0	29
11:00 PM	0	15	1	0	0	0	0	0	0	0	0	0	0	16
Total	**26**	**1,587**	**230**	**0**	**32**	**12**	**0**	**0**	**1**	**3**	**0**	**0**	**1**	**1,892**
Percent	**1.4%**	**83.9%**	**12.2%**	**0.0%**	**1.7%**	**0.6%**	**0.0%**	**0.0%**	**0.1%**	**0.2%**	**0.0%**	**0.0%**	**0.1%**	

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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Total Study Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	14	1	0	0	0	0	0	0	0	0	0	0	**15**
1:00 AM	0	11	1	0	0	0	0	0	0	0	0	0	0	**12**
2:00 AM	0	10	1	0	0	0	0	0	0	0	0	0	0	**11**
3:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	8	1	0	0	0	0	0	0	0	0	0	0	**9**
5:00 AM	0	7	1	0	0	0	0	0	0	0	0	0	0	**8**
6:00 AM	0	16	3	0	2	0	0	0	0	0	0	0	0	**21**
7:00 AM	0	48	7	0	3	1	0	0	0	0	0	0	0	**59**
8:00 AM	1	98	19	0	6	1	0	0	0	0	0	0	0	**125**
9:00 AM	1	111	17	0	7	1	0	0	0	0	0	0	0	**137**
10:00 AM	1	126	19	0	6	1	0	0	0	0	0	0	0	**153**
11:00 AM	1	151	24	0	5	1	0	0	0	0	0	0	0	**182**
12:00 PM	1	188	22	0	5	2	0	0	0	0	0	0	0	**218**
1:00 PM	2	180	21	0	5	3	0	0	0	0	0	0	0	**211**
2:00 PM	2	157	21	0	7	1	0	0	0	0	0	0	0	**188**
3:00 PM	1	174	20	0	4	3	0	0	0	0	0	0	0	**202**
4:00 PM	2	199	24	0	5	3	0	0	0	0	0	0	0	**233**
5:00 PM	2	222	18	0	5	2	0	0	0	0	0	0	0	**249**
6:00 PM	2	183	16	0	1	1	0	0	0	0	0	0	0	**203**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	74	6	0	1	1	0	0	0	0	0	0	0	**82**
9:00 PM	0	55	3	0	0	1	0	0	0	0	0	0	0	**59**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	30	2	0	0	0	0	0	0	0	0	0	0	**32**
Total	**16**	**2,065**	**248**	**0**	**62**	**22**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,413**
Percent	**0.7%**	**85.6%**	**10.3%**	**0.0%**	**2.6%**	**0.9%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Deon Fouche: (415) 757-7714
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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Total Study Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	12	0	0	0	0	0	0	0	0	0	0	0	**12**
1:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	**6**
2:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	8	1	0	0	0	0	0	0	0	0	0	0	**9**
6:00 AM	1	25	4	0	0	0	0	0	0	0	0	0	0	**30**
7:00 AM	1	71	8	0	1	1	0	0	0	0	0	0	0	**82**
8:00 AM	3	118	16	0	2	1	0	0	0	0	0	0	0	**140**
9:00 AM	4	113	16	0	2	0	0	0	0	0	0	0	0	**135**
10:00 AM	5	90	13	0	1	1	0	0	0	0	0	0	0	**110**
11:00 AM	5	95	13	0	2	1	0	0	0	0	0	0	0	**116**
12:00 PM	8	107	17	0	2	1	0	0	0	0	0	0	0	**135**
1:00 PM	6	115	18	0	2	1	0	0	0	0	0	0	0	**142**
2:00 PM	10	105	16	0	3	2	0	0	0	0	0	0	0	**136**
3:00 PM	5	85	15	0	2	1	0	0	0	0	0	0	0	**108**
4:00 PM	2	114	19	0	1	1	0	0	0	0	0	0	0	**137**
5:00 PM	3	123	20	0	1	2	0	0	0	0	0	0	1	**150**
6:00 PM	3	113	11	0	0	2	0	0	0	0	0	0	0	**129**
7:00 PM	2	57	6	0	0	0	0	0	0	0	0	0	0	**65**
8:00 PM	1	40	4	0	0	0	0	0	0	0	0	0	0	**45**
9:00 PM	1	34	3	0	0	0	0	0	0	0	0	0	0	**38**
10:00 PM	1	26	2	0	0	0	0	0	0	0	0	0	0	**29**
11:00 PM	0	20	1	0	0	0	0	0	0	0	0	0	0	**21**
Total	**61**	**1,486**	**203**	**0**	**19**	**14**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1,784**
Percent	**3.4%**	**83.3%**	**11.4%**	**0.0%**	**1.1%**	**0.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	

Note: Average only condsidered on days with 24-hours of data.

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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

3-Day (Tuesday - Thursday) Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	17	1	0	0	0	0	0	0	0	0	0	0	18
1:00 AM	0	3	0	0	1	0	0	0	0	0	0	0	0	4
2:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	5
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
5:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	0	8
6:00 AM	0	7	3	0	0	0	0	0	0	0	0	0	0	10
7:00 AM	0	33	5	0	6	1	0	0	0	0	0	0	0	45
8:00 AM	0	116	21	0	10	1	0	0	0	0	0	0	0	148
9:00 AM	1	132	25	0	8	2	0	0	1	0	0	0	0	169
10:00 AM	2	125	26	0	5	1	0	0	0	0	0	0	0	159
11:00 AM	0	157	29	0	6	0	0	0	0	0	0	0	0	192
12:00 PM	1	189	19	0	9	1	0	0	0	0	0	0	0	219
1:00 PM	1	188	28	0	5	1	0	0	0	0	0	0	0	223
2:00 PM	4	170	22	0	11	0	0	1	0	0	0	0	0	208
3:00 PM	0	181	15	0	2	2	0	0	0	0	0	0	0	200
4:00 PM	1	228	23	0	7	2	0	0	0	0	0	0	0	261
5:00 PM	4	296	30	0	2	5	0	0	0	0	0	0	0	337
6:00 PM	2	246	31	0	3	3	0	0	0	0	0	0	1	286
7:00 PM	2	144	13	0	2	1	0	0	0	0	0	0	0	162
8:00 PM	1	102	9	0	1	2	0	0	0	0	0	0	0	115
9:00 PM	0	66	0	0	0	1	0	0	0	0	0	0	0	67
10:00 PM	0	33	4	0	0	1	0	0	0	0	0	0	0	38
11:00 PM	0	39	1	0	0	0	0	0	0	0	0	0	0	40
Total	**19**	**2,490**	**306**	**0**	**78**	**24**	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**2,920**
Percent	**0.7%**	**85.3%**	**10.5%**	**0.0%**	**2.7%**	**0.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

3-Day (Tuesday - Thursday) Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
1:00 AM	0	7	0	0	0	0	0	0	0	0	0	0	0	7
2:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	8	1	0	0	0	0	0	0	0	0	0	0	9
6:00 AM	1	22	4	0	0	0	0	0	0	0	0	0	0	27
7:00 AM	0	57	7	0	1	0	0	0	0	0	0	0	0	65
8:00 AM	4	179	28	0	2	1	0	0	0	0	0	0	0	214
9:00 AM	4	151	23	0	0	0	0	0	0	0	0	0	0	178
10:00 AM	0	126	18	0	5	1	0	0	0	0	0	0	0	150
11:00 AM	5	102	17	0	2	0	0	0	0	0	0	0	0	126
12:00 PM	0	82	19	0	5	0	0	0	0	0	0	0	0	106
1:00 PM	3	140	14	0	5	0	0	0	0	0	0	0	0	162
2:00 PM	4	103	17	0	2	1	0	0	0	0	0	0	0	127
3:00 PM	2	97	17	0	2	1	0	0	0	0	0	0	0	119
4:00 PM	2	130	21	0	1	0	0	0	0	0	0	0	0	154
5:00 PM	0	120	19	0	0	1	0	0	0	0	0	0	0	140
6:00 PM	1	128	10	0	2	2	0	0	0	1	0	0	0	144
7:00 PM	0	71	10	0	1	0	0	0	0	0	0	0	0	82
8:00 PM	0	64	7	0	0	0	0	0	0	0	0	0	0	71
9:00 PM	0	33	2	0	0	0	0	0	0	0	0	0	0	35
10:00 PM	0	26	3	0	0	0	0	0	0	0	0	0	0	29
11:00 PM	0	32	1	0	0	1	0	0	0	0	0	0	0	34
Total	**26**	**1,688**	**238**	**0**	**28**	**8**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1,989**
Percent	**1.3%**	**84.9%**	**12.0%**	**0.0%**	**1.4%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

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Vehicle Speed Report Summary

Location: Airport Rd N/O Fairground Rd
Count Direction: Northbound / Southbound
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

	Speed Range (mph)																	Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
Study Total																		
Northbound	317	1,799	9,082	6,118	710	42	9	0	0	2	0	0	0	0	0	0	0	18,079
Percent	1.8%	10.0%	50.2%	33.8%	3.9%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	598	2,253	5,961	3,448	270	6	0	0	0	3	0	0	0	0	0	0	2	12,541
Percent	4.8%	18.0%	47.5%	27.5%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	915	4,052	15,043	9,566	980	48	9	0	0	5	0	0	0	0	0	0	2	30,620
Percent	3.0%	13.2%	49.1%	31.2%	3.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Northbound			**Northbound**		
50th Percentile (Median)	18.9	mph	Mean (Average) Speed	19.0	mph
85th Percentile	22.3	mph	10 mph Pace	13.9 - 23.9	mph
95th Percentile	24.6	mph	Percent in Pace	85.0	%
Southbound			**Southbound**		
50th Percentile (Median)	18.0	mph	Mean (Average) Speed	17.8	mph
85th Percentile	21.6	mph	10 mph Pace	12.9 - 22.9	mph
95th Percentile	23.6	mph	Percent in Pace	79.4	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Thursday, November 3, 2016
Northbound

	Speed Range (mph)																	Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
1:00 AM	0	0	17	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**19**
2:00 AM	0	6	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**15**
3:00 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**4**
5:00 AM	0	0	10	7	0	1	0	0	0	0	0	0	0	0	0	0	0	**18**
6:00 AM	2	2	16	16	6	0	0	0	0	0	0	0	0	0	0	0	0	**42**
7:00 AM	0	3	35	72	8	1	3	0	0	0	0	0	0	0	0	0	0	**122**
8:00 AM	2	12	69	85	7	0	0	0	0	0	0	0	0	0	0	0	0	**175**
9:00 AM	2	4	51	72	5	0	0	0	0	0	0	0	0	0	0	0	0	**134**
10:00 AM	1	12	63	57	6	1	0	0	0	0	0	0	0	0	0	0	0	**140**
11:00 AM	2	7	79	76	14	0	0	0	0	0	0	0	0	0	0	0	0	**178**
12:00 PM	3	24	124	104	8	1	0	0	0	0	0	0	0	0	0	0	0	**264**
1:00 PM	5	7	93	78	10	0	0	0	0	0	0	0	0	0	0	0	0	**193**
2:00 PM	2	14	96	59	7	0	0	0	0	0	0	0	0	0	0	0	0	**178**
3:00 PM	2	22	125	87	16	2	0	0	0	0	0	0	0	0	0	0	0	**254**
4:00 PM	16	86	152	79	6	0	0	0	0	0	0	0	0	0	0	0	0	**339**
5:00 PM	20	64	154	61	11	0	0	0	0	0	0	0	0	0	0	0	0	**310**
6:00 PM	5	17	81	53	8	0	0	0	0	0	0	0	0	0	0	0	0	**164**
7:00 PM	2	6	55	38	2	0	0	0	0	0	0	0	0	0	0	0	0	**103**
8:00 PM	0	6	42	20	2	0	0	0	0	0	0	0	0	0	0	0	0	**70**
9:00 PM	4	7	19	7	1	0	0	0	0	0	0	0	0	0	0	0	0	**38**
10:00 PM	0	2	14	9	2	0	0	0	0	0	0	0	0	0	0	0	0	**27**
11:00 PM	1	1	16	10	2	0	0	0	0	0	0	0	0	0	0	0	0	**30**
Total	**69**	**302**	**1,322**	**1,000**	**122**	**6**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,825**
Percent	**2.4%**	**10.7%**	**46.8%**	**35.4%**	**4.3%**	**0.2%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.0	mph	Mean (Average) Speed	19.0	mph
85th Percentile	22.4	mph	10 mph Pace	14.5 - 24.5	mph
95th Percentile	24.8	mph	Percent in Pace	83.2	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Thursday, November 3, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	3	7	0	0	0	0	0	0	0	0	0	0	0	0	0	11
1:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
2:00 AM	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	1	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7
5:00 AM	0	2	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	24
6:00 AM	0	5	20	22	1	0	0	0	0	0	0	0	0	0	0	0	0	48
7:00 AM	0	15	69	67	3	0	0	0	0	0	0	0	0	0	0	0	0	154
8:00 AM	1	9	61	78	6	0	0	0	0	0	0	0	0	0	0	0	0	155
9:00 AM	3	13	52	55	6	0	0	0	0	0	0	0	0	0	0	0	0	129
10:00 AM	0	8	35	19	4	0	0	0	0	0	0	0	0	0	0	0	0	66
11:00 AM	8	19	64	41	3	0	0	0	0	0	0	0	0	0	0	0	0	135
12:00 PM	4	15	69	44	2	0	0	0	0	0	0	0	0	0	0	0	0	134
1:00 PM	5	26	69	36	2	0	0	0	0	0	0	0	0	0	0	0	0	138
2:00 PM	5	17	56	48	4	0	0	0	0	0	0	0	0	0	0	0	0	130
3:00 PM	3	12	68	18	1	0	0	0	0	0	0	0	0	0	0	0	0	102
4:00 PM	9	42	80	39	0	0	0	0	0	0	0	0	0	0	0	0	0	170
5:00 PM	30	56	89	35	2	0	0	0	0	0	0	0	0	0	0	0	0	212
6:00 PM	6	25	34	35	2	1	0	0	0	0	0	0	0	0	0	0	0	103
7:00 PM	3	7	28	25	1	0	0	0	0	0	0	0	0	0	0	0	0	64
8:00 PM	4	1	20	11	1	0	0	0	0	0	0	0	0	0	0	0	0	37
9:00 PM	0	10	23	9	0	0	0	0	0	0	0	0	0	0	0	0	0	42
10:00 PM	0	4	14	16	0	0	0	0	0	0	0	0	0	0	0	0	0	34
11:00 PM	0	2	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Total	**81**	**291**	**884**	**621**	**38**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,916**
Percent	**4.2%**	**15.2%**	**46.1%**	**32.4%**	**2.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.6	mph	Mean (Average) Speed	18.2	mph
85th Percentile	21.9	mph	10 mph Pace	14.4 - 24.4	mph
95th Percentile	23.8	mph	Percent in Pace	79.2	%

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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Friday, November 4, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	0	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	12
1:00 AM	0	0	12	7	1	0	0	0	0	0	0	0	0	0	0	0	0	20
2:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
4:00 AM	0	0	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	8
5:00 AM	0	1	3	7	2	0	0	0	0	0	0	0	0	0	0	0	0	13
6:00 AM	1	3	18	13	2	0	0	0	0	0	0	0	0	0	0	0	0	37
7:00 AM	0	5	47	63	8	0	0	0	0	0	0	0	0	0	0	0	0	123
8:00 AM	3	11	58	75	11	0	0	0	0	0	0	0	0	0	0	0	0	158
9:00 AM	5	18	83	56	5	3	0	0	0	0	0	0	0	0	0	0	0	170
10:00 AM	6	16	99	57	10	1	0	0	0	0	0	0	0	0	0	0	0	189
11:00 AM	8	22	113	98	9	0	0	0	0	0	0	0	0	0	0	0	0	250
12:00 PM	3	26	129	80	10	0	2	0	0	0	0	0	0	0	0	0	0	250
1:00 PM	0	23	151	61	3	1	0	0	0	0	0	0	0	0	0	0	0	239
2:00 PM	4	15	96	100	10	1	0	0	0	0	0	0	0	0	0	0	0	226
3:00 PM	0	32	128	89	9	0	0	0	0	0	0	0	0	0	0	0	0	258
4:00 PM	6	44	140	96	16	0	0	0	0	0	0	0	0	0	0	0	0	302
5:00 PM	5	38	144	56	9	1	0	0	0	0	0	0	0	0	0	0	0	253
6:00 PM	1	16	90	41	5	0	0	0	0	0	0	0	0	0	0	0	0	153
7:00 PM	2	6	70	29	2	0	0	0	0	0	0	0	0	0	0	0	0	109
8:00 PM	3	4	49	25	3	1	0	0	0	0	0	0	0	0	0	0	0	85
9:00 PM	0	9	25	24	0	0	0	0	0	0	0	0	0	0	0	0	0	58
10:00 PM	0	0	34	14	1	0	0	0	0	0	0	0	0	0	0	0	0	49
11:00 PM	2	2	9	12	1	0	0	0	0	0	0	0	0	0	0	0	0	26
Total	**50**	**293**	**1,516**	**1,009**	**117**	**8**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,995**
Percent	**1.7%**	**9.8%**	**50.6%**	**33.7%**	**3.9%**	**0.3%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.9	mph	Mean (Average) Speed	19.0	mph
85th Percentile	22.4	mph	10 mph Pace	14.4 - 24.4	mph
95th Percentile	24.5	mph	Percent in Pace	85.2	%

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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Friday, November 4, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	2	8	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**16**
1:00 AM	0	1	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
2:00 AM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
5:00 AM	0	2	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
6:00 AM	0	2	28	26	0	0	0	0	0	0	0	0	0	0	0	0	0	**56**
7:00 AM	0	21	76	48	3	0	0	0	0	0	0	0	0	0	0	0	0	**148**
8:00 AM	3	13	77	57	5	0	0	0	0	0	0	0	0	0	0	0	0	**155**
9:00 AM	4	15	72	62	7	0	0	0	0	0	0	0	0	0	0	0	0	**160**
10:00 AM	7	23	59	52	7	0	0	0	0	0	0	0	0	0	0	0	0	**148**
11:00 AM	3	27	65	54	4	0	0	0	0	0	0	0	0	0	0	0	0	**153**
12:00 PM	15	58	100	53	1	0	0	0	0	0	0	0	0	0	0	0	0	**227**
1:00 PM	16	30	87	40	3	0	0	0	0	0	0	0	0	0	0	0	0	**176**
2:00 PM	23	61	82	42	7	1	0	0	0	0	0	0	0	0	0	0	0	**216**
3:00 PM	3	34	66	39	2	0	0	0	0	0	0	0	0	0	0	0	0	**144**
4:00 PM	28	69	69	17	1	3	0	0	0	0	0	0	0	0	0	0	0	**187**
5:00 PM	31	93	59	6	0	0	0	0	0	0	0	0	0	0	0	0	0	**189**
6:00 PM	9	38	36	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**88**
7:00 PM	4	27	34	1	0	0	0	0	0	3	0	0	0	0	0	0	0	**69**
8:00 PM	6	15	23	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**45**
9:00 PM	5	14	25	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**49**
10:00 PM	1	7	15	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**25**
11:00 PM	1	6	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**17**
Total	**159**	**560**	**1,005**	**525**	**41**	**4**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,297**
Percent	**6.9%**	**24.4%**	**43.8%**	**22.9%**	**1.8%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	17.2	mph	Mean (Average) Speed	17	mph
85th Percentile	21.3	mph	10 mph Pace	12.6 - 22.6	mph
95th Percentile	23.4	mph	Percent in Pace	76	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Saturday, November 5, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	2	11	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**16**
1:00 AM	0	2	6	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
2:00 AM	0	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
3:00 AM	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	2	8	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**14**
5:00 AM	0	0	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**7**
6:00 AM	1	0	9	9	1	0	0	0	0	0	0	0	0	0	0	0	0	**20**
7:00 AM	4	4	11	16	4	0	0	0	0	0	0	0	0	0	0	0	0	**39**
8:00 AM	4	2	36	30	6	0	0	0	0	0	0	0	0	0	0	0	0	**78**
9:00 AM	1	13	43	61	11	0	0	0	0	2	0	0	0	0	0	0	0	**131**
10:00 AM	1	4	69	63	4	0	0	0	0	0	0	0	0	0	0	0	0	**141**
11:00 AM	3	13	88	75	11	0	0	0	0	0	0	0	0	0	0	0	0	**190**
12:00 PM	3	15	78	83	7	0	0	0	0	0	0	0	0	0	0	0	0	**186**
1:00 PM	3	11	69	69	3	0	0	0	0	0	0	0	0	0	0	0	0	**155**
2:00 PM	2	9	69	48	4	0	0	0	0	0	0	0	0	0	0	0	0	**132**
3:00 PM	4	12	83	44	2	1	0	0	0	0	0	0	0	0	0	0	0	**146**
4:00 PM	2	20	71	42	3	1	0	0	0	0	0	0	0	0	0	0	0	**139**
5:00 PM	0	9	69	41	4	0	0	0	0	0	0	0	0	0	0	0	0	**123**
6:00 PM	1	9	70	25	4	0	0	0	0	0	0	0	0	0	0	0	0	**109**
7:00 PM	2	8	47	17	1	1	0	0	0	0	0	0	0	0	0	0	0	**76**
8:00 PM	1	1	27	24	1	0	0	0	0	0	0	0	0	0	0	0	0	**54**
9:00 PM	1	9	40	24	0	0	0	0	0	0	0	0	0	0	0	0	0	**74**
10:00 PM	0	6	35	15	0	0	0	0	0	0	0	0	0	0	0	0	0	**56**
11:00 PM	2	1	25	10	1	0	0	0	0	0	0	0	0	0	0	0	0	**39**
Total	**35**	**153**	**975**	**712**	**68**	**3**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,948**
Percent	**1.8%**	**7.9%**	**50.1%**	**36.6%**	**3.5%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.2	mph	Mean (Average) Speed	19.2	mph
85th Percentile	22.2	mph	10 mph Pace	15.0 - 25.0	mph
95th Percentile	24.7	mph	Percent in Pace	86.7	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Saturday, November 5, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	6	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
1:00 AM	0	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
5:00 AM	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
6:00 AM	1	4	10	2	0	0	0	0	0	0	0	0	0	0	0	0	0	17
7:00 AM	1	15	17	6	0	0	0	0	0	0	0	0	0	0	0	0	0	39
8:00 AM	1	20	19	2	0	0	0	0	0	0	0	0	0	0	0	0	0	42
9:00 AM	4	36	28	4	1	0	0	0	0	0	0	0	0	0	0	0	0	73
10:00 AM	8	52	29	3	0	0	0	0	0	0	0	0	0	0	0	0	0	92
11:00 AM	9	42	38	4	1	0	0	0	0	0	0	0	0	0	0	0	0	94
12:00 PM	15	66	38	5	0	0	0	0	0	0	0	0	0	0	0	0	0	124
1:00 PM	7	54	35	1	0	0	0	0	0	0	0	0	0	0	0	0	0	97
2:00 PM	19	66	29	2	0	0	0	0	0	0	0	0	0	0	0	0	0	116
3:00 PM	14	41	28	3	0	0	0	0	0	0	0	0	0	0	0	0	0	86
4:00 PM	6	19	54	26	1	0	0	0	0	0	0	0	0	0	0	0	0	106
5:00 PM	3	14	45	21	3	0	0	0	0	0	0	0	0	0	0	0	0	86
6:00 PM	4	9	29	18	1	0	0	0	0	0	0	0	0	0	0	0	0	61
7:00 PM	1	9	24	14	1	0	0	0	0	0	0	0	0	0	0	0	0	49
8:00 PM	1	3	15	10	1	0	0	0	0	0	0	0	0	0	0	0	0	30
9:00 PM	3	3	13	7	1	0	0	0	0	0	0	0	0	0	0	0	0	27
10:00 PM	1	1	20	14	1	0	0	0	0	0	0	0	0	0	0	0	0	37
11:00 PM	1	5	18	6	0	0	0	0	0	0	0	0	0	0	0	0	0	30
Total	**99**	**477**	**510**	**149**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,246**
Percent	**7.9%**	**38.3%**	**40.9%**	**12.0%**	**0.9%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	15.3	mph	Mean (Average) Speed	15.5	mph
85th Percentile	19.7	mph	10 mph Pace	10.7 - 20.7	mph
95th Percentile	21.8	mph	Percent in Pace	79.8	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Sunday, November 6, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	2	12	7	1	0	0	0	0	0	0	0	0	0	0	0	0	22
1:00 AM	0	1	12	3	0	0	0	0	0	0	0	0	0	0	0	0	0	16
2:00 AM	0	2	7	1	1	0	0	0	0	0	0	0	0	0	0	0	0	11
3:00 AM	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
4:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	0	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6
6:00 AM	0	2	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	8
7:00 AM	1	1	4	10	1	0	0	0	0	0	0	0	0	0	0	0	0	17
8:00 AM	1	3	27	14	0	0	0	0	0	0	0	0	0	0	0	0	0	45
9:00 AM	0	7	40	20	1	0	0	0	0	0	0	0	0	0	0	0	0	68
10:00 AM	1	10	66	53	13	1	0	0	0	0	0	0	0	0	0	0	0	144
11:00 AM	3	4	70	56	5	0	0	0	0	0	0	0	0	0	0	0	0	138
12:00 PM	2	16	73	56	4	0	0	0	0	0	0	0	0	0	0	0	0	151
1:00 PM	1	7	79	48	4	0	0	0	0	0	0	0	0	0	0	0	0	139
2:00 PM	0	6	80	54	10	1	0	0	0	0	0	0	0	0	0	0	0	151
3:00 PM	2	5	49	68	5	1	0	0	0	0	0	0	0	0	0	0	0	130
4:00 PM	3	10	65	40	1	0	0	0	0	0	0	0	0	0	0	0	0	119
5:00 PM	1	4	59	21	4	0	0	0	0	0	0	0	0	0	0	0	0	89
6:00 PM	2	11	83	35	2	0	1	0	0	0	0	0	0	0	0	0	0	134
7:00 PM	4	10	61	27	0	0	0	0	0	0	0	0	0	0	0	0	0	102
8:00 PM	3	6	29	12	3	0	0	0	0	0	0	0	0	0	0	0	0	53
9:00 PM	0	4	31	11	0	0	0	0	0	0	0	0	0	0	0	0	0	46
10:00 PM	0	2	24	7	2	0	0	0	0	0	0	0	0	0	0	0	0	35
11:00 PM	2	4	15	9	2	0	0	0	0	0	0	0	0	0	0	0	0	32
Total	**27**	**120**	**899**	**554**	**59**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,663**
Percent	**1.6%**	**7.2%**	**54.1%**	**33.3%**	**3.5%**	**0.2%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.9	mph	Mean (Average) Speed	19.1	mph
85th Percentile	22.1	mph	10 mph Pace	13.9 - 23.9	mph
95th Percentile	24.5	mph	Percent in Pace	88.5	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Sunday, November 6, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	0	13
1:00 AM	0	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	7
2:00 AM	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
3:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
6:00 AM	1	1	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	12
7:00 AM	0	2	11	4	2	0	0	0	0	0	0	0	0	0	0	0	0	19
8:00 AM	0	3	21	10	0	0	0	0	0	0	0	0	0	0	0	0	0	34
9:00 AM	1	0	31	22	1	0	0	0	0	0	0	0	0	0	0	0	0	55
10:00 AM	0	2	38	17	1	0	0	0	0	0	0	0	0	0	0	0	0	58
11:00 AM	1	3	25	25	3	0	0	0	0	0	0	0	0	0	0	0	0	57
12:00 PM	0	22	44	14	1	0	0	0	0	0	0	0	0	0	0	0	0	81
1:00 PM	3	8	33	35	3	0	0	0	0	0	0	0	0	0	0	0	0	82
2:00 PM	2	11	34	23	2	0	0	0	0	0	0	0	0	0	0	0	0	72
3:00 PM	5	9	31	26	2	0	0	0	0	0	0	0	0	0	0	0	0	73
4:00 PM	4	10	28	25	1	0	0	0	0	0	0	0	0	0	0	0	0	68
5:00 PM	1	17	36	18	3	0	0	0	0	0	0	0	0	0	0	0	0	75
6:00 PM	0	10	36	25	4	0	0	0	0	0	0	0	0	0	0	0	0	75
7:00 PM	1	5	20	16	0	0	0	0	0	0	0	0	0	0	0	0	0	42
8:00 PM	1	7	18	9	2	0	0	0	0	0	0	0	0	0	0	0	0	37
9:00 PM	1	2	16	15	0	0	0	0	0	0	0	0	0	0	0	0	0	34
10:00 PM	0	1	9	10	1	0	0	0	0	0	0	0	0	0	0	0	0	21
11:00 PM	0	6	13	6	1	0	0	0	0	0	0	0	0	0	0	0	0	26
Total	**21**	**121**	**474**	**313**	**27**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**956**
Percent	**2.2%**	**12.7%**	**49.6%**	**32.7%**	**2.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.6	mph	Mean (Average) Speed	18.5	mph
85th Percentile	21.7	mph	10 mph Pace	13.5 - 23.5	mph
95th Percentile	23.7	mph	Percent in Pace	85.1	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Monday, November 7, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	3	10	2	0	0	0	0	0	0	0	0	0	0	0	0	0	15
1:00 AM	0	0	5	4	1	0	0	0	0	0	0	0	0	0	0	0	0	10
2:00 AM	0	4	23	3	0	0	0	0	0	0	0	0	0	0	0	0	0	30
3:00 AM	0	3	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	12
4:00 AM	1	2	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	12
5:00 AM	0	1	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	7
6:00 AM	0	0	3	5	4	0	0	0	0	0	0	0	0	0	0	0	0	12
7:00 AM	1	2	16	21	1	0	0	0	0	0	0	0	0	0	0	0	0	41
8:00 AM	0	6	44	67	10	0	0	0	0	0	0	0	0	0	0	0	0	127
9:00 AM	0	7	66	59	13	0	0	0	0	0	0	0	0	0	0	0	0	145
10:00 AM	4	12	61	70	11	0	1	0	0	0	0	0	0	0	0	0	0	159
11:00 AM	1	13	89	70	7	1	0	0	0	0	0	0	0	0	0	0	0	181
12:00 PM	13	43	151	72	9	0	0	0	0	0	0	0	0	0	0	0	0	288
1:00 PM	3	45	136	102	7	0	0	0	0	0	0	0	0	0	0	0	0	293
2:00 PM	2	12	115	59	3	0	0	0	0	0	0	0	0	0	0	0	0	191
3:00 PM	3	27	141	62	6	0	0	0	0	0	0	0	0	0	0	0	0	239
4:00 PM	3	31	127	67	8	1	0	0	0	0	0	0	0	0	0	0	0	237
5:00 PM	6	55	155	76	8	0	1	0	0	0	0	0	0	0	0	0	0	301
6:00 PM	4	48	144	59	8	1	0	0	0	0	0	0	0	0	0	0	0	264
7:00 PM	1	21	68	36	4	1	0	0	0	0	0	0	0	0	0	0	0	131
8:00 PM	1	7	51	22	3	0	0	0	0	0	0	0	0	0	0	0	0	84
9:00 PM	2	4	45	14	1	0	0	0	0	0	0	0	0	0	0	0	0	66
10:00 PM	2	5	20	10	0	1	0	0	0	0	0	0	0	0	0	0	0	38
11:00 PM	0	3	17	7	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Total	**47**	**354**	**1,501**	**895**	**106**	**5**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,910**
Percent	**1.6%**	**12.2%**	**51.6%**	**30.8%**	**3.6%**	**0.2%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.6	mph	Mean (Average) Speed	18.7	mph
85th Percentile	22.1	mph	10 mph Pace	13.6 - 23.6	mph
95th Percentile	24.4	mph	Percent in Pace	85.1	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Monday, November 7, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	1	9	3	1	0	0	0	0	0	0	0	0	0	0	0	0	15
1:00 AM	0	2	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	9
2:00 AM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	4
3:00 AM	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	1	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	10
6:00 AM	1	2	10	8	0	0	0	0	0	0	0	0	0	0	0	0	0	21
7:00 AM	0	4	35	29	3	0	0	0	0	0	0	0	0	0	0	0	0	71
8:00 AM	4	10	89	89	6	0	0	0	0	0	0	0	0	0	0	0	0	198
9:00 AM	3	11	80	91	7	0	0	0	0	0	0	0	0	0	0	0	0	192
10:00 AM	0	10	70	47	8	0	0	0	0	0	0	0	0	0	0	0	0	135
11:00 AM	3	21	87	33	4	0	0	0	0	0	0	0	0	0	0	0	0	148
12:00 PM	3	18	91	42	4	0	0	0	0	0	0	0	0	0	0	0	0	158
1:00 PM	2	25	105	55	2	0	0	0	0	0	0	0	0	0	0	0	2	191
2:00 PM	3	18	70	41	3	0	0	0	0	0	0	0	0	0	0	0	0	135
3:00 PM	5	23	55	32	2	0	0	0	0	0	0	0	0	0	0	0	0	117
4:00 PM	12	24	76	41	3	0	0	0	0	0	0	0	0	0	0	0	0	156
5:00 PM	16	54	88	45	2	0	0	0	0	0	0	0	0	0	0	0	0	205
6:00 PM	48	59	106	31	4	0	0	0	0	0	0	0	0	0	0	0	0	248
7:00 PM	6	16	34	20	1	0	0	0	0	0	0	0	0	0	0	0	0	77
8:00 PM	2	7	29	13	0	0	0	0	0	0	0	0	0	0	0	0	0	51
9:00 PM	3	9	25	13	0	0	0	0	0	0	0	0	0	0	0	0	0	50
10:00 PM	0	4	10	13	0	0	0	0	0	0	0	0	0	0	0	0	0	27
11:00 PM	0	1	8	10	0	0	0	0	0	0	0	0	0	0	0	0	0	19
Total	**112**	**322**	**1,094**	**665**	**50**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**2,245**
Percent	**5.0%**	**14.3%**	**48.7%**	**29.6%**	**2.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.3	mph	Mean (Average) Speed	18.1	mph
85th Percentile	21.7	mph	10 mph Pace	13.6 - 23.6	mph
95th Percentile	23.6	mph	Percent in Pace	81.4	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Tuesday, November 8, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	10	5	2	0	0	0	0	0	0	0	0	0	0	0	0	18
1:00 AM	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4
2:00 AM	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	6
5:00 AM	0	1	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	8
6:00 AM	0	0	1	7	2	0	0	0	0	0	0	0	0	0	0	0	0	10
7:00 AM	0	5	11	25	3	1	0	0	0	0	0	0	0	0	0	0	0	45
8:00 AM	0	10	62	67	8	1	0	0	0	0	0	0	0	0	0	0	0	148
9:00 AM	0	11	85	68	5	0	0	0	0	0	0	0	0	0	0	0	0	169
10:00 AM	0	14	72	64	8	1	0	0	0	0	0	0	0	0	0	0	0	159
11:00 AM	4	13	99	68	6	2	0	0	0	0	0	0	0	0	0	0	0	192
12:00 PM	1	21	101	78	17	1	0	0	0	0	0	0	0	0	0	0	0	219
1:00 PM	4	11	111	90	7	0	0	0	0	0	0	0	0	0	0	0	0	223
2:00 PM	0	17	99	82	9	1	0	0	0	0	0	0	0	0	0	0	0	208
3:00 PM	3	14	116	62	5	0	0	0	0	0	0	0	0	0	0	0	0	200
4:00 PM	3	16	118	106	17	1	0	0	0	0	0	0	0	0	0	0	0	261
5:00 PM	4	34	165	118	14	2	0	0	0	0	0	0	0	0	0	0	0	337
6:00 PM	8	46	148	79	5	0	0	0	0	0	0	0	0	0	0	0	0	286
7:00 PM	1	13	102	46	0	0	0	0	0	0	0	0	0	0	0	0	0	162
8:00 PM	1	2	73	37	2	0	0	0	0	0	0	0	0	0	0	0	0	115
9:00 PM	1	2	34	28	2	0	0	0	0	0	0	0	0	0	0	0	0	67
10:00 PM	1	4	25	7	1	0	0	0	0	0	0	0	0	0	0	0	0	38
11:00 PM	0	3	23	12	1	1	0	0	0	0	0	0	0	0	0	0	0	40
Total	**31**	**240**	**1,469**	**1,054**	**115**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,920**
Percent	**1.1%**	**8.2%**	**50.3%**	**36.1%**	**3.9%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.2	mph	Mean (Average) Speed	19.3	mph
85th Percentile	22.5	mph	10 mph Pace	14.3 - 24.3	mph
95th Percentile	24.8	mph	Percent in Pace	86.7	%

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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Tuesday, November 8, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
1:00 AM	0	1	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	7
2:00 AM	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	1	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	9
6:00 AM	0	0	13	12	2	0	0	0	0	0	0	0	0	0	0	0	0	27
7:00 AM	0	3	40	21	1	0	0	0	0	0	0	0	0	0	0	0	0	65
8:00 AM	0	12	111	81	10	0	0	0	0	0	0	0	0	0	0	0	0	214
9:00 AM	1	8	91	69	8	1	0	0	0	0	0	0	0	0	0	0	0	178
10:00 AM	3	24	79	43	1	0	0	0	0	0	0	0	0	0	0	0	0	150
11:00 AM	5	19	66	32	4	0	0	0	0	0	0	0	0	0	0	0	0	126
12:00 PM	1	16	53	34	2	0	0	0	0	0	0	0	0	0	0	0	0	106
1:00 PM	3	17	102	37	3	0	0	0	0	0	0	0	0	0	0	0	0	162
2:00 PM	8	23	61	32	3	0	0	0	0	0	0	0	0	0	0	0	0	127
3:00 PM	5	11	63	38	2	0	0	0	0	0	0	0	0	0	0	0	0	119
4:00 PM	2	16	75	59	2	0	0	0	0	0	0	0	0	0	0	0	0	154
5:00 PM	4	20	86	28	2	0	0	0	0	0	0	0	0	0	0	0	0	140
6:00 PM	7	33	77	26	1	0	0	0	0	0	0	0	0	0	0	0	0	144
7:00 PM	7	13	40	19	3	0	0	0	0	0	0	0	0	0	0	0	0	82
8:00 PM	3	13	39	13	3	0	0	0	0	0	0	0	0	0	0	0	0	71
9:00 PM	1	1	21	9	3	0	0	0	0	0	0	0	0	0	0	0	0	35
10:00 PM	2	3	15	9	0	0	0	0	0	0	0	0	0	0	0	0	0	29
11:00 PM	1	4	17	12	0	0	0	0	0	0	0	0	0	0	0	0	0	34
Total	**53**	**239**	**1,064**	**579**	**53**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,989**
Percent	**2.7%**	**12.0%**	**53.5%**	**29.1%**	**2.7%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.5	mph	Mean (Average) Speed	18.4	mph
85th Percentile	21.5	mph	10 mph Pace	14.0 - 24.0	mph
95th Percentile	23.7	mph	Percent in Pace	86.2	%

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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Wednesday, November 9, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	6	8	0	0	0	0	0	0	0	0	0	0	0	0	0	15
1:00 AM	0	2	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	10
2:00 AM	0	1	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	1	6	2	0	1	0	0	0	0	0	0	0	0	0	0	0	10
5:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
6:00 AM	0	0	7	6	5	1	0	0	0	0	0	0	0	0	0	0	0	19
7:00 AM	1	2	10	18	3	0	0	0	0	0	0	0	0	0	0	0	0	34
8:00 AM	5	16	55	62	9	0	0	0	0	0	0	0	0	0	0	0	0	147
9:00 AM	2	6	69	58	10	0	0	0	0	0	0	0	0	0	0	0	0	145
10:00 AM	1	10	59	59	12	0	0	0	0	0	0	0	0	0	0	0	0	141
11:00 AM	1	16	69	46	13	0	0	0	0	0	0	0	0	0	0	0	0	145
12:00 PM	1	8	93	64	15	0	0	0	0	0	0	0	0	0	0	0	0	181
1:00 PM	5	30	112	80	7	0	0	0	0	0	0	0	0	0	0	0	0	234
2:00 PM	9	30	120	58	10	0	0	0	0	0	0	0	0	0	0	0	0	227
3:00 PM	1	20	97	63	4	1	0	0	0	0	0	0	0	0	0	0	0	186
4:00 PM	2	24	104	93	9	2	0	0	0	0	0	0	0	0	0	0	0	234
5:00 PM	7	53	160	101	10	0	0	0	0	0	0	0	0	0	0	0	0	331
6:00 PM	14	83	173	41	6	0	0	0	0	0	0	0	0	0	0	0	0	317
7:00 PM	4	18	93	48	4	0	0	0	0	0	0	0	0	0	0	0	0	167
8:00 PM	3	7	63	28	4	1	0	0	0	0	0	0	0	0	0	0	0	106
9:00 PM	0	3	34	22	0	0	0	0	0	0	0	0	0	0	0	0	0	59
10:00 PM	0	5	32	28	0	0	0	0	0	0	0	0	0	0	0	0	0	65
11:00 PM	2	1	24	6	1	0	0	0	0	0	0	0	0	0	0	0	0	34
Total	**58**	**337**	**1,400**	**894**	**123**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,818**
Percent	**2.1%**	**12.0%**	**49.7%**	**31.7%**	**4.4%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.8	mph	Mean (Average) Speed	18.8	mph
85th Percentile	22.2	mph	10 mph Pace	14.1 - 24.1	mph
95th Percentile	24.7	mph	Percent in Pace	83.3	%

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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Wednesday, November 9, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	2	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
1:00 AM	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
2:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
6:00 AM	0	0	15	12	0	0	0	0	0	0	0	0	0	0	0	0	0	**27**
7:00 AM	0	9	48	16	3	0	0	0	0	0	0	0	0	0	0	0	0	**76**
8:00 AM	1	5	81	92	3	0	0	0	0	0	0	0	0	0	0	0	0	**182**
9:00 AM	1	8	68	71	11	0	0	0	0	0	0	0	0	0	0	0	0	**159**
10:00 AM	3	10	41	69	8	0	0	0	0	0	0	0	0	0	0	0	0	**131**
11:00 AM	5	14	53	30	1	0	0	0	0	0	0	0	0	0	0	0	0	**103**
12:00 PM	0	7	59	38	3	0	0	0	0	0	0	0	0	0	0	0	0	**107**
1:00 PM	4	20	95	32	3	0	0	0	0	0	0	0	0	0	0	0	0	**154**
2:00 PM	12	15	72	46	5	0	0	0	0	0	0	0	0	0	0	0	0	**150**
3:00 PM	8	13	61	32	3	0	0	0	0	0	0	0	0	0	0	0	0	**117**
4:00 PM	8	21	69	26	1	0	0	0	0	0	0	0	0	0	0	0	0	**125**
5:00 PM	9	27	61	38	1	0	0	0	0	0	0	0	0	0	0	0	0	**136**
6:00 PM	15	61	91	23	2	0	0	0	0	0	0	0	0	0	0	0	0	**192**
7:00 PM	7	12	38	18	3	0	0	0	0	0	0	0	0	0	0	0	0	**78**
8:00 PM	0	11	29	8	1	0	0	0	0	0	0	0	0	0	0	0	0	**49**
9:00 PM	0	4	20	11	1	0	0	0	0	0	0	0	0	0	0	0	0	**36**
10:00 PM	0	2	13	14	0	0	0	0	0	0	0	0	0	0	0	0	0	**29**
11:00 PM	0	0	5	10	1	0	0	0	0	0	0	0	0	0	0	0	0	**16**
Total	**73**	**243**	**930**	**596**	**50**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,892**
Percent	**3.9%**	**12.8%**	**49.2%**	**31.5%**	**2.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.5	mph	Mean (Average) Speed	18.3	mph
85th Percentile	21.9	mph	10 mph Pace	14.0 - 24.0	mph
95th Percentile	24.0	mph	Percent in Pace	81.5	%

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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Total Study Average
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	9	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**14**
1:00 AM	0	1	9	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**13**
2:00 AM	0	2	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
3:00 AM	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	1	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
5:00 AM	0	0	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**9**
6:00 AM	1	1	8	8	3	0	0	0	0	0	0	0	0	0	0	0	0	**21**
7:00 AM	1	3	19	32	4	0	0	0	0	0	0	0	0	0	0	0	0	**59**
8:00 AM	2	9	50	57	7	0	0	0	0	0	0	0	0	0	0	0	0	**125**
9:00 AM	1	9	62	56	7	0	0	0	0	0	0	0	0	0	0	0	0	**135**
10:00 AM	2	11	70	60	9	1	0	0	0	0	0	0	0	0	0	0	0	**153**
11:00 AM	3	13	87	70	9	0	0	0	0	0	0	0	0	0	0	0	0	**182**
12:00 PM	4	22	107	77	10	0	0	0	0	0	0	0	0	0	0	0	0	**220**
1:00 PM	3	19	107	75	6	0	0	0	0	0	0	0	0	0	0	0	0	**210**
2:00 PM	3	15	96	66	8	0	0	0	0	0	0	0	0	0	0	0	0	**188**
3:00 PM	2	19	106	68	7	1	0	0	0	0	0	0	0	0	0	0	0	**203**
4:00 PM	5	33	111	75	9	1	0	0	0	0	0	0	0	0	0	0	0	**234**
5:00 PM	6	37	129	68	9	0	0	0	0	0	0	0	0	0	0	0	0	**249**
6:00 PM	5	33	113	48	5	0	0	0	0	0	0	0	0	0	0	0	0	**204**
7:00 PM	2	12	71	34	2	0	0	0	0	0	0	0	0	0	0	0	0	**121**
8:00 PM	2	5	48	24	3	0	0	0	0	0	0	0	0	0	0	0	0	**82**
9:00 PM	1	5	33	19	1	0	0	0	0	0	0	0	0	0	0	0	0	**59**
10:00 PM	0	3	26	13	1	0	0	0	0	0	0	0	0	0	0	0	0	**43**
11:00 PM	1	2	18	9	1	0	0	0	0	0	0	0	0	0	0	0	0	**31**
Total	**44**	**257**	**1,297**	**874**	**102**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,577**
Percent	**1.7%**	**10.0%**	**50.3%**	**33.9%**	**4.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	18.9	mph	Mean (Average) Speed	19.0	mph
85th Percentile	22.3	mph	10 mph Pace	13.9 - 23.9	mph
95th Percentile	24.6	mph	Percent in Pace	85.0	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 01

Total Study Average
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	2	6	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
1:00 AM	0	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
2:00 AM	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	1	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
6:00 AM	0	2	15	12	0	0	0	0	0	0	0	0	0	0	0	0	0	**29**
7:00 AM	0	10	42	27	2	0	0	0	0	0	0	0	0	0	0	0	0	**81**
8:00 AM	1	10	66	58	4	0	0	0	0	0	0	0	0	0	0	0	0	**139**
9:00 AM	2	13	60	53	6	0	0	0	0	0	0	0	0	0	0	0	0	**134**
10:00 AM	3	18	50	36	4	0	0	0	0	0	0	0	0	0	0	0	0	**111**
11:00 AM	5	21	57	31	3	0	0	0	0	0	0	0	0	0	0	0	0	**117**
12:00 PM	5	29	65	33	2	0	0	0	0	0	0	0	0	0	0	0	0	**134**
1:00 PM	6	26	75	34	2	0	0	0	0	0	0	0	0	0	0	0	0	**143**
2:00 PM	10	30	58	33	3	0	0	0	0	0	0	0	0	0	0	0	0	**134**
3:00 PM	6	20	53	27	2	0	0	0	0	0	0	0	0	0	0	0	0	**108**
4:00 PM	10	29	64	33	1	0	0	0	0	0	0	0	0	0	0	0	0	**137**
5:00 PM	13	40	66	27	2	0	0	0	0	0	0	0	0	0	0	0	0	**148**
6:00 PM	13	34	58	23	2	0	0	0	0	0	0	0	0	0	0	0	0	**130**
7:00 PM	4	13	31	16	1	0	0	0	0	0	0	0	0	0	0	0	0	**65**
8:00 PM	2	8	25	9	1	0	0	0	0	0	0	0	0	0	0	0	0	**45**
9:00 PM	2	6	20	10	1	0	0	0	0	0	0	0	0	0	0	0	0	**39**
10:00 PM	1	3	14	11	0	0	0	0	0	0	0	0	0	0	0	0	0	**29**
11:00 PM	0	3	11	7	0	0	0	0	0	0	0	0	0	0	0	0	0	**21**
Total	**83**	**322**	**850**	**491**	**36**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,782**
Percent	**4.7%**	**18.1%**	**47.7%**	**27.6%**	**2.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	18.0	mph	Mean (Average) Speed	17.8	mph
85th Percentile	21.6	mph	10 mph Pace	12.9 - 22.9	mph
95th Percentile	23.6	mph	Percent in Pace	79.4	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd N/O Fairground Rd
Date Range: 11/3/2016 - 11/9/2016
Site Code: 01

	Thursday			Friday			Saturday			Sunday			Monday			Tuesday			Wednesday			Mid-Week Average		
	11/3/2016			11/4/2016			11/5/2016			11/6/2016			11/7/2016			11/8/2016			11/9/2016					
Time	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	6	11	17	12	16	28	16	11	27	22	13	35	15	15	30	18	5	23	15	11	26	13	9	22
1:00 AM	19	3	22	20	6	26	12	8	20	16	7	23	10	9	19	4	7	11	10	5	15	11	5	16
2:00 AM	15	5	20	2	4	6	7	0	7	11	5	16	30	4	34	5	3	8	8	2	10	9	3	13
3:00 AM	2	1	3	5	3	8	4	6	10	4	3	7	12	6	18	0	1	1	1	0	1	1	1	2
4:00 AM	4	7	11	8	4	12	14	8	22	3	2	5	12	2	14	6	1	7	10	2	12	7	3	10
5:00 AM	18	24	42	13	12	25	7	7	14	6	5	11	7	10	17	8	9	17	2	5	7	9	13	22
6:00 AM	42	48	90	37	56	93	20	17	37	8	12	20	12	21	33	10	27	37	19	27	46	24	34	58
7:00 AM	122	154	276	123	148	271	39	39	78	17	19	36	41	71	112	45	65	110	34	76	110	67	98	165
8:00 AM	175	155	330	158	155	313	78	42	120	45	34	79	127	198	325	148	214	362	147	182	329	157	184	340
9:00 AM	134	129	263	170	160	330	131	73	204	68	55	123	145	192	337	169	178	347	145	159	304	149	155	305
10:00 AM	140	66	206	189	148	337	141	92	233	144	58	202	159	135	294	159	150	309	141	131	272	147	116	262
11:00 AM	178	135	313	250	153	403	190	94	284	138	57	195	181	148	329	192	126	318	145	103	248	172	121	293
12:00 PM	264	134	398	250	227	477	186	124	310	151	81	232	288	158	446	219	106	325	181	107	288	221	116	337
1:00 PM	193	138	331	239	176	415	155	97	252	139	82	221	293	191	484	223	162	385	234	154	388	217	151	368
2:00 PM	178	130	308	226	216	442	132	116	248	151	72	223	191	135	326	208	127	335	227	150	377	204	136	340
3:00 PM	254	102	356	258	144	402	146	86	232	130	73	203	239	117	356	200	119	319	186	117	303	213	113	326
4:00 PM	339	170	509	302	187	489	139	106	245	119	68	187	237	156	393	261	154	415	234	125	359	278	150	428
5:00 PM	310	212	522	253	189	442	123	86	209	89	75	164	301	205	506	337	140	477	331	136	467	326	163	489
6:00 PM	164	103	267	153	88	241	109	61	170	134	75	209	264	248	512	286	144	430	317	192	509	256	146	402
7:00 PM	103	64	167	109	69	178	76	49	125	102	42	144	131	77	208	162	82	244	167	78	245	144	75	219
8:00 PM	70	37	107	85	45	130	54	30	84	53	37	90	84	51	135	115	71	186	106	49	155	97	52	149
9:00 PM	38	42	80	58	49	107	74	27	101	46	34	80	66	50	116	67	35	102	59	36	95	55	38	92
10:00 PM	27	34	61	49	25	74	56	37	93	35	21	56	38	27	65	38	29	67	65	29	94	43	31	74
11:00 PM	30	12	42	26	17	43	39	30	69	32	26	58	27	19	46	40	34	74	34	16	50	35	21	55
Total	**2,825**	**1,916**	**4,741**	**2,995**	**2,297**	**5,292**	**1,948**	**1,246**	**3,194**	**1,663**	**956**	**2,619**	**2,910**	**2,245**	**5,155**	**2,920**	**1,989**	**4,909**	**2,818**	**1,892**	**4,710**	**2,854**	**1,932**	**4,787**
Percent	**60%**	**40%**	-	**57%**	**43%**	-	**61%**	**39%**	-	**63%**	**37%**	-	**56%**	**44%**	-	**59%**	**41%**	-	**60%**	**40%**	-	**60%**	**40%**	-

1. Mid-week average includes data between Tuesday and Thursday.

Deon Fouche: (415) 757-7714
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Vehicle Classification Report Summary

Location: Airport Rd S/O Fairground Rd
Count Direction: Northbound / Southbound
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

	FHWA Vehicle Classification													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total														
Northbound	128	6,446	1,390	3	484	16	0	6	1	0	0	0	1	8,475
Percent	1.5%	76.1%	16.4%	0.0%	5.7%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	155	5,726	4,031	2	227	453	0	3	12	32	0	0	16	10,657
Percent	1.5%	53.7%	37.8%	0.0%	2.1%	4.3%	0.0%	0.0%	0.1%	0.3%	0.0%	0.0%	0.2%	100%
Total	283	12,172	5,421	5	711	469	0	9	13	32	0	0	17	19,132
Percent	1.5%	63.6%	28.3%	0.0%	3.7%	2.5%	0.0%	0.0%	0.1%	0.2%	0.0%	0.0%	0.1%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

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Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Thursday, November 3, 2016
Southbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	6	3	0	0	1	0	0	0	0	0	0	0	**10**
1:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	3	0	0	1	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	1	6	3	0	1	1	0	0	0	0	0	0	0	**12**
6:00 AM	0	20	18	0	2	3	0	0	0	0	0	0	0	**43**
7:00 AM	0	59	76	0	1	5	0	0	1	0	0	0	0	**142**
8:00 AM	1	56	74	0	1	7	0	0	0	1	0	0	2	**142**
9:00 AM	1	61	44	0	3	3	0	0	0	0	0	0	0	**112**
10:00 AM	1	42	26	0	2	4	0	0	0	0	0	0	0	**75**
11:00 AM	0	47	33	0	0	8	0	1	0	0	0	0	0	**89**
12:00 PM	3	84	46	0	2	10	0	0	1	0	0	0	0	**146**
1:00 PM	2	89	40	0	3	5	0	0	0	0	0	0	0	**139**
2:00 PM	2	77	32	1	3	7	0	0	0	1	0	0	0	**123**
3:00 PM	0	70	36	0	3	5	0	0	0	0	0	0	0	**114**
4:00 PM	5	110	57	0	3	7	0	0	0	0	0	0	0	**182**
5:00 PM	5	132	60	0	2	8	0	0	0	0	0	0	1	**208**
6:00 PM	2	42	34	0	1	2	0	0	0	1	0	0	1	**83**
7:00 PM	0	34	14	0	1	1	0	0	0	0	0	0	0	**50**
8:00 PM	0	19	11	0	0	1	0	0	0	0	0	0	0	**31**
9:00 PM	0	8	16	0	0	0	0	0	0	0	0	0	0	**24**
10:00 PM	0	8	10	0	0	0	0	0	0	0	0	0	0	**18**
11:00 PM	0	4	8	0	0	0	0	0	0	0	0	0	0	**12**
Total	**23**	**977**	**643**	**1**	**29**	**78**	**0**	**1**	**2**	**3**	**0**	**0**	**4**	**1,761**
Percent	**1.3%**	**55.5%**	**36.5%**	**0.1%**	**1.6%**	**4.4%**	**0.0%**	**0.1%**	**0.1%**	**0.2%**	**0.0%**	**0.0%**	**0.2%**	

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Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Friday, November 4, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	7	2	0	1	0	0	0	0	0	0	0	0	**10**
6:00 AM	0	24	2	0	3	0	0	0	0	0	0	0	0	**29**
7:00 AM	2	81	14	0	5	1	0	0	0	0	0	0	0	**103**
8:00 AM	1	80	16	0	8	0	0	0	0	0	0	0	0	**105**
9:00 AM	0	66	21	0	2	0	0	0	0	0	0	0	0	**89**
10:00 AM	1	61	14	0	12	0	0	1	0	0	0	0	0	**89**
11:00 AM	3	82	15	0	9	0	0	0	0	0	0	0	0	**109**
12:00 PM	0	77	22	0	4	0	0	1	0	0	0	0	0	**104**
1:00 PM	3	68	12	0	14	1	0	0	0	0	0	0	0	**98**
2:00 PM	0	73	21	0	10	0	0	0	0	0	0	0	0	**104**
3:00 PM	1	84	20	0	8	0	0	0	0	0	0	0	0	**113**
4:00 PM	3	106	23	0	8	1	0	0	0	0	0	0	0	**141**
5:00 PM	3	93	12	0	2	0	0	0	0	0	0	0	0	**110**
6:00 PM	0	54	7	0	2	0	0	0	0	0	0	0	0	**63**
7:00 PM	0	30	4	0	3	0	0	0	0	0	0	0	0	**37**
8:00 PM	0	21	2	0	1	0	0	0	0	0	0	0	0	**24**
9:00 PM	0	14	1	0	1	0	0	0	0	0	0	0	0	**16**
10:00 PM	0	9	0	0	0	0	0	0	0	0	0	0	0	**9**
11:00 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
Total	**17**	**1,039**	**209**	**0**	**93**	**3**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1,363**
Percent	**1.2%**	**76.2%**	**15.3%**	**0.0%**	**6.8%**	**0.2%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Friday, November 4, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	3	4	0	0	0	0	0	0	0	0	0	0	**7**
6:00 AM	0	22	17	0	1	1	0	0	0	0	0	0	0	**41**
7:00 AM	2	50	45	0	3	7	0	0	0	1	0	0	0	**108**
8:00 AM	6	44	51	0	3	2	0	0	0	0	0	0	0	**106**
9:00 AM	1	68	37	0	1	9	0	0	0	0	0	0	0	**116**
10:00 AM	0	71	25	0	3	6	0	0	0	0	0	0	0	**105**
11:00 AM	0	69	24	0	4	5	0	0	0	1	0	0	0	**103**
12:00 PM	2	101	55	0	4	9	0	0	1	0	0	0	0	**172**
1:00 PM	3	71	59	0	1	3	0	0	1	1	0	0	0	**139**
2:00 PM	2	85	33	0	3	6	0	0	0	0	0	0	0	**129**
3:00 PM	0	74	66	0	4	4	0	0	0	1	0	0	0	**149**
4:00 PM	3	96	68	0	6	17	0	0	0	1	0	0	1	**192**
5:00 PM	2	105	72	0	4	9	0	0	0	0	0	0	0	**192**
6:00 PM	0	35	35	0	1	2	0	0	0	0	0	0	0	**73**
7:00 PM	1	27	14	0	0	1	0	0	0	0	0	0	0	**43**
8:00 PM	0	26	13	0	0	0	0	0	0	0	0	0	0	**39**
9:00 PM	0	15	18	0	0	1	0	0	0	0	0	0	0	**34**
10:00 PM	0	12	13	0	0	0	0	0	0	0	0	0	0	**25**
11:00 PM	0	6	4	0	0	0	0	0	0	0	0	0	0	**10**
Total	**22**	**986**	**654**	**0**	**38**	**82**	**0**	**0**	**2**	**5**	**0**	**0**	**1**	**1,790**
Percent	**1.2%**	**55.1%**	**36.5%**	**0.0%**	**2.1%**	**4.6%**	**0.0%**	**0.0%**	**0.1%**	**0.3%**	**0.0%**	**0.0%**	**0.1%**	

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Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Saturday, November 5, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
1:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	3
2:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	7	1	0	0	0	0	0	0	0	0	0	0	8
6:00 AM	0	13	1	0	1	0	0	0	0	0	0	0	0	15
7:00 AM	0	19	5	0	2	0	0	0	0	0	0	0	0	26
8:00 AM	1	25	15	0	3	0	0	0	0	0	0	0	0	44
9:00 AM	1	46	6	0	2	0	0	0	0	0	0	0	0	55
10:00 AM	0	33	12	0	6	0	0	0	0	0	0	0	0	51
11:00 AM	3	68	14	0	5	0	0	0	0	0	0	0	0	90
12:00 PM	1	61	9	0	5	0	0	0	0	0	0	0	0	76
1:00 PM	0	57	11	0	4	0	0	0	0	0	0	0	0	72
2:00 PM	1	53	12	0	2	0	0	0	0	0	0	0	0	68
3:00 PM	1	40	9	0	3	0	0	0	0	0	0	0	0	53
4:00 PM	0	48	8	0	1	0	0	0	0	0	0	0	0	57
5:00 PM	0	43	6	0	1	0	0	0	0	0	0	0	0	50
6:00 PM	0	24	3	0	1	0	0	0	0	0	0	0	0	28
7:00 PM	0	15	2	0	0	0	0	0	0	0	0	0	0	17
8:00 PM	0	14	0	0	1	0	0	0	0	0	0	0	0	15
9:00 PM	0	7	0	0	1	0	0	0	0	0	0	0	0	8
10:00 PM	0	10	0	0	0	0	0	0	0	0	0	0	0	10
11:00 PM	0	11	1	0	0	0	0	0	0	0	0	0	0	12
Total	**8**	**602**	**117**	**0**	**39**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**766**
Percent	**1.0%**	**78.6%**	**15.3%**	**0.0%**	**5.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Saturday, November 5, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	5	0	0	0	0	0	0	0	0	0	0	6
1:00 AM	0	3	3	0	1	0	0	0	0	0	0	0	0	7
2:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
6:00 AM	0	5	4	0	0	1	0	0	0	0	0	0	0	10
7:00 AM	0	19	10	0	0	1	0	0	0	0	0	0	0	30
8:00 AM	0	7	19	0	0	1	0	0	1	1	0	0	0	29
9:00 AM	2	13	31	0	0	1	0	0	0	0	0	0	0	47
10:00 AM	3	21	36	0	1	3	0	0	0	0	0	0	0	64
11:00 AM	1	32	36	0	1	3	0	0	0	0	0	0	0	73
12:00 PM	2	23	56	0	3	4	0	0	0	0	0	0	1	89
1:00 PM	1	24	52	0	2	5	0	0	0	0	0	0	0	84
2:00 PM	1	29	44	0	0	1	0	0	0	1	0	0	1	77
3:00 PM	1	35	28	0	0	3	0	0	0	2	0	0	1	70
4:00 PM	0	31	35	0	2	4	0	0	0	0	0	0	0	72
5:00 PM	1	31	17	0	0	4	0	0	0	2	0	0	0	55
6:00 PM	0	25	15	0	0	1	0	0	0	0	0	0	0	41
7:00 PM	0	15	9	0	0	5	0	0	0	0	0	0	0	29
8:00 PM	0	12	11	0	0	2	0	0	0	0	0	0	0	25
9:00 PM	0	12	7	0	0	1	0	0	0	0	0	0	0	20
10:00 PM	0	15	8	0	0	3	0	0	0	0	0	0	0	26
11:00 PM	0	12	6	0	0	2	0	0	0	0	0	0	0	20
Total	**12**	**367**	**435**	**0**	**10**	**45**	**0**	**0**	**1**	**6**	**0**	**0**	**3**	**879**
Percent	**1.4%**	**41.8%**	**49.5%**	**0.0%**	**1.1%**	**5.1%**	**0.0%**	**0.0%**	**0.1%**	**0.7%**	**0.0%**	**0.0%**	**0.3%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Sunday, November 6, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	8	1	0	0	0	0	0	0	0	0	0	0	9
1:00 AM	0	4	0	0	0	1	0	0	0	0	0	0	0	5
2:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
6:00 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	4
7:00 AM	0	11	3	0	0	0	0	0	0	0	0	0	0	14
8:00 AM	0	22	1	0	0	0	0	0	0	0	0	0	0	23
9:00 AM	0	32	8	0	0	0	0	0	0	0	0	0	0	40
10:00 AM	3	51	8	0	0	0	0	0	0	0	0	0	0	62
11:00 AM	1	48	6	0	2	0	0	0	0	0	0	0	0	57
12:00 PM	0	43	14	0	1	0	0	0	0	0	0	0	0	58
1:00 PM	2	40	8	0	0	0	0	0	0	0	0	0	0	50
2:00 PM	0	55	1	0	3	0	0	0	0	0	0	0	0	59
3:00 PM	1	42	6	0	2	0	0	0	0	0	0	0	0	51
4:00 PM	0	36	4	0	1	0	0	0	0	0	0	0	0	41
5:00 PM	1	31	5	0	5	0	0	0	0	0	0	0	0	42
6:00 PM	0	34	8	0	3	0	0	0	0	0	0	0	0	45
7:00 PM	0	19	1	0	1	0	0	0	0	0	0	0	0	21
8:00 PM	0	10	0	0	0	0	0	0	0	0	0	0	0	10
9:00 PM	0	13	3	0	0	0	0	0	0	0	0	0	0	16
10:00 PM	0	6	0	0	1	0	0	0	0	0	0	0	0	7
11:00 PM	0	8	0	0	0	0	0	0	0	0	0	0	0	8
Total	**8**	**522**	**79**	**0**	**21**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**631**
Percent	**1.3%**	**82.7%**	**12.5%**	**0.0%**	**3.3%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Sunday, November 6, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	15	0	0	0	1	0	0	0	1	0	0	0	17
1:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	3
7:00 AM	0	3	8	0	0	0	0	0	0	0	0	0	0	11
8:00 AM	1	4	2	0	0	3	0	0	0	0	0	0	0	10
9:00 AM	0	19	7	0	1	2	0	0	0	0	0	0	0	29
10:00 AM	1	16	22	0	1	1	0	0	0	0	0	0	0	41
11:00 AM	0	27	23	0	0	2	0	0	0	0	0	0	0	52
12:00 PM	0	29	28	0	2	7	0	0	0	0	0	0	0	66
1:00 PM	2	37	29	0	3	3	0	0	0	0	0	0	0	74
2:00 PM	3	38	25	0	1	4	0	0	0	0	0	0	0	71
3:00 PM	2	13	24	0	1	7	0	0	0	0	0	0	0	47
4:00 PM	2	30	23	0	0	5	0	0	0	0	0	0	0	60
5:00 PM	1	30	21	0	1	6	0	0	0	0	0	0	0	59
6:00 PM	1	38	20	0	1	1	0	0	0	0	0	0	0	61
7:00 PM	1	22	14	0	0	1	0	0	0	0	0	0	0	38
8:00 PM	0	15	4	0	0	0	0	0	0	0	0	0	0	19
9:00 PM	0	14	10	0	0	0	0	0	0	0	0	0	0	24
10:00 PM	0	7	6	0	0	0	0	0	0	0	0	0	0	13
11:00 PM	0	11	3	0	0	0	0	0	0	0	0	0	0	14
Total	**14**	**372**	**274**	**0**	**11**	**43**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**715**
Percent	**2.0%**	**52.0%**	**38.3%**	**0.0%**	**1.5%**	**6.0%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Monday, November 7, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
5:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	7	2	0	1	0	0	0	0	0	0	0	0	**10**
7:00 AM	1	26	6	0	3	0	0	1	0	0	0	0	0	**37**
8:00 AM	2	94	19	1	6	0	0	0	0	0	0	0	0	**122**
9:00 AM	0	77	19	0	9	1	0	0	0	0	0	0	0	**106**
10:00 AM	0	61	27	0	4	0	0	0	0	0	0	0	0	**92**
11:00 AM	2	56	30	0	8	0	0	0	0	0	0	0	0	**96**
12:00 PM	1	88	26	0	5	0	0	0	0	0	0	0	1	**121**
1:00 PM	0	77	20	0	6	0	0	0	0	0	0	0	0	**103**
2:00 PM	1	64	19	0	6	0	0	0	0	0	0	0	0	**90**
3:00 PM	5	70	18	0	5	0	0	1	0	0	0	0	0	**99**
4:00 PM	1	77	21	0	11	0	0	0	0	0	0	0	0	**110**
5:00 PM	3	129	24	0	4	0	0	0	0	0	0	0	0	**160**
6:00 PM	3	114	15	0	7	1	0	0	0	0	0	0	0	**140**
7:00 PM	2	56	8	0	3	0	0	0	0	0	0	0	0	**69**
8:00 PM	0	19	3	0	0	0	0	0	0	0	0	0	0	**22**
9:00 PM	0	8	2	0	0	0	0	0	0	0	0	0	0	**10**
10:00 PM	0	7	0	0	0	0	0	0	0	0	0	0	0	**7**
11:00 PM	0	6	1	0	1	0	0	0	0	0	0	0	0	**8**
Total	**21**	**1,045**	**262**	**1**	**79**	**2**	**0**	**2**	**0**	**0**	**0**	**0**	**1**	**1,413**
Percent	**1.5%**	**74.0%**	**18.5%**	**0.1%**	**5.6%**	**0.1%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Monday, November 7, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	2	0	0	1	0	0	0	0	0	0	0	**7**
1:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	3	2	0	0	1	0	0	0	1	0	0	0	**7**
7:00 AM	0	25	24	0	3	2	0	0	0	1	0	0	0	**55**
8:00 AM	3	95	73	0	2	7	0	0	0	1	0	0	0	**181**
9:00 AM	2	90	56	0	2	3	0	0	0	0	0	0	1	**154**
10:00 AM	2	47	47	0	0	5	0	1	0	0	0	0	0	**102**
11:00 AM	0	69	37	0	3	13	0	0	0	0	0	0	0	**122**
12:00 PM	1	76	43	0	6	3	0	0	0	0	0	0	0	**129**
1:00 PM	2	86	51	0	3	8	0	0	0	0	0	0	0	**150**
2:00 PM	1	62	50	0	1	3	0	0	0	0	0	0	1	**118**
3:00 PM	4	82	28	0	5	3	0	0	1	0	0	0	0	**123**
4:00 PM	3	95	48	0	6	3	0	0	0	0	0	0	0	**155**
5:00 PM	3	131	47	0	5	4	0	0	0	0	0	0	0	**190**
6:00 PM	1	107	103	0	5	7	0	0	0	0	0	0	0	**223**
7:00 PM	1	34	19	0	3	3	0	0	0	0	0	0	1	**61**
8:00 PM	0	24	13	0	0	0	0	0	0	0	0	0	0	**37**
9:00 PM	0	19	11	0	0	0	0	0	0	0	0	0	0	**30**
10:00 PM	1	9	12	0	0	0	0	0	0	0	0	0	0	**22**
11:00 PM	0	15	4	0	0	0	0	0	0	0	0	0	0	**19**
Total	**24**	**1,079**	**672**	**0**	**44**	**66**	**0**	**1**	**1**	**3**	**0**	**0**	**3**	**1,893**
Percent	**1.3%**	**57.0%**	**35.5%**	**0.0%**	**2.3%**	**3.5%**	**0.0%**	**0.1%**	**0.1%**	**0.2%**	**0.0%**	**0.0%**	**0.2%**	

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Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Tuesday, November 8, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	9	3	0	0	0	0	0	0	0	0	0	0	**12**
7:00 AM	1	27	4	0	3	0	0	0	0	0	0	0	0	**35**
8:00 AM	3	117	20	0	10	0	0	0	0	0	0	0	0	**150**
9:00 AM	1	70	23	0	9	1	0	0	0	0	0	0	0	**104**
10:00 AM	1	83	20	0	8	0	0	0	0	0	0	0	0	**112**
11:00 AM	1	74	29	0	6	0	0	0	0	0	0	0	0	**110**
12:00 PM	4	110	15	0	9	0	0	0	0	0	0	0	0	**138**
1:00 PM	2	81	21	0	3	0	0	0	0	0	0	0	0	**107**
2:00 PM	5	77	17	0	14	0	0	0	0	0	0	0	0	**113**
3:00 PM	2	74	20	0	7	0	0	0	0	0	0	0	0	**103**
4:00 PM	1	93	16	0	10	2	0	1	0	0	0	0	0	**123**
5:00 PM	5	135	26	0	5	0	0	0	0	0	0	0	0	**171**
6:00 PM	2	105	15	0	10	0	0	0	0	0	0	0	0	**132**
7:00 PM	1	50	4	0	0	0	0	0	0	0	0	0	0	**55**
8:00 PM	0	29	9	0	0	0	0	0	0	0	0	0	0	**38**
9:00 PM	0	17	0	0	0	0	0	0	0	0	0	0	0	**17**
10:00 PM	0	15	1	0	1	0	0	0	0	0	0	0	0	**17**
11:00 PM	0	14	0	0	1	0	0	0	0	0	0	0	0	**15**
Total	**29**	**1,189**	**245**	**0**	**96**	**3**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1,563**
Percent	**1.9%**	**76.1%**	**15.7%**	**0.0%**	**6.1%**	**0.2%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Tuesday, November 8, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
1:00 AM	0	3	2	0	0	0	0	0	0	0	0	0	0	**5**
2:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	1	4	4	0	0	1	0	0	0	0	0	0	0	**10**
7:00 AM	0	26	29	0	4	0	0	0	0	0	0	0	0	**59**
8:00 AM	8	80	58	0	4	4	0	1	0	1	0	0	1	**157**
9:00 AM	3	72	48	0	4	7	0	0	2	2	0	0	1	**139**
10:00 AM	1	91	41	0	1	5	0	0	0	2	0	0	0	**141**
11:00 AM	1	75	41	0	5	7	0	0	1	0	0	0	0	**130**
12:00 PM	3	60	33	0	2	5	0	0	0	0	0	0	0	**103**
1:00 PM	5	71	85	0	4	6	0	0	0	0	0	0	1	**172**
2:00 PM	3	64	38	0	4	4	0	0	0	0	0	0	1	**114**
3:00 PM	1	73	35	0	7	3	0	0	0	2	0	0	0	**121**
4:00 PM	3	79	45	0	5	9	0	0	0	0	0	0	0	**141**
5:00 PM	0	103	59	0	4	0	0	0	1	0	0	0	0	**167**
6:00 PM	2	109	67	0	3	10	0	0	0	0	0	0	0	**191**
7:00 PM	0	58	26	0	2	3	0	0	0	0	0	0	0	**89**
8:00 PM	0	39	16	0	1	2	0	0	0	0	0	0	0	**58**
9:00 PM	0	19	7	0	0	1	0	0	0	0	0	0	0	**27**
10:00 PM	0	11	13	0	0	1	0	0	0	0	0	0	0	**25**
11:00 PM	0	22	5	0	0	0	0	0	0	0	0	0	0	**27**
Total	**31**	**1,067**	**655**	**0**	**50**	**68**	**0**	**1**	**4**	**7**	**0**	**0**	**4**	**1,887**
Percent	**1.6%**	**56.5%**	**34.7%**	**0.0%**	**2.6%**	**3.6%**	**0.0%**	**0.1%**	**0.2%**	**0.4%**	**0.0%**	**0.0%**	**0.2%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Wednesday, November 9, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	7	0	0	0	0	0	0	0	0	0	0	0	7
1:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
6:00 AM	0	12	1	0	2	0	0	0	0	0	0	0	0	15
7:00 AM	1	18	5	0	1	0	0	0	0	0	0	0	0	25
8:00 AM	3	85	29	0	8	0	0	0	0	0	0	0	0	125
9:00 AM	3	72	19	0	10	0	0	0	0	0	0	0	0	104
10:00 AM	0	65	15	0	6	0	0	0	0	0	0	0	0	86
11:00 AM	1	53	20	0	3	0	0	0	0	0	0	0	0	77
12:00 PM	1	63	12	0	4	0	0	0	0	0	0	0	0	80
1:00 PM	3	96	26	1	8	2	0	0	0	0	0	0	0	136
2:00 PM	1	59	14	0	8	1	0	0	1	0	0	0	0	84
3:00 PM	5	54	13	0	9	0	0	0	0	0	0	0	0	81
4:00 PM	3	78	24	0	8	0	0	0	0	0	0	0	0	113
5:00 PM	3	111	24	0	6	0	0	0	0	0	0	0	0	144
6:00 PM	3	111	20	0	0	0	0	0	0	0	0	0	0	134
7:00 PM	0	52	11	0	6	0	0	0	0	0	0	0	0	69
8:00 PM	0	27	5	0	2	0	0	0	0	0	0	0	0	34
9:00 PM	0	12	2	0	0	0	0	0	0	0	0	0	0	14
10:00 PM	0	8	0	0	0	0	0	0	0	0	0	0	0	8
11:00 PM	0	3	0	0	1	0	0	0	0	0	0	0	0	4
Total	**27**	**994**	**242**	**1**	**82**	**3**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1,350**
Percent	**2.0%**	**73.6%**	**17.9%**	**0.1%**	**6.1%**	**0.2%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Wednesday, November 9, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	5	0	0	0	0	0	0	0	0	0	0	9
1:00 AM	0	4	4	0	0	0	0	0	0	0	0	0	0	8
2:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
6:00 AM	1	5	3	0	1	0	0	0	0	0	0	0	0	10
7:00 AM	1	23	34	0	4	6	0	0	0	0	0	0	0	68
8:00 AM	4	64	54	0	6	5	0	0	0	0	0	0	0	133
9:00 AM	3	74	53	0	3	5	0	0	0	2	0	0	0	140
10:00 AM	1	43	60	0	2	4	0	0	0	0	0	0	0	110
11:00 AM	3	42	36	1	2	4	0	0	0	0	0	0	0	88
12:00 PM	2	38	43	0	3	5	0	0	0	2	0	0	0	93
1:00 PM	1	58	58	0	4	6	0	0	0	1	0	0	0	128
2:00 PM	2	59	53	0	2	7	0	0	0	1	0	0	0	124
3:00 PM	1	48	51	0	6	3	0	0	1	0	0	0	1	111
4:00 PM	2	68	43	0	4	5	0	0	0	0	0	0	0	122
5:00 PM	6	123	61	0	3	7	0	0	0	1	0	0	0	201
6:00 PM	2	118	77	0	3	6	0	0	1	0	0	0	0	207
7:00 PM	0	44	23	0	1	3	0	0	0	0	0	0	0	71
8:00 PM	0	26	13	0	0	2	0	0	0	0	0	0	0	41
9:00 PM	0	17	12	0	1	2	0	0	0	0	0	0	0	32
10:00 PM	0	12	5	0	0	0	0	0	0	0	0	0	0	17
11:00 PM	0	7	8	0	0	1	0	0	0	0	0	0	0	16
Total	**29**	**878**	**698**	**1**	**45**	**71**	**0**	**0**	**2**	**7**	**0**	**0**	**1**	**1,732**
Percent	**1.7%**	**50.7%**	**40.3%**	**0.1%**	**2.6%**	**4.1%**	**0.0%**	**0.0%**	**0.1%**	**0.4%**	**0.0%**	**0.0%**	**0.1%**	

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Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Total Study Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
1:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	5
6:00 AM	0	14	2	0	2	0	0	0	0	0	0	0	0	18
7:00 AM	1	40	8	0	3	0	0	0	0	0	0	0	0	52
8:00 AM	2	72	19	0	6	0	0	0	0	0	0	0	0	99
9:00 AM	1	61	17	0	5	0	0	0	0	0	0	0	0	84
10:00 AM	1	57	16	0	5	0	0	0	0	0	0	0	0	79
11:00 AM	2	65	19	0	6	0	0	0	0	0	0	0	0	92
12:00 PM	1	76	17	0	5	0	0	0	0	0	0	0	0	99
1:00 PM	2	68	17	0	6	1	0	0	0	0	0	0	0	94
2:00 PM	1	63	14	0	7	0	0	0	0	0	0	0	0	85
3:00 PM	2	65	15	0	7	0	0	0	0	0	0	0	0	89
4:00 PM	1	80	17	0	7	0	0	0	0	0	0	0	0	105
5:00 PM	2	93	15	0	3	0	0	0	0	0	0	0	0	113
6:00 PM	1	72	11	0	4	0	0	0	0	0	0	0	0	88
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	19	3	0	1	0	0	0	0	0	0	0	0	23
9:00 PM	0	11	1	0	0	0	0	0	0	0	0	0	0	12
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	7	0	0	0	0	0	0	0	0	0	0	0	7
Total	**17**	**877**	**193**	**0**	**67**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,155**
Percent	**1.5%**	**75.9%**	**16.7%**	**0.0%**	**5.8%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Total Study Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	5	2	0	0	0	0	0	0	0	0	0	0	7
1:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	4
2:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
6:00 AM	0	8	7	0	1	1	0	0	0	0	0	0	0	17
7:00 AM	0	29	32	0	2	3	0	0	0	0	0	0	0	66
8:00 AM	3	50	47	0	2	4	0	0	0	1	0	0	0	107
9:00 AM	2	57	39	0	2	4	0	0	0	1	0	0	0	105
10:00 AM	1	47	37	0	1	4	0	0	0	0	0	0	0	90
11:00 AM	1	52	33	0	2	6	0	0	0	0	0	0	0	94
12:00 PM	2	59	43	0	3	6	0	0	0	0	0	0	0	113
1:00 PM	2	62	53	0	3	5	0	0	0	0	0	0	0	125
2:00 PM	2	59	39	0	2	5	0	0	0	0	0	0	0	107
3:00 PM	1	56	38	0	4	4	0	0	0	1	0	0	0	104
4:00 PM	3	73	46	0	4	7	0	0	0	0	0	0	0	133
5:00 PM	3	94	48	0	3	5	0	0	0	0	0	0	0	153
6:00 PM	1	68	50	0	2	4	0	0	0	0	0	0	0	125
7:00 PM	0	33	17	0	1	2	0	0	0	0	0	0	0	53
8:00 PM	0	23	12	0	0	1	0	0	0	0	0	0	0	36
9:00 PM	0	15	12	0	0	1	0	0	0	0	0	0	0	28
10:00 PM	0	11	10	0	0	1	0	0	0	0	0	0	0	22
11:00 PM	0	11	5	0	0	0	0	0	0	0	0	0	0	16
Total	**21**	**817**	**575**	**0**	**32**	**63**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**1,511**
Percent	**1.4%**	**54.1%**	**38.1%**	**0.0%**	**2.1%**	**4.2%**	**0.0%**	**0.0%**	**0.0%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

3-Day (Tuesday - Thursday) Average
Northbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	9	3	0	0	0	0	0	0	0	0	0	0	**12**
7:00 AM	1	27	4	0	3	0	0	0	0	0	0	0	0	**35**
8:00 AM	3	117	20	0	10	0	0	0	0	0	0	0	0	**150**
9:00 AM	1	70	23	0	9	1	0	0	0	0	0	0	0	**104**
10:00 AM	1	83	20	0	8	0	0	0	0	0	0	0	0	**112**
11:00 AM	1	74	29	0	6	0	0	0	0	0	0	0	0	**110**
12:00 PM	4	110	15	0	9	0	0	0	0	0	0	0	0	**138**
1:00 PM	2	81	21	0	3	0	0	0	0	0	0	0	0	**107**
2:00 PM	5	77	17	0	14	0	0	0	0	0	0	0	0	**113**
3:00 PM	2	74	20	0	7	0	0	0	0	0	0	0	0	**103**
4:00 PM	1	93	16	0	10	2	0	1	0	0	0	0	0	**123**
5:00 PM	5	135	26	0	5	0	0	0	0	0	0	0	0	**171**
6:00 PM	2	105	15	0	10	0	0	0	0	0	0	0	0	**132**
7:00 PM	1	50	4	0	0	0	0	0	0	0	0	0	0	**55**
8:00 PM	0	29	9	0	0	0	0	0	0	0	0	0	0	**38**
9:00 PM	0	17	0	0	0	0	0	0	0	0	0	0	0	**17**
10:00 PM	0	15	1	0	1	0	0	0	0	0	0	0	0	**17**
11:00 PM	0	14	0	0	1	0	0	0	0	0	0	0	0	**15**
Total	**29**	**1,189**	**245**	**0**	**96**	**3**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1,563**
Percent	**1.9%**	**76.1%**	**15.7%**	**0.0%**	**6.1%**	**0.2%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

3-Day (Tuesday - Thursday) Average
Southbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
1:00 AM	0	3	2	0	0	0	0	0	0	0	0	0	0	**5**
2:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	1	4	4	0	0	1	0	0	0	0	0	0	0	**10**
7:00 AM	0	26	29	0	4	0	0	0	0	0	0	0	0	**59**
8:00 AM	8	80	58	0	4	4	0	1	0	1	0	0	1	**157**
9:00 AM	3	72	48	0	4	7	0	0	2	2	0	0	1	**139**
10:00 AM	1	91	41	0	1	5	0	0	0	2	0	0	0	**141**
11:00 AM	1	75	41	0	5	7	0	0	1	0	0	0	0	**130**
12:00 PM	3	60	33	0	2	5	0	0	0	0	0	0	0	**103**
1:00 PM	5	71	85	0	4	6	0	0	0	0	0	0	1	**172**
2:00 PM	3	64	38	0	4	4	0	0	0	0	0	0	1	**114**
3:00 PM	1	73	35	0	7	3	0	0	0	2	0	0	0	**121**
4:00 PM	3	79	45	0	5	9	0	0	0	0	0	0	0	**141**
5:00 PM	0	103	59	0	4	0	0	0	1	0	0	0	0	**167**
6:00 PM	2	109	67	0	3	10	0	0	0	0	0	0	0	**191**
7:00 PM	0	58	26	0	2	3	0	0	0	0	0	0	0	**89**
8:00 PM	0	39	16	0	1	2	0	0	0	0	0	0	0	**58**
9:00 PM	0	19	7	0	0	1	0	0	0	0	0	0	0	**27**
10:00 PM	0	11	13	0	0	1	0	0	0	0	0	0	0	**25**
11:00 PM	0	22	5	0	0	0	0	0	0	0	0	0	0	**27**
Total	**31**	**1,067**	**655**	**0**	**50**	**68**	**0**	**1**	**4**	**7**	**0**	**0**	**4**	**1,887**
Percent	**1.6%**	**56.5%**	**34.7%**	**0.0%**	**2.6%**	**3.6%**	**0.0%**	**0.1%**	**0.2%**	**0.4%**	**0.0%**	**0.0%**	**0.2%**	

Deon Fouche: (415) 757-7714
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Vehicle Speed Report Summary

Location: Airport Rd S/O Fairground Rd
Count Direction: Northbound / Southbound
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

	Speed Range (mph)																	Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
Study Total																		
Northbound	33	112	854	2,871	3,649	882	69	4	1	0	0	0	0	0	0	0	0	8,475
Percent	0.4%	1.3%	10.1%	33.9%	43.1%	10.4%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	45	213	1,069	4,427	4,129	691	72	7	2	0	0	0	1	0	0	1	0	10,657
Percent	0.4%	2.0%	10.0%	41.5%	38.7%	6.5%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	78	325	1,923	7,298	7,778	1,573	141	11	3	0	0	0	1	0	0	1	0	19,132
Percent	0.4%	1.7%	10.1%	38.1%	40.7%	8.2%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Northbound			**Northbound**		
50th Percentile (Median)	25.3	mph	Mean (Average) Speed	25.1	mph
85th Percentile	29.3	mph	10 mph Pace	20.6 - 30.6	mph
95th Percentile	31.6	mph	Percent in Pace	77.6	%
Southbound			**Southbound**		
50th Percentile (Median)	24.5	mph	Mean (Average) Speed	24.5	mph
85th Percentile	28.2	mph	10 mph Pace	19.7 - 29.7	mph
95th Percentile	30.8	mph	Percent in Pace	80.2	%

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Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Thursday, November 3, 2016
Northbound

	Speed Range (mph)																	Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**4**
1:00 AM	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	0	1	4	5	0	0	0	0	0	0	0	0	0	0	0	0	**10**
6:00 AM	0	0	7	11	14	3	0	0	0	0	0	0	0	0	0	0	0	**35**
7:00 AM	0	1	13	39	58	14	1	0	0	0	0	0	0	0	0	0	0	**126**
8:00 AM	0	2	13	43	53	8	0	0	0	0	0	0	0	0	0	0	0	**119**
9:00 AM	0	0	15	40	37	4	0	0	0	0	0	0	0	0	0	0	0	**96**
10:00 AM	2	1	5	26	20	5	2	1	0	0	0	0	0	0	0	0	0	**62**
11:00 AM	1	1	5	35	51	8	1	1	0	0	0	0	0	0	0	0	0	**103**
12:00 PM	2	4	22	38	45	7	1	0	0	0	0	0	0	0	0	0	0	**119**
1:00 PM	0	2	10	31	38	5	1	0	0	0	0	0	0	0	0	0	0	**87**
2:00 PM	0	1	8	32	31	7	1	0	0	0	0	0	0	0	0	0	0	**80**
3:00 PM	1	1	7	40	58	14	3	0	0	0	0	0	0	0	0	0	0	**124**
4:00 PM	0	2	6	53	73	17	1	0	0	0	0	0	0	0	0	0	0	**152**
5:00 PM	1	0	12	49	51	11	0	0	0	0	0	0	0	0	0	0	0	**124**
6:00 PM	0	1	9	24	26	11	0	0	0	0	0	0	0	0	0	0	0	**71**
7:00 PM	0	0	6	7	14	4	0	0	0	0	0	0	0	0	0	0	0	**31**
8:00 PM	1	1	2	9	1	1	0	0	0	0	0	0	0	0	0	0	0	**15**
9:00 PM	0	0	2	3	2	1	0	0	0	0	0	0	0	0	0	0	0	**8**
10:00 PM	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	**5**
11:00 PM	0	1	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	**7**
Total	**8**	**19**	**144**	**496**	**585**	**123**	**12**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,389**
Percent	**0.6%**	**1.4%**	**10.4%**	**35.7%**	**42.1%**	**8.9%**	**0.9%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.1	mph	Mean (Average) Speed	24.9	mph
85th Percentile	28.9	mph	10 mph Pace	20.5 - 30.5	mph
95th Percentile	31.6	mph	Percent in Pace	78.3	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Thursday, November 3, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	2	1	6	1	0	0	0	0	0	0	0	0	0	0	0	**10**
1:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	2	1	8	1	0	0	0	0	0	0	0	0	0	0	0	**12**
6:00 AM	0	1	4	18	15	4	1	0	0	0	0	0	0	0	0	0	0	**43**
7:00 AM	0	0	10	57	62	11	2	0	0	0	0	0	0	0	0	0	0	**142**
8:00 AM	1	1	10	64	60	6	0	0	0	0	0	0	0	0	0	0	0	**142**
9:00 AM	0	4	17	34	44	13	0	0	0	0	0	0	0	0	0	0	0	**112**
10:00 AM	0	4	10	30	25	4	2	0	0	0	0	0	0	0	0	0	0	**75**
11:00 AM	0	1	2	46	32	7	1	0	0	0	0	0	0	0	0	0	0	**89**
12:00 PM	0	2	11	60	63	10	0	0	0	0	0	0	0	0	0	0	0	**146**
1:00 PM	0	3	9	44	69	14	0	0	0	0	0	0	0	0	0	0	0	**139**
2:00 PM	0	3	12	44	54	9	1	0	0	0	0	0	0	0	0	0	0	**123**
3:00 PM	0	5	13	48	44	4	0	0	0	0	0	0	0	0	0	0	0	**114**
4:00 PM	0	3	8	77	78	14	2	0	0	0	0	0	0	0	0	0	0	**182**
5:00 PM	1	1	11	98	83	14	0	0	0	0	0	0	0	0	0	0	0	**208**
6:00 PM	1	1	6	38	31	3	2	0	1	0	0	0	0	0	0	0	0	**83**
7:00 PM	0	0	2	23	21	4	0	0	0	0	0	0	0	0	0	0	0	**50**
8:00 PM	0	2	5	9	13	2	0	0	0	0	0	0	0	0	0	0	0	**31**
9:00 PM	0	0	4	11	5	4	0	0	0	0	0	0	0	0	0	0	0	**24**
10:00 PM	0	0	3	10	4	1	0	0	0	0	0	0	0	0	0	0	0	**18**
11:00 PM	0	0	2	6	4	0	0	0	0	0	0	0	0	0	0	0	0	**12**
Total	**3**	**32**	**143**	**724**	**721**	**126**	**11**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,761**
Percent	**0.2%**	**1.8%**	**8.1%**	**41.1%**	**40.9%**	**7.2%**	**0.6%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	24.7	mph	Mean (Average) Speed	24.8	mph
85th Percentile	28.4	mph	10 mph Pace	19.9 - 29.9	mph
95th Percentile	31.1	mph	Percent in Pace	81.9	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Friday, November 4, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	1	2	2	3	2	0	0	0	0	0	0	0	0	0	0	0	**10**
6:00 AM	0	0	2	9	10	8	0	0	0	0	0	0	0	0	0	0	0	**29**
7:00 AM	1	1	7	30	47	17	0	0	0	0	0	0	0	0	0	0	0	**103**
8:00 AM	0	1	8	38	47	11	0	0	0	0	0	0	0	0	0	0	0	**105**
9:00 AM	0	1	4	33	37	13	1	0	0	0	0	0	0	0	0	0	0	**89**
10:00 AM	1	1	11	27	36	13	0	0	0	0	0	0	0	0	0	0	0	**89**
11:00 AM	0	0	9	34	56	8	2	0	0	0	0	0	0	0	0	0	0	**109**
12:00 PM	0	2	11	43	36	11	1	0	0	0	0	0	0	0	0	0	0	**104**
1:00 PM	0	2	12	34	47	3	0	0	0	0	0	0	0	0	0	0	0	**98**
2:00 PM	0	0	10	34	49	10	1	0	0	0	0	0	0	0	0	0	0	**104**
3:00 PM	0	0	9	40	53	11	0	0	0	0	0	0	0	0	0	0	0	**113**
4:00 PM	0	0	7	38	77	19	0	0	0	0	0	0	0	0	0	0	0	**141**
5:00 PM	0	1	18	38	47	5	1	0	0	0	0	0	0	0	0	0	0	**110**
6:00 PM	0	2	5	25	24	6	1	0	0	0	0	0	0	0	0	0	0	**63**
7:00 PM	0	0	4	14	17	2	0	0	0	0	0	0	0	0	0	0	0	**37**
8:00 PM	1	1	6	7	6	3	0	0	0	0	0	0	0	0	0	0	0	**24**
9:00 PM	0	0	4	7	4	1	0	0	0	0	0	0	0	0	0	0	0	**16**
10:00 PM	0	0	0	3	5	1	0	0	0	0	0	0	0	0	0	0	0	**9**
11:00 PM	0	0	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	**4**
Total	**3**	**13**	**131**	**459**	**604**	**146**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,363**
Percent	**0.2%**	**1.0%**	**9.6%**	**33.7%**	**44.3%**	**10.7%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.4	mph	Mean (Average) Speed	25.3	mph
85th Percentile	29.2	mph	10 mph Pace	20.6 - 30.6	mph
95th Percentile	31.4	mph	Percent in Pace	79.0	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Friday, November 4, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	2	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	**7**
6:00 AM	0	0	2	14	25	0	0	0	0	0	0	0	0	0	0	0	0	**41**
7:00 AM	0	0	16	37	47	6	2	0	0	0	0	0	0	0	0	0	0	**108**
8:00 AM	0	3	5	28	65	4	0	1	0	0	0	0	0	0	0	0	0	**106**
9:00 AM	1	0	5	42	52	14	2	0	0	0	0	0	0	0	0	0	0	**116**
10:00 AM	0	0	9	38	47	11	0	0	0	0	0	0	0	0	0	0	0	**105**
11:00 AM	0	0	5	27	63	8	0	0	0	0	0	0	0	0	0	0	0	**103**
12:00 PM	0	4	18	67	72	11	0	0	0	0	0	0	0	0	0	0	0	**172**
1:00 PM	0	1	8	49	71	10	0	0	0	0	0	0	0	0	0	0	0	**139**
2:00 PM	0	0	8	62	52	4	3	0	0	0	0	0	0	0	0	0	0	**129**
3:00 PM	1	3	12	59	56	17	1	0	0	0	0	0	0	0	0	0	0	**149**
4:00 PM	0	4	20	76	79	11	2	0	0	0	0	0	0	0	0	0	0	**192**
5:00 PM	0	3	19	67	88	12	2	0	0	0	0	0	1	0	0	0	0	**192**
6:00 PM	0	0	9	31	29	4	0	0	0	0	0	0	0	0	0	0	0	**73**
7:00 PM	0	0	6	29	8	0	0	0	0	0	0	0	0	0	0	0	0	**43**
8:00 PM	0	1	12	16	10	0	0	0	0	0	0	0	0	0	0	0	0	**39**
9:00 PM	0	0	7	16	10	1	0	0	0	0	0	0	0	0	0	0	0	**34**
10:00 PM	0	1	3	12	9	0	0	0	0	0	0	0	0	0	0	0	0	**25**
11:00 PM	0	0	0	6	4	0	0	0	0	0	0	0	0	0	0	0	0	**10**
Total	**2**	**22**	**164**	**682**	**792**	**114**	**12**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1,790**
Percent	**0.1%**	**1.2%**	**9.2%**	**38.1%**	**44.2%**	**6.4%**	**0.7%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.0	mph	Mean (Average) Speed	24.8	mph
85th Percentile	28.2	mph	10 mph Pace	20.0 - 30.0	mph
95th Percentile	30.7	mph	Percent in Pace	82.3	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Saturday, November 5, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	0	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	**8**
6:00 AM	0	1	1	2	8	3	0	0	0	0	0	0	0	0	0	0	0	**15**
7:00 AM	0	0	6	6	11	3	0	0	0	0	0	0	0	0	0	0	0	**26**
8:00 AM	0	2	2	11	23	5	1	0	0	0	0	0	0	0	0	0	0	**44**
9:00 AM	0	1	5	17	25	7	0	0	0	0	0	0	0	0	0	0	0	**55**
10:00 AM	0	0	6	19	20	5	1	0	0	0	0	0	0	0	0	0	0	**51**
11:00 AM	0	5	8	26	41	9	1	0	0	0	0	0	0	0	0	0	0	**90**
12:00 PM	1	2	9	24	33	7	0	0	0	0	0	0	0	0	0	0	0	**76**
1:00 PM	0	0	10	22	36	4	0	0	0	0	0	0	0	0	0	0	0	**72**
2:00 PM	1	0	10	22	30	5	0	0	0	0	0	0	0	0	0	0	0	**68**
3:00 PM	1	1	11	21	16	3	0	0	0	0	0	0	0	0	0	0	0	**53**
4:00 PM	0	1	5	28	18	5	0	0	0	0	0	0	0	0	0	0	0	**57**
5:00 PM	0	0	7	22	16	5	0	0	0	0	0	0	0	0	0	0	0	**50**
6:00 PM	0	0	6	10	9	3	0	0	0	0	0	0	0	0	0	0	0	**28**
7:00 PM	0	1	4	5	7	0	0	0	0	0	0	0	0	0	0	0	0	**17**
8:00 PM	0	0	6	4	5	0	0	0	0	0	0	0	0	0	0	0	0	**15**
9:00 PM	0	0	2	3	2	1	0	0	0	0	0	0	0	0	0	0	0	**8**
10:00 PM	0	0	0	5	4	1	0	0	0	0	0	0	0	0	0	0	0	**10**
11:00 PM	0	1	2	2	6	1	0	0	0	0	0	0	0	0	0	0	0	**12**
Total	**3**	**15**	**103**	**256**	**318**	**68**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**766**
Percent	**0.4%**	**2.0%**	**13.4%**	**33.4%**	**41.5%**	**8.9%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.0	mph	Mean (Average) Speed	24.6	mph
85th Percentile	28.7	mph	10 mph Pace	19.7 - 29.7	mph
95th Percentile	31.2	mph	Percent in Pace	75.7	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Saturday, November 5, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	**6**
1:00 AM	0	0	1	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**7**
2:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	0	0	6	3	1	0	0	0	0	0	0	0	0	0	0	0	**10**
7:00 AM	0	1	6	12	10	0	1	0	0	0	0	0	0	0	0	0	0	**30**
8:00 AM	0	0	4	11	14	0	0	0	0	0	0	0	0	0	0	0	0	**29**
9:00 AM	1	3	3	13	22	5	0	0	0	0	0	0	0	0	0	0	0	**47**
10:00 AM	0	1	6	31	20	5	1	0	0	0	0	0	0	0	0	0	0	**64**
11:00 AM	0	0	6	26	34	4	3	0	0	0	0	0	0	0	0	0	0	**73**
12:00 PM	0	2	7	39	33	8	0	0	0	0	0	0	0	0	0	0	0	**89**
1:00 PM	1	0	9	27	35	12	0	0	0	0	0	0	0	0	0	0	0	**84**
2:00 PM	0	2	6	32	30	5	2	0	0	0	0	0	0	0	0	0	0	**77**
3:00 PM	3	4	14	38	9	2	0	0	0	0	0	0	0	0	0	0	0	**70**
4:00 PM	0	4	14	32	18	4	0	0	0	0	0	0	0	0	0	0	0	**72**
5:00 PM	1	2	9	28	13	1	0	0	1	0	0	0	0	0	0	0	0	**55**
6:00 PM	0	1	9	21	8	2	0	0	0	0	0	0	0	0	0	0	0	**41**
7:00 PM	0	2	9	11	7	0	0	0	0	0	0	0	0	0	0	0	0	**29**
8:00 PM	0	2	4	13	5	1	0	0	0	0	0	0	0	0	0	0	0	**25**
9:00 PM	1	0	6	9	4	0	0	0	0	0	0	0	0	0	0	0	0	**20**
10:00 PM	0	0	10	12	3	1	0	0	0	0	0	0	0	0	0	0	0	**26**
11:00 PM	0	3	8	8	1	0	0	0	0	0	0	0	0	0	0	0	0	**20**
Total	**7**	**28**	**131**	**378**	**275**	**52**	**7**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**879**
Percent	**0.8%**	**3.2%**	**14.9%**	**43.0%**	**31.3%**	**5.9%**	**0.8%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	23.6	mph	Mean (Average) Speed	23.6	mph
85th Percentile	27.7	mph	10 mph Pace	18.1 - 28.1	mph
95th Percentile	30.6	mph	Percent in Pace	76.3	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Sunday, November 6, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	1	2	3	2	0	0	0	0	0	0	0	0	0	0	0	0	**9**
1:00 AM	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
2:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	**4**
5:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	**4**
7:00 AM	0	1	1	3	5	3	1	0	0	0	0	0	0	0	0	0	0	**14**
8:00 AM	0	0	3	5	13	2	0	0	0	0	0	0	0	0	0	0	0	**23**
9:00 AM	1	0	4	11	20	4	0	0	0	0	0	0	0	0	0	0	0	**40**
10:00 AM	0	3	8	11	31	6	3	0	0	0	0	0	0	0	0	0	0	**62**
11:00 AM	0	0	9	20	22	5	0	1	0	0	0	0	0	0	0	0	0	**57**
12:00 PM	0	3	8	26	15	3	3	0	0	0	0	0	0	0	0	0	0	**58**
1:00 PM	1	0	12	15	17	5	0	0	0	0	0	0	0	0	0	0	0	**50**
2:00 PM	0	3	5	19	25	5	2	0	0	0	0	0	0	0	0	0	0	**59**
3:00 PM	0	0	8	20	19	4	0	0	0	0	0	0	0	0	0	0	0	**51**
4:00 PM	0	0	9	16	12	3	1	0	0	0	0	0	0	0	0	0	0	**41**
5:00 PM	0	2	6	10	22	2	0	0	0	0	0	0	0	0	0	0	0	**42**
6:00 PM	0	0	6	24	10	3	2	0	0	0	0	0	0	0	0	0	0	**45**
7:00 PM	0	1	3	9	8	0	0	0	0	0	0	0	0	0	0	0	0	**21**
8:00 PM	0	0	2	4	1	3	0	0	0	0	0	0	0	0	0	0	0	**10**
9:00 PM	0	0	6	6	4	0	0	0	0	0	0	0	0	0	0	0	0	**16**
10:00 PM	0	0	0	6	0	1	0	0	0	0	0	0	0	0	0	0	0	**7**
11:00 PM	0	0	0	4	2	2	0	0	0	0	0	0	0	0	0	0	0	**8**
Total	**4**	**17**	**94**	**215**	**236**	**51**	**13**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**631**
Percent	**0.6%**	**2.7%**	**14.9%**	**34.1%**	**37.4%**	**8.1%**	**2.1%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	24.6	mph	Mean (Average) Speed	24.4	mph
85th Percentile	28.8	mph	10 mph Pace	19.3 - 29.3	mph
95th Percentile	31.4	mph	Percent in Pace	71.8	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Sunday, November 6, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	6	11	0	0	0	0	0	0	0	0	0	0	0	0	0	**17**
1:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
7:00 AM	0	0	1	4	2	3	1	0	0	0	0	0	0	0	0	0	0	**11**
8:00 AM	0	1	1	8	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
9:00 AM	0	2	5	18	4	0	0	0	0	0	0	0	0	0	0	0	0	**29**
10:00 AM	0	2	2	15	20	2	0	0	0	0	0	0	0	0	0	0	0	**41**
11:00 AM	0	2	5	20	23	2	0	0	0	0	0	0	0	0	0	0	0	**52**
12:00 PM	0	4	8	37	17	0	0	0	0	0	0	0	0	0	0	0	0	**66**
1:00 PM	1	3	13	27	25	5	0	0	0	0	0	0	0	0	0	0	0	**74**
2:00 PM	0	0	11	33	26	1	0	0	0	0	0	0	0	0	0	0	0	**71**
3:00 PM	0	2	8	23	13	1	0	0	0	0	0	0	0	0	0	0	0	**47**
4:00 PM	0	2	13	27	18	0	0	0	0	0	0	0	0	0	0	0	0	**60**
5:00 PM	0	3	5	23	24	3	1	0	0	0	0	0	0	0	0	0	0	**59**
6:00 PM	0	1	8	26	22	2	1	0	0	0	0	0	0	0	0	1	0	**61**
7:00 PM	0	0	7	18	12	1	0	0	0	0	0	0	0	0	0	0	0	**38**
8:00 PM	0	0	2	12	4	1	0	0	0	0	0	0	0	0	0	0	0	**19**
9:00 PM	0	0	5	10	7	2	0	0	0	0	0	0	0	0	0	0	0	**24**
10:00 PM	0	1	1	6	5	0	0	0	0	0	0	0	0	0	0	0	0	**13**
11:00 PM	0	0	2	8	3	1	0	0	0	0	0	0	0	0	0	0	0	**14**
Total	**1**	**24**	**106**	**329**	**226**	**25**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**715**
Percent	**0.1%**	**3.4%**	**14.8%**	**46.0%**	**31.6%**	**3.5%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	23.5	mph	Mean (Average) Speed	23.4	mph
85th Percentile	27.0	mph	10 mph Pace	18.6 - 28.6	mph
95th Percentile	29.4	mph	Percent in Pace	81.3	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Monday, November 7, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	**4**
5:00 AM	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	0	2	1	4	3	0	0	0	0	0	0	0	0	0	0	0	**10**
7:00 AM	0	0	2	12	17	6	0	0	0	0	0	0	0	0	0	0	0	**37**
8:00 AM	0	3	13	30	57	19	0	0	0	0	0	0	0	0	0	0	0	**122**
9:00 AM	1	1	4	30	55	14	1	0	0	0	0	0	0	0	0	0	0	**106**
10:00 AM	1	1	5	27	36	20	2	0	0	0	0	0	0	0	0	0	0	**92**
11:00 AM	1	2	7	36	34	14	2	0	0	0	0	0	0	0	0	0	0	**96**
12:00 PM	0	0	9	40	54	17	1	0	0	0	0	0	0	0	0	0	0	**121**
1:00 PM	0	1	10	31	45	16	0	0	0	0	0	0	0	0	0	0	0	**103**
2:00 PM	1	0	4	34	46	4	1	0	0	0	0	0	0	0	0	0	0	**90**
3:00 PM	3	0	11	33	45	6	1	0	0	0	0	0	0	0	0	0	0	**99**
4:00 PM	0	1	4	48	43	13	1	0	0	0	0	0	0	0	0	0	0	**110**
5:00 PM	0	0	6	67	70	16	1	0	0	0	0	0	0	0	0	0	0	**160**
6:00 PM	0	1	8	73	51	6	1	0	0	0	0	0	0	0	0	0	0	**140**
7:00 PM	0	1	10	23	32	3	0	0	0	0	0	0	0	0	0	0	0	**69**
8:00 PM	0	0	2	7	9	4	0	0	0	0	0	0	0	0	0	0	0	**22**
9:00 PM	0	0	0	5	3	2	0	0	0	0	0	0	0	0	0	0	0	**10**
10:00 PM	0	0	0	4	2	1	0	0	0	0	0	0	0	0	0	0	0	**7**
11:00 PM	0	1	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	**8**
Total	**7**	**12**	**99**	**506**	**610**	**168**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,413**
Percent	**0.5%**	**0.8%**	**7.0%**	**35.8%**	**43.2%**	**11.9%**	**0.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.4	mph	Mean (Average) Speed	25.5	mph
85th Percentile	29.5	mph	10 mph Pace	20.4 - 30.4	mph
95th Percentile	31.6	mph	Percent in Pace	80.3	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Monday, November 7, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	**7**
1:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	0	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	**7**
7:00 AM	0	3	2	22	22	4	2	0	0	0	0	0	0	0	0	0	0	**55**
8:00 AM	0	1	7	52	107	13	1	0	0	0	0	0	0	0	0	0	0	**181**
9:00 AM	2	1	7	38	77	27	2	0	0	0	0	0	0	0	0	0	0	**154**
10:00 AM	0	3	6	49	36	8	0	0	0	0	0	0	0	0	0	0	0	**102**
11:00 AM	0	1	10	34	56	19	1	1	0	0	0	0	0	0	0	0	0	**122**
12:00 PM	1	1	11	43	64	9	0	0	0	0	0	0	0	0	0	0	0	**129**
1:00 PM	0	2	8	69	61	9	1	0	0	0	0	0	0	0	0	0	0	**150**
2:00 PM	0	4	12	60	33	9	0	0	0	0	0	0	0	0	0	0	0	**118**
3:00 PM	3	2	12	61	39	6	0	0	0	0	0	0	0	0	0	0	0	**123**
4:00 PM	2	3	25	43	69	11	1	1	0	0	0	0	0	0	0	0	0	**155**
5:00 PM	0	3	16	108	49	12	2	0	0	0	0	0	0	0	0	0	0	**190**
6:00 PM	2	2	19	113	77	8	2	0	0	0	0	0	0	0	0	0	0	**223**
7:00 PM	0	0	5	34	22	0	0	0	0	0	0	0	0	0	0	0	0	**61**
8:00 PM	1	0	6	16	12	2	0	0	0	0	0	0	0	0	0	0	0	**37**
9:00 PM	0	0	2	15	10	3	0	0	0	0	0	0	0	0	0	0	0	**30**
10:00 PM	0	1	3	10	8	0	0	0	0	0	0	0	0	0	0	0	0	**22**
11:00 PM	0	0	6	6	5	2	0	0	0	0	0	0	0	0	0	0	0	**19**
Total	**11**	**27**	**160**	**778**	**759**	**144**	**12**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,893**
Percent	**0.6%**	**1.4%**	**8.5%**	**41.1%**	**40.1%**	**7.6%**	**0.6%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	24.7	mph	Mean (Average) Speed	24.8	mph
85th Percentile	28.6	mph	10 mph Pace	20.0 - 30.0	mph
95th Percentile	30.9	mph	Percent in Pace	81.2	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Tuesday, November 8, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	**4**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	0	0	3	5	3	0	1	0	0	0	0	0	0	0	0	0	**12**
7:00 AM	0	2	6	6	16	5	0	0	0	0	0	0	0	0	0	0	0	**35**
8:00 AM	1	1	18	44	65	18	3	0	0	0	0	0	0	0	0	0	0	**150**
9:00 AM	0	2	7	29	54	12	0	0	0	0	0	0	0	0	0	0	0	**104**
10:00 AM	0	3	15	26	55	12	1	0	0	0	0	0	0	0	0	0	0	**112**
11:00 AM	0	4	14	44	37	10	1	0	0	0	0	0	0	0	0	0	0	**110**
12:00 PM	0	2	16	51	59	8	2	0	0	0	0	0	0	0	0	0	0	**138**
1:00 PM	0	4	8	34	51	9	0	0	1	0	0	0	0	0	0	0	0	**107**
2:00 PM	0	0	6	33	62	11	1	0	0	0	0	0	0	0	0	0	0	**113**
3:00 PM	0	0	7	29	49	16	2	0	0	0	0	0	0	0	0	0	0	**103**
4:00 PM	2	1	14	47	48	10	1	0	0	0	0	0	0	0	0	0	0	**123**
5:00 PM	0	0	8	63	81	19	0	0	0	0	0	0	0	0	0	0	0	**171**
6:00 PM	0	2	14	48	60	8	0	0	0	0	0	0	0	0	0	0	0	**132**
7:00 PM	0	0	5	20	24	6	0	0	0	0	0	0	0	0	0	0	0	**55**
8:00 PM	0	0	6	11	13	8	0	0	0	0	0	0	0	0	0	0	0	**38**
9:00 PM	0	0	2	8	6	1	0	0	0	0	0	0	0	0	0	0	0	**17**
10:00 PM	0	1	1	8	4	3	0	0	0	0	0	0	0	0	0	0	0	**17**
11:00 PM	0	1	5	5	3	1	0	0	0	0	0	0	0	0	0	0	0	**15**
Total	**3**	**24**	**152**	**514**	**695**	**162**	**11**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,563**
Percent	**0.2%**	**1.5%**	**9.7%**	**32.9%**	**44.5%**	**10.4%**	**0.7%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.4	mph	Mean (Average) Speed	25.2	mph
85th Percentile	29.1	mph	10 mph Pace	21.0 - 31.0	mph
95th Percentile	31.3	mph	Percent in Pace	78.3	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Tuesday, November 8, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
1:00 AM	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
2:00 AM	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	0	1	2	5	2	0	0	0	0	0	0	0	0	0	0	0	**10**
7:00 AM	0	0	6	28	21	3	1	0	0	0	0	0	0	0	0	0	0	**59**
8:00 AM	0	5	4	56	76	15	1	0	0	0	0	0	0	0	0	0	0	**157**
9:00 AM	0	4	8	45	64	15	3	0	0	0	0	0	0	0	0	0	0	**139**
10:00 AM	1	16	33	41	42	7	1	0	0	0	0	0	0	0	0	0	0	**141**
11:00 AM	7	9	24	42	40	7	1	0	0	0	0	0	0	0	0	0	0	**130**
12:00 PM	0	1	9	57	25	7	1	3	0	0	0	0	0	0	0	0	0	**103**
1:00 PM	0	1	15	66	80	10	0	0	0	0	0	0	0	0	0	0	0	**172**
2:00 PM	0	2	15	43	47	6	1	0	0	0	0	0	0	0	0	0	0	**114**
3:00 PM	3	1	5	49	51	11	1	0	0	0	0	0	0	0	0	0	0	**121**
4:00 PM	0	2	23	74	38	4	0	0	0	0	0	0	0	0	0	0	0	**141**
5:00 PM	1	2	18	82	56	8	0	0	0	0	0	0	0	0	0	0	0	**167**
6:00 PM	0	4	14	100	61	12	0	0	0	0	0	0	0	0	0	0	0	**191**
7:00 PM	0	0	13	49	22	5	0	0	0	0	0	0	0	0	0	0	0	**89**
8:00 PM	0	2	12	23	16	4	1	0	0	0	0	0	0	0	0	0	0	**58**
9:00 PM	0	0	4	20	2	1	0	0	0	0	0	0	0	0	0	0	0	**27**
10:00 PM	0	2	7	10	6	0	0	0	0	0	0	0	0	0	0	0	0	**25**
11:00 PM	2	0	7	12	4	2	0	0	0	0	0	0	0	0	0	0	0	**27**
Total	**14**	**52**	**219**	**807**	**661**	**120**	**11**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,887**
Percent	**0.7%**	**2.8%**	**11.6%**	**42.8%**	**35.0%**	**6.4%**	**0.6%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	24.2	mph	Mean (Average) Speed	24	mph
85th Percentile	28.1	mph	10 mph Pace	19.2 - 29.2	mph
95th Percentile	30.6	mph	Percent in Pace	78.9	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Wednesday, November 9, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	2	3	1	0	0	0	0	0	0	0	0	0	0	0	**7**
1:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	0	3	3	4	2	3	0	0	0	0	0	0	0	0	0	0	**15**
7:00 AM	0	0	1	8	9	7	0	0	0	0	0	0	0	0	0	0	0	**25**
8:00 AM	0	1	10	24	64	26	0	0	0	0	0	0	0	0	0	0	0	**125**
9:00 AM	0	0	9	28	55	12	0	0	0	0	0	0	0	0	0	0	0	**104**
10:00 AM	0	1	10	28	37	10	0	0	0	0	0	0	0	0	0	0	0	**86**
11:00 AM	1	1	10	20	36	8	1	0	0	0	0	0	0	0	0	0	0	**77**
12:00 PM	0	0	9	29	31	11	0	0	0	0	0	0	0	0	0	0	0	**80**
1:00 PM	2	0	9	40	68	15	2	0	0	0	0	0	0	0	0	0	0	**136**
2:00 PM	0	0	6	23	43	11	1	0	0	0	0	0	0	0	0	0	0	**84**
3:00 PM	0	3	9	29	30	9	1	0	0	0	0	0	0	0	0	0	0	**81**
4:00 PM	1	1	11	39	50	8	3	0	0	0	0	0	0	0	0	0	0	**113**
5:00 PM	1	1	15	36	69	22	0	0	0	0	0	0	0	0	0	0	0	**144**
6:00 PM	0	0	15	59	53	7	0	0	0	0	0	0	0	0	0	0	0	**134**
7:00 PM	0	2	4	37	23	3	0	0	0	0	0	0	0	0	0	0	0	**69**
8:00 PM	0	1	6	8	14	5	0	0	0	0	0	0	0	0	0	0	0	**34**
9:00 PM	0	1	2	4	5	2	0	0	0	0	0	0	0	0	0	0	0	**14**
10:00 PM	0	0	0	3	4	1	0	0	0	0	0	0	0	0	0	0	0	**8**
11:00 PM	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	**4**
Total	**5**	**12**	**131**	**425**	**601**	**164**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,350**
Percent	**0.4%**	**0.9%**	**9.7%**	**31.5%**	**44.5%**	**12.1%**	**0.9%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.6	mph	Mean (Average) Speed	25.5	mph
85th Percentile	29.6	mph	10 mph Pace	20.9 - 30.9	mph
95th Percentile	31.9	mph	Percent in Pace	77.9	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Wednesday, November 9, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	2	6	0	0	0	0	0	0	0	0	0	0	0	0	**9**
1:00 AM	0	0	1	5	2	0	0	0	0	0	0	0	0	0	0	0	0	**8**
2:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	0	1	3	6	0	0	0	0	0	0	0	0	0	0	0	0	**10**
7:00 AM	1	1	12	19	27	6	2	0	0	0	0	0	0	0	0	0	0	**68**
8:00 AM	0	2	11	39	66	12	3	0	0	0	0	0	0	0	0	0	0	**133**
9:00 AM	2	2	6	29	80	16	5	0	0	0	0	0	0	0	0	0	0	**140**
10:00 AM	0	2	2	51	49	5	1	0	0	0	0	0	0	0	0	0	0	**110**
11:00 AM	0	2	7	39	36	4	0	0	0	0	0	0	0	0	0	0	0	**88**
12:00 PM	0	3	10	31	42	7	0	0	0	0	0	0	0	0	0	0	0	**93**
1:00 PM	0	3	4	63	50	8	0	0	0	0	0	0	0	0	0	0	0	**128**
2:00 PM	0	2	10	55	46	11	0	0	0	0	0	0	0	0	0	0	0	**124**
3:00 PM	3	1	10	54	34	9	0	0	0	0	0	0	0	0	0	0	0	**111**
4:00 PM	0	1	15	68	31	5	2	0	0	0	0	0	0	0	0	0	0	**122**
5:00 PM	0	5	15	87	85	7	1	1	0	0	0	0	0	0	0	0	0	**201**
6:00 PM	0	2	14	100	82	7	2	0	0	0	0	0	0	0	0	0	0	**207**
7:00 PM	1	0	7	38	21	4	0	0	0	0	0	0	0	0	0	0	0	**71**
8:00 PM	0	1	8	11	17	4	0	0	0	0	0	0	0	0	0	0	0	**41**
9:00 PM	0	1	6	20	4	1	0	0	0	0	0	0	0	0	0	0	0	**32**
10:00 PM	0	0	2	9	4	2	0	0	0	0	0	0	0	0	0	0	0	**17**
11:00 PM	0	0	3	5	6	2	0	0	0	0	0	0	0	0	0	0	0	**16**
Total	**7**	**28**	**146**	**729**	**695**	**110**	**16**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,732**
Percent	**0.4%**	**1.6%**	**8.4%**	**42.1%**	**40.1%**	**6.4%**	**0.9%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	24.7	mph	Mean (Average) Speed	24.7	mph
85th Percentile	28.4	mph	10 mph Pace	20.0 - 30.0	mph
95th Percentile	31.0	mph	Percent in Pace	82.2	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Total Study Average
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	0	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	**5**
6:00 AM	0	0	2	4	7	3	0	0	0	0	0	0	0	0	0	0	0	**16**
7:00 AM	0	1	5	15	23	8	0	0	0	0	0	0	0	0	0	0	0	**52**
8:00 AM	0	1	10	28	46	13	1	0	0	0	0	0	0	0	0	0	0	**99**
9:00 AM	0	1	7	27	40	9	0	0	0	0	0	0	0	0	0	0	0	**84**
10:00 AM	1	1	9	23	34	10	1	0	0	0	0	0	0	0	0	0	0	**79**
11:00 AM	0	2	9	31	40	9	1	0	0	0	0	0	0	0	0	0	0	**92**
12:00 PM	0	2	12	36	39	9	1	0	0	0	0	0	0	0	0	0	0	**99**
1:00 PM	0	1	10	30	43	8	0	0	0	0	0	0	0	0	0	0	0	**92**
2:00 PM	0	1	7	28	41	8	1	0	0	0	0	0	0	0	0	0	0	**86**
3:00 PM	1	1	9	30	39	9	1	0	0	0	0	0	0	0	0	0	0	**90**
4:00 PM	0	1	8	38	46	11	1	0	0	0	0	0	0	0	0	0	0	**105**
5:00 PM	0	1	10	41	51	11	0	0	0	0	0	0	0	0	0	0	0	**114**
6:00 PM	0	1	9	38	33	6	1	0	0	0	0	0	0	0	0	0	0	**88**
7:00 PM	0	1	5	16	18	3	0	0	0	0	0	0	0	0	0	0	0	**43**
8:00 PM	0	0	4	7	7	3	0	0	0	0	0	0	0	0	0	0	0	**21**
9:00 PM	0	0	3	5	4	1	0	0	0	0	0	0	0	0	0	0	0	**13**
10:00 PM	0	0	0	5	3	1	0	0	0	0	0	0	0	0	0	0	0	**9**
11:00 PM	0	1	2	3	2	1	0	0	0	0	0	0	0	0	0	0	0	**9**
Total	**2**	**16**	**123**	**411**	**521**	**124**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,205**
Percent	**0.2%**	**1.3%**	**10.2%**	**34.1%**	**43.2%**	**10.3%**	**0.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	25.3	mph	Mean (Average) Speed	25.1	mph
85th Percentile	29.3	mph	10 mph Pace	20.6 - 30.6	mph
95th Percentile	31.6	mph	Percent in Pace	77.6	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 02

Total Study Average
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	**8**
1:00 AM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	**4**
6:00 AM	0	0	1	7	9	1	0	0	0	0	0	0	0	0	0	0	0	**18**
7:00 AM	0	1	8	26	27	5	2	0	0	0	0	0	0	0	0	0	0	**69**
8:00 AM	0	2	6	37	55	7	1	0	0	0	0	0	0	0	0	0	0	**108**
9:00 AM	1	2	7	31	49	13	2	0	0	0	0	0	0	0	0	0	0	**105**
10:00 AM	0	4	10	36	34	6	1	0	0	0	0	0	0	0	0	0	0	**91**
11:00 AM	1	2	8	33	41	7	1	0	0	0	0	0	0	0	0	0	0	**93**
12:00 PM	0	2	11	48	45	7	0	0	0	0	0	0	0	0	0	0	0	**113**
1:00 PM	0	2	9	49	56	10	0	0	0	0	0	0	0	0	0	0	0	**126**
2:00 PM	0	2	11	47	41	6	1	0	0	0	0	0	0	0	0	0	0	**108**
3:00 PM	2	3	11	47	35	7	0	0	0	0	0	0	0	0	0	0	0	**105**
4:00 PM	0	3	17	57	47	7	1	0	0	0	0	0	0	0	0	0	0	**132**
5:00 PM	0	3	13	70	57	8	1	0	0	0	0	0	0	0	0	0	0	**152**
6:00 PM	0	2	11	61	44	5	1	0	0	0	0	0	0	0	0	0	0	**124**
7:00 PM	0	0	7	29	16	2	0	0	0	0	0	0	0	0	0	0	0	**54**
8:00 PM	0	1	7	14	11	2	0	0	0	0	0	0	0	0	0	0	0	**35**
9:00 PM	0	0	5	14	6	2	0	0	0	0	0	0	0	0	0	0	0	**27**
10:00 PM	0	1	4	10	6	1	0	0	0	0	0	0	0	0	0	0	0	**22**
11:00 PM	0	0	4	7	4	1	0	0	0	0	0	0	0	0	0	0	0	**16**
Total	**4**	**30**	**153**	**630**	**590**	**97**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,515**
Percent	**0.3%**	**2.0%**	**10.1%**	**41.6%**	**38.9%**	**6.4%**	**0.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	24.5	mph	Mean (Average) Speed	24.5	mph
85th Percentile	28.2	mph	10 mph Pace	19.7 - 29.7	mph
95th Percentile	30.8	mph	Percent in Pace	80.2	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Fairground Rd
Date Range: 11/3/2016 - 11/9/2016
Site Code: 02

	Thursday			Friday			Saturday			Sunday			Monday			Tuesday			Wednesday			Mid-Week Average		
	11/3/2016			11/4/2016			11/5/2016			11/6/2016			11/7/2016			11/8/2016			11/9/2016					
Time	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	4	10	14	1	3	4	3	6	9	9	17	26	2	7	9	4	4	8	7	9	16	5	8	13
1:00 AM	3	1	4	0	1	1	3	7	10	5	3	8	1	2	3	0	5	5	2	8	10	2	5	6
2:00 AM	3	4	7	1	0	1	2	1	3	2	0	2	0	1	1	0	3	3	0	2	2	1	3	4
3:00 AM	3	0	3	1	1	2	1	1	2	2	3	5	1	2	3	3	0	3	4	0	4	3	0	3
4:00 AM	2	1	3	3	2	5	2	0	2	4	0	4	4	0	4	2	1	3	2	0	2	2	1	3
5:00 AM	10	12	22	10	7	17	8	3	11	1	0	1	3	3	6	2	3	5	2	1	3	5	5	10
6:00 AM	35	43	78	29	41	70	15	10	25	4	3	7	10	7	17	12	10	22	15	10	25	21	21	42
7:00 AM	126	142	268	103	108	211	26	30	56	14	11	25	37	55	92	35	59	94	25	68	93	62	90	152
8:00 AM	119	142	261	105	106	211	44	29	73	23	10	33	122	181	303	150	157	307	125	133	258	131	144	275
9:00 AM	96	112	208	89	116	205	55	47	102	40	29	69	106	154	260	104	139	243	104	140	244	101	130	232
10:00 AM	62	75	137	89	105	194	51	64	115	62	41	103	92	102	194	112	141	253	86	110	196	87	109	195
11:00 AM	103	89	192	109	103	212	90	73	163	57	52	109	96	122	218	110	130	240	77	88	165	97	102	199
12:00 PM	119	146	265	104	172	276	76	89	165	58	66	124	121	129	250	138	103	241	80	93	173	112	114	226
1:00 PM	87	139	226	98	139	237	72	84	156	50	74	124	103	150	253	107	172	279	136	128	264	110	146	256
2:00 PM	80	123	203	104	129	233	68	77	145	59	71	130	90	118	208	113	114	227	84	124	208	92	120	213
3:00 PM	124	114	238	113	149	262	53	70	123	51	47	98	99	123	222	103	121	224	81	111	192	103	115	218
4:00 PM	152	182	334	141	192	333	57	72	129	41	60	101	110	155	265	123	141	264	113	122	235	129	148	278
5:00 PM	124	208	332	110	192	302	50	55	105	42	59	101	160	190	350	171	167	338	144	201	345	146	192	338
6:00 PM	71	83	154	63	73	136	28	41	69	45	61	106	140	223	363	132	191	323	134	207	341	112	160	273
7:00 PM	31	50	81	37	43	80	17	29	46	21	38	59	69	61	130	55	89	144	69	71	140	52	70	122
8:00 PM	15	31	46	24	39	63	15	25	40	10	19	29	22	37	59	38	58	96	34	41	75	29	43	72
9:00 PM	8	24	32	16	34	50	8	20	28	16	24	40	10	30	40	17	27	44	14	32	46	13	28	41
10:00 PM	5	18	23	9	25	34	10	26	36	7	13	20	7	22	29	17	25	42	8	17	25	10	20	30
11:00 PM	7	12	19	4	10	14	12	20	32	8	14	22	8	19	27	15	27	42	4	16	20	9	18	27
Total	**1,389**	**1,761**	**3,150**	**1,363**	**1,790**	**3,153**	**766**	**879**	**1,645**	**631**	**715**	**1,346**	**1,413**	**1,893**	**3,306**	**1,563**	**1,887**	**3,450**	**1,350**	**1,732**	**3,082**	**1,434**	**1,793**	**3,227**
Percent	**44%**	**56%**	-	**43%**	**57%**	-	**47%**	**53%**	-	**47%**	**53%**	-	**43%**	**57%**	-	**45%**	**55%**	-	**44%**	**56%**	-	**44%**	**56%**	-

1. Mid-week average includes data between Tuesday and Thursday.

Deon Fouche: (415) 757-7714
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Vehicle Classification Report Summary

Location: Airport Rd W/O Mitcher St
Count Direction: Eastbound / Westbound
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

	FHWA Vehicle Classification													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total														
Eastbound	84	4,471	1,262	0	485	13	0	4	2	1	0	0	0	6,322
Percent	1.3%	70.7%	20.0%	0.0%	7.7%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Westbound	72	5,387	1,461	1	509	5	0	6	4	0	0	0	1	7,446
Percent	1.0%	72.3%	19.6%	0.0%	6.8%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	100%
Total	156	9,858	2,723	1	994	18	0	10	6	1	0	0	1	13,768
Percent	1.1%	71.6%	19.8%	0.0%	7.2%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Thursday, November 3, 2016
Westbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	1	1	0	1	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	1	6	2	0	1	0	0	0	0	0	0	0	0	**10**
6:00 AM	0	31	7	0	2	0	0	0	0	0	0	0	0	**40**
7:00 AM	1	88	34	0	6	0	0	0	0	0	0	0	0	**129**
8:00 AM	1	94	23	0	5	0	0	0	0	0	0	0	0	**123**
9:00 AM	1	67	17	0	4	1	0	0	0	0	0	0	0	**90**
10:00 AM	1	37	12	0	7	0	0	0	0	0	0	0	0	**57**
11:00 AM	1	43	14	0	5	0	0	0	0	0	0	0	0	**63**
12:00 PM	4	80	21	0	7	0	0	1	1	0	0	0	0	**114**
1:00 PM	0	61	23	1	9	0	0	0	0	0	0	0	0	**94**
2:00 PM	1	51	18	0	8	0	0	0	0	0	0	0	0	**78**
3:00 PM	0	38	22	0	6	0	0	0	0	0	0	0	0	**66**
4:00 PM	2	94	21	0	9	0	0	0	0	0	0	0	0	**126**
5:00 PM	1	126	18	0	4	0	0	0	0	0	0	0	0	**149**
6:00 PM	0	51	6	0	1	0	0	0	0	0	0	0	0	**58**
7:00 PM	0	22	2	0	1	0	0	0	0	0	0	0	0	**25**
8:00 PM	0	18	1	0	0	0	0	0	0	0	0	0	0	**19**
9:00 PM	0	10	3	0	0	0	0	0	0	0	0	0	0	**13**
10:00 PM	0	10	0	0	1	0	0	0	0	0	0	0	0	**11**
11:00 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
Total	**14**	**937**	**245**	**1**	**77**	**1**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**1,277**
Percent	**1.1%**	**73.4%**	**19.2%**	**0.1%**	**6.0%**	**0.1%**	**0.0%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Friday, November 4, 2016
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
6:00 AM	0	14	6	0	3	0	0	0	0	0	0	0	0	**23**
7:00 AM	1	54	16	0	3	0	0	0	0	0	0	0	0	**74**
8:00 AM	0	49	12	0	9	0	0	0	0	0	0	0	0	**70**
9:00 AM	0	44	16	0	3	0	0	0	0	0	0	0	0	**63**
10:00 AM	1	36	12	0	12	0	0	1	0	0	0	0	0	**62**
11:00 AM	2	67	17	0	6	0	0	0	0	0	0	0	0	**92**
12:00 PM	0	60	18	0	4	1	0	0	0	0	0	0	0	**83**
1:00 PM	2	57	14	0	12	0	0	0	0	0	0	0	0	**85**
2:00 PM	0	53	17	0	14	0	0	0	0	0	0	0	0	**84**
3:00 PM	2	63	22	0	8	0	0	0	0	0	0	0	0	**95**
4:00 PM	1	86	23	0	7	0	0	0	0	0	0	0	0	**117**
5:00 PM	3	71	10	0	1	0	0	0	0	0	0	0	0	**85**
6:00 PM	0	37	7	0	2	0	0	0	0	0	0	0	0	**46**
7:00 PM	0	17	2	0	4	0	0	0	0	0	0	0	0	**23**
8:00 PM	0	16	3	0	1	0	0	0	0	0	0	0	0	**20**
9:00 PM	0	9	1	0	1	0	0	0	0	0	0	0	0	**11**
10:00 PM	0	8	0	0	0	0	0	0	0	0	0	0	0	**8**
11:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
Total	**12**	**750**	**198**	**0**	**90**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1,052**
Percent	**1.1%**	**71.3%**	**18.8%**	**0.0%**	**8.6%**	**0.1%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Friday, November 4, 2016
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	3	2	0	1	0	0	0	0	0	0	0	0	**6**
6:00 AM	0	31	4	0	1	0	0	0	0	0	0	0	0	**36**
7:00 AM	0	59	21	0	4	0	0	0	1	0	0	0	0	**85**
8:00 AM	3	58	18	0	3	0	0	0	0	0	0	0	0	**82**
9:00 AM	1	76	13	0	6	0	0	0	0	0	0	0	0	**96**
10:00 AM	0	37	20	0	9	0	0	0	0	0	0	0	0	**66**
11:00 AM	0	50	17	0	5	0	0	1	0	0	0	0	0	**73**
12:00 PM	1	87	21	0	11	1	0	0	0	0	0	0	0	**121**
1:00 PM	2	81	18	0	8	0	0	0	1	0	0	0	0	**110**
2:00 PM	1	53	26	0	6	0	0	0	0	0	0	0	0	**86**
3:00 PM	0	70	22	0	7	0	0	0	0	0	0	0	0	**99**
4:00 PM	1	98	20	0	13	0	0	1	0	0	0	0	0	**133**
5:00 PM	1	108	16	0	6	0	0	0	0	0	0	0	0	**131**
6:00 PM	0	34	4	0	3	0	0	0	0	0	0	0	0	**41**
7:00 PM	0	12	3	0	1	0	0	0	0	0	0	0	0	**16**
8:00 PM	0	19	0	0	1	0	0	0	0	0	0	0	0	**20**
9:00 PM	0	12	2	0	1	0	0	0	0	0	0	0	0	**15**
10:00 PM	0	10	2	0	0	0	0	0	0	0	0	0	0	**12**
11:00 PM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
Total	**10**	**906**	**232**	**0**	**86**	**1**	**0**	**2**	**2**	**0**	**0**	**0**	**0**	**1,239**
Percent	**0.8%**	**73.1%**	**18.7%**	**0.0%**	**6.9%**	**0.1%**	**0.0%**	**0.2%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Saturday, November 5, 2016
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	3
2:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
6:00 AM	0	11	1	0	1	0	0	0	0	0	0	0	0	13
7:00 AM	0	13	3	0	1	0	0	0	0	0	0	0	0	17
8:00 AM	0	13	14	0	3	0	0	0	0	0	0	0	0	30
9:00 AM	0	23	3	0	2	1	0	0	0	0	0	0	0	29
10:00 AM	1	19	11	0	6	0	0	0	0	0	0	0	0	37
11:00 AM	1	38	15	0	5	0	0	0	0	0	0	0	0	59
12:00 PM	0	41	8	0	5	0	0	0	0	0	0	0	0	54
1:00 PM	0	35	9	0	4	0	0	0	0	0	0	0	0	48
2:00 PM	1	30	10	0	3	0	0	0	0	0	0	0	0	44
3:00 PM	0	27	7	0	2	0	0	0	0	0	0	0	0	36
4:00 PM	0	33	5	0	1	0	0	0	0	0	0	0	0	39
5:00 PM	0	25	4	0	1	0	0	0	0	0	0	0	0	30
6:00 PM	0	16	2	0	1	0	0	0	0	0	0	0	0	19
7:00 PM	0	4	3	0	0	0	0	0	0	0	0	0	0	7
8:00 PM	0	6	0	0	1	0	0	0	0	0	0	0	0	7
9:00 PM	0	2	0	0	1	0	0	0	0	0	0	0	0	3
10:00 PM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
11:00 PM	0	10	0	0	0	0	0	0	0	0	0	0	0	10
Total	**3**	**360**	**96**	**0**	**38**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**498**
Percent	**0.6%**	**72.3%**	**19.3%**	**0.0%**	**7.6%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Saturday, November 5, 2016
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	3	1	0	1	0	0	0	0	0	0	0	0	5
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
6:00 AM	0	7	0	0	0	0	0	0	0	0	0	0	0	7
7:00 AM	0	6	9	0	1	0	0	0	0	0	0	0	0	16
8:00 AM	0	12	8	0	0	0	0	0	0	0	0	0	0	20
9:00 AM	0	27	6	0	2	0	0	0	0	0	0	0	0	35
10:00 AM	0	29	8	0	5	0	0	0	0	0	0	0	0	42
11:00 AM	1	23	10	0	1	0	0	0	0	0	0	0	0	35
12:00 PM	0	33	12	0	7	0	0	0	0	0	0	0	0	52
1:00 PM	0	41	11	0	3	0	0	0	0	0	0	0	0	55
2:00 PM	0	30	8	0	3	0	0	0	0	0	0	0	0	41
3:00 PM	0	32	7	0	1	0	0	0	0	0	0	0	0	40
4:00 PM	0	43	7	0	2	0	0	0	0	0	0	0	0	52
5:00 PM	1	25	3	0	1	0	0	0	0	0	0	0	0	30
6:00 PM	0	15	2	0	0	0	0	0	0	0	0	0	0	17
7:00 PM	0	7	2	0	0	0	0	0	0	0	0	0	0	9
8:00 PM	0	11	0	0	1	0	0	0	0	0	0	0	0	12
9:00 PM	0	12	1	0	0	0	0	0	0	0	0	0	0	13
10:00 PM	0	9	1	0	0	0	0	0	0	0	0	0	0	10
11:00 PM	0	11	1	0	0	0	0	0	0	0	0	0	0	12
Total	**2**	**382**	**98**	**0**	**28**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**510**
Percent	**0.4%**	**74.9%**	**19.2%**	**0.0%**	**5.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Sunday, November 6, 2016
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
6:00 AM	0	3	0	0	1	0	0	0	0	0	0	0	0	4
7:00 AM	0	6	3	0	0	0	0	0	0	0	0	0	0	9
8:00 AM	0	12	1	0	0	0	0	0	0	0	0	0	0	13
9:00 AM	0	16	6	0	0	0	0	0	0	0	0	0	0	22
10:00 AM	1	30	5	0	0	0	0	0	0	0	0	0	0	36
11:00 AM	0	23	3	0	1	0	0	0	0	0	0	0	0	27
12:00 PM	0	20	8	0	1	0	0	0	0	0	0	0	0	29
1:00 PM	1	25	4	0	1	0	0	0	0	0	0	0	0	31
2:00 PM	0	29	2	0	4	0	0	0	0	0	0	0	0	35
3:00 PM	1	25	7	0	2	0	0	0	0	0	0	0	0	35
4:00 PM	0	21	4	0	1	0	0	0	0	0	0	0	0	26
5:00 PM	0	19	5	0	5	0	0	0	0	0	0	0	0	29
6:00 PM	0	20	4	0	3	0	0	0	0	0	0	0	0	27
7:00 PM	0	8	0	0	1	0	0	0	0	0	0	0	0	9
8:00 PM	0	7	0	0	0	0	0	0	0	0	0	0	0	7
9:00 PM	0	6	0	0	1	0	0	0	0	0	0	0	0	7
10:00 PM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
11:00 PM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
Total	**3**	**289**	**54**	**0**	**21**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**367**
Percent	**0.8%**	**78.7%**	**14.7%**	**0.0%**	**5.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Sunday, November 6, 2016
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
6:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
7:00 AM	0	7	3	0	0	0	0	0	0	0	0	0	0	10
8:00 AM	0	5	1	0	1	0	0	0	0	0	0	0	0	7
9:00 AM	0	16	2	0	1	0	0	0	0	0	0	0	0	19
10:00 AM	0	26	4	0	2	0	0	0	0	0	0	0	0	32
11:00 AM	0	23	2	0	2	0	0	0	0	0	0	0	0	27
12:00 PM	0	32	5	0	3	0	0	0	0	0	0	0	0	40
1:00 PM	1	30	4	0	4	0	0	0	0	0	0	0	0	39
2:00 PM	0	32	1	0	3	0	0	0	0	0	0	0	0	36
3:00 PM	0	20	5	0	4	0	0	0	0	0	0	0	0	29
4:00 PM	0	23	5	0	2	0	0	0	0	0	0	0	0	30
5:00 PM	0	20	8	0	4	0	0	0	0	0	0	0	0	32
6:00 PM	0	24	4	0	1	0	0	0	0	0	0	0	0	29
7:00 PM	0	19	1	0	1	0	0	0	0	0	0	0	0	21
8:00 PM	0	7	0	0	0	0	0	0	0	0	0	0	0	7
9:00 PM	0	8	3	0	1	0	0	0	0	0	0	0	0	12
10:00 PM	0	5	0	0	1	0	0	0	0	0	0	0	0	6
11:00 PM	0	9	0	0	0	0	0	0	0	0	0	0	0	9
Total	**1**	**316**	**49**	**0**	**30**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**396**
Percent	**0.3%**	**79.8%**	**12.4%**	**0.0%**	**7.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Monday, November 7, 2016
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	4	1	0	1	0	0	0	0	0	0	0	0	**6**
7:00 AM	1	14	6	0	3	0	0	1	0	0	0	0	0	**25**
8:00 AM	1	54	20	0	4	1	0	0	1	0	0	0	0	**81**
9:00 AM	1	45	18	0	11	0	0	0	0	0	0	0	0	**75**
10:00 AM	0	36	24	0	6	0	0	0	0	0	0	0	0	**66**
11:00 AM	0	41	24	0	9	1	0	0	0	0	0	0	0	**75**
12:00 PM	1	61	27	0	5	0	0	0	0	0	0	0	0	**94**
1:00 PM	1	52	22	0	6	0	0	0	0	0	0	0	0	**81**
2:00 PM	1	48	21	0	5	0	0	0	0	0	0	0	0	**75**
3:00 PM	2	58	13	0	4	0	0	0	0	0	0	0	0	**77**
4:00 PM	0	59	23	0	8	0	0	0	0	0	0	0	0	**90**
5:00 PM	2	110	25	0	4	0	0	0	0	0	0	0	0	**141**
6:00 PM	2	86	15	0	8	0	0	0	0	0	0	0	0	**111**
7:00 PM	0	43	9	0	2	0	0	0	0	0	0	0	0	**54**
8:00 PM	0	13	2	0	0	0	0	0	0	0	0	0	0	**15**
9:00 PM	0	6	1	0	0	0	0	0	0	0	0	0	0	**7**
10:00 PM	0	6	0	0	0	0	0	0	0	0	0	0	0	**6**
11:00 PM	0	2	2	0	1	0	0	0	0	0	0	0	0	**5**
Total	**12**	**744**	**255**	**0**	**77**	**2**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**1,092**
Percent	**1.1%**	**68.1%**	**23.4%**	**0.0%**	**7.1%**	**0.2%**	**0.0%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Monday, November 7, 2016
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
7:00 AM	0	41	9	0	5	0	0	0	0	0	0	0	0	**55**
8:00 AM	2	99	43	0	6	0	0	0	0	0	0	0	0	**150**
9:00 AM	2	100	31	0	4	0	0	0	0	0	0	0	0	**137**
10:00 AM	2	62	16	0	6	0	0	1	0	0	0	0	0	**87**
11:00 AM	0	59	27	0	7	1	0	0	0	0	0	0	0	**94**
12:00 PM	1	59	21	0	11	0	0	0	0	0	0	0	0	**92**
1:00 PM	2	79	30	0	7	0	0	0	0	0	0	0	0	**118**
2:00 PM	1	65	25	0	4	0	0	0	0	0	0	0	0	**95**
3:00 PM	2	49	22	0	5	0	0	0	0	0	0	0	0	**78**
4:00 PM	1	71	19	0	10	0	0	0	0	0	0	0	0	**101**
5:00 PM	1	94	25	0	4	0	0	1	0	0	0	0	0	**125**
6:00 PM	1	135	24	0	9	0	0	0	0	0	0	0	0	**169**
7:00 PM	0	29	2	0	2	0	0	0	0	0	0	0	0	**33**
8:00 PM	0	15	2	0	0	0	0	0	0	0	0	0	0	**17**
9:00 PM	0	16	1	0	0	0	0	0	0	0	0	0	0	**17**
10:00 PM	0	7	2	0	0	0	0	0	0	0	0	0	0	**9**
11:00 PM	0	9	0	0	0	0	0	0	0	0	0	0	0	**9**
Total	**15**	**1,001**	**300**	**0**	**81**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1,400**
Percent	**1.1%**	**71.5%**	**21.4%**	**0.0%**	**5.8%**	**0.1%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Tuesday, November 8, 2016
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
6:00 AM	0	5	2	0	0	0	0	0	0	0	0	0	0	7
7:00 AM	1	12	4	0	3	0	0	0	0	0	0	0	0	20
8:00 AM	1	72	21	0	8	0	0	0	0	0	0	0	0	102
9:00 AM	0	54	18	0	11	0	0	0	0	0	0	0	0	83
10:00 AM	0	50	14	0	9	0	0	0	0	0	0	0	0	73
11:00 AM	1	54	23	0	6	0	0	0	0	0	0	0	0	84
12:00 PM	4	71	20	0	8	0	0	0	1	0	0	0	0	104
1:00 PM	2	61	21	0	3	0	0	0	0	0	0	0	0	87
2:00 PM	4	59	13	0	17	0	0	0	0	0	0	0	0	93
3:00 PM	2	65	19	0	7	2	0	0	0	0	0	0	0	95
4:00 PM	0	60	18	0	11	1	0	1	0	0	0	0	0	91
5:00 PM	4	115	22	0	5	0	0	1	0	0	0	0	0	147
6:00 PM	2	92	13	0	11	0	0	0	0	0	0	0	0	118
7:00 PM	1	34	2	0	0	0	0	0	0	0	0	0	0	37
8:00 PM	0	16	6	0	0	0	0	0	0	0	0	0	0	22
9:00 PM	0	14	0	0	0	0	0	0	0	0	0	0	0	14
10:00 PM	0	10	0	0	0	0	0	0	0	0	0	0	0	10
11:00 PM	0	2	1	0	1	0	0	0	0	0	0	0	0	4
Total	**22**	**852**	**219**	**0**	**100**	**3**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**1,199**
Percent	**1.8%**	**71.1%**	**18.3%**	**0.0%**	**8.3%**	**0.3%**	**0.0%**	**0.2%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Tuesday, November 8, 2016
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
6:00 AM	1	6	1	0	1	0	0	0	0	0	0	0	0	9
7:00 AM	0	38	8	0	5	0	0	0	0	0	0	0	0	51
8:00 AM	2	90	33	0	6	0	0	1	0	0	0	0	0	132
9:00 AM	3	77	27	0	6	0	0	0	0	0	0	0	0	113
10:00 AM	1	85	18	0	8	0	0	0	0	0	0	0	0	112
11:00 AM	1	54	21	0	8	0	0	0	1	0	0	0	0	85
12:00 PM	0	47	13	0	6	0	0	0	0	0	0	0	0	66
1:00 PM	1	81	34	0	13	0	0	0	0	0	0	0	0	129
2:00 PM	2	57	15	0	13	0	0	0	0	0	0	0	0	87
3:00 PM	0	66	19	0	9	0	0	0	0	0	0	0	0	94
4:00 PM	1	60	22	0	9	0	0	0	0	0	0	0	0	92
5:00 PM	1	72	25	0	8	0	0	0	0	0	0	0	0	106
6:00 PM	0	107	18	0	6	0	0	0	0	0	0	0	0	131
7:00 PM	0	34	2	0	3	0	0	0	0	0	0	0	0	39
8:00 PM	0	26	6	0	1	0	0	0	0	0	0	0	0	33
9:00 PM	0	13	3	0	0	0	0	0	0	0	0	0	0	16
10:00 PM	0	11	1	0	0	0	0	0	0	0	0	0	0	12
11:00 PM	0	11	0	0	0	0	0	0	0	0	0	0	0	11
Total	**13**	**946**	**267**	**0**	**102**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**1,330**
Percent	**1.0%**	**71.1%**	**20.1%**	**0.0%**	**7.7%**	**0.0%**	**0.0%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Wednesday, November 9, 2016
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	6	2	0	1	0	0	0	0	0	0	0	0	**9**
7:00 AM	1	13	3	0	2	0	0	0	0	0	0	0	0	**19**
8:00 AM	3	49	30	0	8	0	0	0	0	0	0	0	0	**90**
9:00 AM	2	45	21	0	10	0	0	0	0	0	0	0	0	**78**
10:00 AM	0	35	12	0	4	0	0	0	0	0	0	0	0	**51**
11:00 AM	0	36	15	0	3	0	0	0	0	0	0	0	0	**54**
12:00 PM	1	41	14	0	6	0	0	0	0	0	0	0	0	**62**
1:00 PM	2	72	30	0	7	1	0	0	0	1	0	0	0	**113**
2:00 PM	0	45	9	0	8	2	0	0	0	0	0	0	0	**64**
3:00 PM	3	48	11	0	6	0	0	0	0	0	0	0	0	**68**
4:00 PM	2	53	19	0	9	0	0	0	0	0	0	0	0	**83**
5:00 PM	3	89	25	0	9	0	0	0	0	0	0	0	0	**126**
6:00 PM	2	100	18	0	3	0	0	0	0	0	0	0	0	**123**
7:00 PM	0	42	7	0	4	0	0	0	0	0	0	0	0	**53**
8:00 PM	0	16	8	0	2	0	0	0	0	0	0	0	0	**26**
9:00 PM	0	10	0	0	0	0	0	0	0	0	0	0	0	**10**
10:00 PM	0	6	0	0	0	0	0	0	0	0	0	0	0	**6**
11:00 PM	0	1	1	0	1	0	0	0	0	0	0	0	0	**3**
Total	**19**	**715**	**227**	**0**	**83**	**3**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1,048**
Percent	**1.8%**	**68.2%**	**21.7%**	**0.0%**	**7.9%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Wednesday, November 9, 2016
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	**9**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	2	2	0	2	0	0	0	0	0	0	0	0	**6**
7:00 AM	3	41	11	0	4	2	0	0	0	0	0	0	0	**61**
8:00 AM	3	82	28	0	15	0	0	0	0	0	0	0	0	**128**
9:00 AM	3	81	29	0	6	0	0	0	0	0	0	0	0	**119**
10:00 AM	0	67	19	0	8	0	0	0	0	0	0	0	0	**94**
11:00 AM	2	45	15	0	5	0	0	0	0	0	0	0	0	**67**
12:00 PM	1	45	17	0	6	0	0	0	0	0	0	0	1	**70**
1:00 PM	1	66	28	0	11	0	0	0	0	0	0	0	0	**106**
2:00 PM	0	69	18	0	7	0	0	0	0	0	0	0	0	**94**
3:00 PM	0	45	22	0	12	0	0	0	0	0	0	0	0	**79**
4:00 PM	0	54	17	0	7	0	0	0	0	0	0	0	0	**78**
5:00 PM	3	102	24	0	11	0	0	0	0	0	0	0	0	**140**
6:00 PM	1	110	29	0	3	0	0	0	0	0	0	0	0	**143**
7:00 PM	0	29	4	0	5	0	0	0	0	0	0	0	0	**38**
8:00 PM	0	20	3	0	2	0	0	0	0	0	0	0	0	**25**
9:00 PM	0	9	1	0	1	0	0	0	0	0	0	0	0	**11**
10:00 PM	0	8	1	0	0	0	0	0	0	0	0	0	0	**9**
11:00 PM	0	11	2	0	0	0	0	0	0	0	0	0	0	**13**
Total	**17**	**899**	**270**	**0**	**105**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1,294**
Percent	**1.3%**	**69.5%**	**20.9%**	**0.0%**	**8.1%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Total Study Average
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	9	2	0	2	0	0	0	0	0	0	0	0	**13**
7:00 AM	1	25	7	0	3	0	0	0	0	0	0	0	0	**36**
8:00 AM	1	42	18	0	5	0	0	0	0	0	0	0	0	**66**
9:00 AM	1	38	14	0	6	0	0	0	0	0	0	0	0	**59**
10:00 AM	1	33	14	0	6	0	0	0	0	0	0	0	0	**54**
11:00 AM	1	46	16	0	5	0	0	0	0	0	0	0	0	**68**
12:00 PM	1	52	16	0	5	0	0	0	0	0	0	0	0	**74**
1:00 PM	1	50	17	0	6	0	0	0	0	0	0	0	0	**74**
2:00 PM	1	44	13	0	8	0	0	0	0	0	0	0	0	**66**
3:00 PM	1	51	14	0	6	0	0	0	0	0	0	0	0	**72**
4:00 PM	0	59	16	0	6	0	0	0	0	0	0	0	0	**81**
5:00 PM	2	73	14	0	4	0	0	0	0	0	0	0	0	**93**
6:00 PM	1	56	10	0	4	0	0	0	0	0	0	0	0	**71**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	12	3	0	1	0	0	0	0	0	0	0	0	**16**
9:00 PM	0	7	0	0	1	0	0	0	0	0	0	0	0	**8**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	4	1	0	0	0	0	0	0	0	0	0	0	**5**
Total	**12**	**608**	**176**	**0**	**68**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**864**
Percent	**1.4%**	**70.4%**	**20.4%**	**0.0%**	**7.9%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Deon Fouche: (415) 757-7714
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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Total Study Average
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	12	2	0	1	0	0	0	0	0	0	0	0	**15**
7:00 AM	1	40	14	0	4	0	0	0	0	0	0	0	0	**59**
8:00 AM	2	63	22	0	5	0	0	0	0	0	0	0	0	**92**
9:00 AM	1	63	18	0	4	0	0	0	0	0	0	0	0	**86**
10:00 AM	1	49	14	0	6	0	0	0	0	0	0	0	0	**70**
11:00 AM	1	42	15	0	5	0	0	0	0	0	0	0	0	**63**
12:00 PM	1	55	16	0	7	0	0	0	0	0	0	0	0	**79**
1:00 PM	1	63	21	0	8	0	0	0	0	0	0	0	0	**93**
2:00 PM	1	51	16	0	6	0	0	0	0	0	0	0	0	**74**
3:00 PM	0	46	17	0	6	0	0	0	0	0	0	0	0	**69**
4:00 PM	1	63	16	0	7	0	0	0	0	0	0	0	0	**87**
5:00 PM	1	78	17	0	5	0	0	0	0	0	0	0	0	**101**
6:00 PM	0	68	12	0	3	0	0	0	0	0	0	0	0	**83**
7:00 PM	0	22	2	0	2	0	0	0	0	0	0	0	0	**26**
8:00 PM	0	17	2	0	1	0	0	0	0	0	0	0	0	**20**
9:00 PM	0	11	2	0	0	0	0	0	0	0	0	0	0	**13**
10:00 PM	0	9	1	0	0	0	0	0	0	0	0	0	0	**10**
11:00 PM	0	9	1	0	0	0	0	0	0	0	0	0	0	**10**
Total	**11**	**770**	**209**	**0**	**70**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,060**
Percent	**1.0%**	**72.6%**	**19.7%**	**0.0%**	**6.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

3-Day (Tuesday - Thursday) Average
Eastbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
6:00 AM	0	5	2	0	0	0	0	0	0	0	0	0	0	7
7:00 AM	1	12	4	0	3	0	0	0	0	0	0	0	0	20
8:00 AM	1	72	21	0	8	0	0	0	0	0	0	0	0	102
9:00 AM	0	54	18	0	11	0	0	0	0	0	0	0	0	83
10:00 AM	0	50	14	0	9	0	0	0	0	0	0	0	0	73
11:00 AM	1	54	23	0	6	0	0	0	0	0	0	0	0	84
12:00 PM	4	71	20	0	8	0	0	0	1	0	0	0	0	104
1:00 PM	2	61	21	0	3	0	0	0	0	0	0	0	0	87
2:00 PM	4	59	13	0	17	0	0	0	0	0	0	0	0	93
3:00 PM	2	65	19	0	7	2	0	0	0	0	0	0	0	95
4:00 PM	0	60	18	0	11	1	0	1	0	0	0	0	0	91
5:00 PM	4	115	22	0	5	0	0	1	0	0	0	0	0	147
6:00 PM	2	92	13	0	11	0	0	0	0	0	0	0	0	118
7:00 PM	1	34	2	0	0	0	0	0	0	0	0	0	0	37
8:00 PM	0	16	6	0	0	0	0	0	0	0	0	0	0	22
9:00 PM	0	14	0	0	0	0	0	0	0	0	0	0	0	14
10:00 PM	0	10	0	0	0	0	0	0	0	0	0	0	0	10
11:00 PM	0	2	1	0	1	0	0	0	0	0	0	0	0	4
Total	**22**	**852**	**219**	**0**	**100**	**3**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**1,199**
Percent	**1.8%**	**71.1%**	**18.3%**	**0.0%**	**8.3%**	**0.3%**	**0.0%**	**0.2%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

3-Day (Tuesday - Thursday) Average
Westbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
6:00 AM	1	6	1	0	1	0	0	0	0	0	0	0	0	9
7:00 AM	0	38	8	0	5	0	0	0	0	0	0	0	0	51
8:00 AM	2	90	33	0	6	0	0	1	0	0	0	0	0	132
9:00 AM	3	77	27	0	6	0	0	0	0	0	0	0	0	113
10:00 AM	1	85	18	0	8	0	0	0	0	0	0	0	0	112
11:00 AM	1	54	21	0	8	0	0	0	1	0	0	0	0	85
12:00 PM	0	47	13	0	6	0	0	0	0	0	0	0	0	66
1:00 PM	1	81	34	0	13	0	0	0	0	0	0	0	0	129
2:00 PM	2	57	15	0	13	0	0	0	0	0	0	0	0	87
3:00 PM	0	66	19	0	9	0	0	0	0	0	0	0	0	94
4:00 PM	1	60	22	0	9	0	0	0	0	0	0	0	0	92
5:00 PM	1	72	25	0	8	0	0	0	0	0	0	0	0	106
6:00 PM	0	107	18	0	6	0	0	0	0	0	0	0	0	131
7:00 PM	0	34	2	0	3	0	0	0	0	0	0	0	0	39
8:00 PM	0	26	6	0	1	0	0	0	0	0	0	0	0	33
9:00 PM	0	13	3	0	0	0	0	0	0	0	0	0	0	16
10:00 PM	0	11	1	0	0	0	0	0	0	0	0	0	0	12
11:00 PM	0	11	0	0	0	0	0	0	0	0	0	0	0	11
Total	**13**	**946**	**267**	**0**	**102**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**1,330**
Percent	**1.0%**	**71.1%**	**20.1%**	**0.0%**	**7.7%**	**0.0%**	**0.0%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Vehicle Speed Report Summary

Location: Airport Rd W/O Mitcher St
Count Direction: Eastbound / Westbound
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

	Speed Range (mph)																	Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
Study Total																		
Eastbound	27	77	360	2,213	2,847	739	56	3	0	0	0	0	0	0	0	0	0	6,322
Percent	0.4%	1.2%	5.7%	35.0%	45.0%	11.7%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Westbound	27	45	262	1,862	3,781	1,332	132	5	0	0	0	0	0	0	0	0	0	7,446
Percent	0.4%	0.6%	3.5%	25.0%	50.8%	17.9%	1.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	54	122	622	4,075	6,628	2,071	188	8	0	0	0	0	0	0	0	0	0	13,768
Percent	0.4%	0.9%	4.5%	29.6%	48.1%	15.0%	1.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Eastbound			**Eastbound**		
50th Percentile (Median)	25.6	mph	Mean (Average) Speed	25.6	mph
85th Percentile	29.5	mph	10 mph Pace	20.8 - 30.8	mph
95th Percentile	31.9	mph	Percent in Pace	80.8	%
Westbound			**Westbound**		
50th Percentile (Median)	26.8	mph	Mean (Average) Speed	26.8	mph
85th Percentile	30.6	mph	10 mph Pace	21.9 - 31.9	mph
95th Percentile	33.1	mph	Percent in Pace	82.0	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Thursday, November 3, 2016
Eastbound

	Speed Range (mph)																	Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	**6**
6:00 AM	0	0	1	7	12	3	0	0	0	0	0	0	0	0	0	0	0	**23**
7:00 AM	0	0	5	17	45	16	0	0	0	0	0	0	0	0	0	0	0	**83**
8:00 AM	0	0	10	26	34	7	0	0	0	0	0	0	0	0	0	0	0	**77**
9:00 AM	0	1	11	27	23	2	0	0	0	0	0	0	0	0	0	0	0	**64**
10:00 AM	2	1	4	19	17	4	3	0	0	0	0	0	0	0	0	0	0	**50**
11:00 AM	0	0	4	32	43	7	0	0	0	0	0	0	0	0	0	0	0	**86**
12:00 PM	2	2	7	37	43	6	1	0	0	0	0	0	0	0	0	0	0	**98**
1:00 PM	0	2	5	29	30	7	1	0	0	0	0	0	0	0	0	0	0	**74**
2:00 PM	0	3	7	24	28	7	2	0	0	0	0	0	0	0	0	0	0	**71**
3:00 PM	0	0	2	27	48	21	2	0	0	0	0	0	0	0	0	0	0	**100**
4:00 PM	0	1	1	42	69	17	2	0	0	0	0	0	0	0	0	0	0	**132**
5:00 PM	0	1	2	34	50	4	0	0	0	0	0	0	0	0	0	0	0	**91**
6:00 PM	0	0	0	19	26	7	0	0	0	0	0	0	0	0	0	0	0	**52**
7:00 PM	0	1	1	6	8	4	0	0	0	0	0	0	0	0	0	0	0	**20**
8:00 PM	0	1	0	8	3	0	0	0	0	0	0	0	0	0	0	0	0	**12**
9:00 PM	0	0	0	1	4	1	0	0	0	0	0	0	0	0	0	0	0	**6**
10:00 PM	0	0	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**6**
11:00 PM	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	**4**
Total	**4**	**13**	**61**	**372**	**488**	**117**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,066**
Percent	**0.4%**	**1.2%**	**5.7%**	**34.9%**	**45.8%**	**11.0%**	**1.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.6	mph	Mean (Average) Speed	25.5	mph
85th Percentile	29.4	mph	10 mph Pace	20.7 - 30.7	mph
95th Percentile	31.7	mph	Percent in Pace	81.1	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Thursday, November 3, 2016
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	8	2	0	0	0	0	0	0	0	0	0	0	0	10
6:00 AM	0	0	3	13	16	8	0	0	0	0	0	0	0	0	0	0	0	40
7:00 AM	1	0	4	29	72	19	4	0	0	0	0	0	0	0	0	0	0	129
8:00 AM	0	1	7	43	59	13	0	0	0	0	0	0	0	0	0	0	0	123
9:00 AM	1	1	7	22	50	9	0	0	0	0	0	0	0	0	0	0	0	90
10:00 AM	0	0	5	11	26	13	2	0	0	0	0	0	0	0	0	0	0	57
11:00 AM	0	1	0	19	36	7	0	0	0	0	0	0	0	0	0	0	0	63
12:00 PM	2	1	3	41	50	13	4	0	0	0	0	0	0	0	0	0	0	114
1:00 PM	0	0	5	26	44	17	2	0	0	0	0	0	0	0	0	0	0	94
2:00 PM	0	1	1	24	41	10	1	0	0	0	0	0	0	0	0	0	0	78
3:00 PM	1	1	1	17	39	7	0	0	0	0	0	0	0	0	0	0	0	66
4:00 PM	0	1	1	19	77	27	1	0	0	0	0	0	0	0	0	0	0	126
5:00 PM	0	0	4	26	92	26	1	0	0	0	0	0	0	0	0	0	0	149
6:00 PM	0	0	3	11	29	14	1	0	0	0	0	0	0	0	0	0	0	58
7:00 PM	0	0	2	6	10	6	1	0	0	0	0	0	0	0	0	0	0	25
8:00 PM	0	0	2	9	5	3	0	0	0	0	0	0	0	0	0	0	0	19
9:00 PM	0	0	1	1	8	3	0	0	0	0	0	0	0	0	0	0	0	13
10:00 PM	0	0	0	4	7	0	0	0	0	0	0	0	0	0	0	0	0	11
11:00 PM	0	0	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	5
Total	**5**	**7**	**50**	**323**	**674**	**201**	**17**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,277**
Percent	**0.4%**	**0.5%**	**3.9%**	**25.3%**	**52.8%**	**15.7%**	**1.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	26.6	mph	Mean (Average) Speed	26.6	mph
85th Percentile	30.1	mph	10 mph Pace	22.1 - 32.1	mph
95th Percentile	32.4	mph	Percent in Pace	83.9	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Friday, November 4, 2016
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	4
6:00 AM	0	0	1	6	7	9	0	0	0	0	0	0	0	0	0	0	0	23
7:00 AM	0	1	1	22	41	9	0	0	0	0	0	0	0	0	0	0	0	74
8:00 AM	0	1	3	20	39	5	2	0	0	0	0	0	0	0	0	0	0	70
9:00 AM	0	0	8	23	24	8	0	0	0	0	0	0	0	0	0	0	0	63
10:00 AM	1	0	5	24	25	7	0	0	0	0	0	0	0	0	0	0	0	62
11:00 AM	0	2	2	32	46	8	1	1	0	0	0	0	0	0	0	0	0	92
12:00 PM	0	0	6	33	35	6	3	0	0	0	0	0	0	0	0	0	0	83
1:00 PM	1	1	6	36	34	7	0	0	0	0	0	0	0	0	0	0	0	85
2:00 PM	0	0	3	16	43	21	1	0	0	0	0	0	0	0	0	0	0	84
3:00 PM	0	0	1	30	49	14	1	0	0	0	0	0	0	0	0	0	0	95
4:00 PM	0	0	2	45	56	14	0	0	0	0	0	0	0	0	0	0	0	117
5:00 PM	2	4	2	38	34	4	1	0	0	0	0	0	0	0	0	0	0	85
6:00 PM	0	2	4	17	17	5	1	0	0	0	0	0	0	0	0	0	0	46
7:00 PM	0	0	2	7	11	3	0	0	0	0	0	0	0	0	0	0	0	23
8:00 PM	0	1	5	7	5	2	0	0	0	0	0	0	0	0	0	0	0	20
9:00 PM	0	0	0	5	6	0	0	0	0	0	0	0	0	0	0	0	0	11
10:00 PM	0	0	0	3	5	0	0	0	0	0	0	0	0	0	0	0	0	8
11:00 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Total	**4**	**12**	**51**	**365**	**483**	**125**	**11**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,052**
Percent	**0.4%**	**1.1%**	**4.8%**	**34.7%**	**45.9%**	**11.9%**	**1.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.7	mph	Mean (Average) Speed	25.8	mph
85th Percentile	29.5	mph	10 mph Pace	21.5 - 31.5	mph
95th Percentile	31.9	mph	Percent in Pace	81.3	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Friday, November 4, 2016
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	0	0	3	2	0	1	0	0	0	0	0	0	0	0	0	0	6
6:00 AM	0	0	0	10	20	5	1	0	0	0	0	0	0	0	0	0	0	36
7:00 AM	0	0	2	24	43	15	1	0	0	0	0	0	0	0	0	0	0	85
8:00 AM	1	0	1	27	47	6	0	0	0	0	0	0	0	0	0	0	0	82
9:00 AM	0	0	2	21	57	15	1	0	0	0	0	0	0	0	0	0	0	96
10:00 AM	0	1	1	13	30	16	5	0	0	0	0	0	0	0	0	0	0	66
11:00 AM	0	1	0	24	40	8	0	0	0	0	0	0	0	0	0	0	0	73
12:00 PM	0	0	4	37	64	16	0	0	0	0	0	0	0	0	0	0	0	121
1:00 PM	1	0	4	29	57	19	0	0	0	0	0	0	0	0	0	0	0	110
2:00 PM	0	0	2	17	52	10	5	0	0	0	0	0	0	0	0	0	0	86
3:00 PM	0	0	1	25	58	14	1	0	0	0	0	0	0	0	0	0	0	99
4:00 PM	0	1	4	38	59	26	5	0	0	0	0	0	0	0	0	0	0	133
5:00 PM	0	0	2	26	71	31	1	0	0	0	0	0	0	0	0	0	0	131
6:00 PM	0	1	2	11	18	7	2	0	0	0	0	0	0	0	0	0	0	41
7:00 PM	0	0	0	8	7	1	0	0	0	0	0	0	0	0	0	0	0	16
8:00 PM	0	0	1	5	11	3	0	0	0	0	0	0	0	0	0	0	0	20
9:00 PM	0	0	0	2	9	4	0	0	0	0	0	0	0	0	0	0	0	15
10:00 PM	0	0	1	4	3	4	0	0	0	0	0	0	0	0	0	0	0	12
11:00 PM	0	0	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0	6
Total	**2**	**4**	**27**	**328**	**655**	**200**	**23**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,239**
Percent	**0.2%**	**0.3%**	**2.2%**	**26.5%**	**52.9%**	**16.1%**	**1.9%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	26.7	mph	Mean (Average) Speed	26.9	mph
85th Percentile	30.3	mph	10 mph Pace	21.6 - 31.6	mph
95th Percentile	33.2	mph	Percent in Pace	84.5	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Saturday, November 5, 2016
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3
2:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
6:00 AM	0	0	0	3	8	2	0	0	0	0	0	0	0	0	0	0	0	13
7:00 AM	0	1	2	4	9	1	0	0	0	0	0	0	0	0	0	0	0	17
8:00 AM	0	1	1	7	13	7	1	0	0	0	0	0	0	0	0	0	0	30
9:00 AM	1	0	4	6	13	5	0	0	0	0	0	0	0	0	0	0	0	29
10:00 AM	0	0	8	8	15	3	3	0	0	0	0	0	0	0	0	0	0	37
11:00 AM	0	1	1	15	30	11	1	0	0	0	0	0	0	0	0	0	0	59
12:00 PM	1	0	4	21	18	10	0	0	0	0	0	0	0	0	0	0	0	54
1:00 PM	1	1	2	20	22	1	1	0	0	0	0	0	0	0	0	0	0	48
2:00 PM	0	2	2	17	19	4	0	0	0	0	0	0	0	0	0	0	0	44
3:00 PM	0	0	1	16	14	3	2	0	0	0	0	0	0	0	0	0	0	36
4:00 PM	0	0	7	17	12	3	0	0	0	0	0	0	0	0	0	0	0	39
5:00 PM	0	0	4	9	13	4	0	0	0	0	0	0	0	0	0	0	0	30
6:00 PM	0	0	4	8	5	2	0	0	0	0	0	0	0	0	0	0	0	19
7:00 PM	0	0	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	7
8:00 PM	0	0	1	1	5	0	0	0	0	0	0	0	0	0	0	0	0	7
9:00 PM	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
10:00 PM	0	1	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	6
11:00 PM	0	0	0	4	3	3	0	0	0	0	0	0	0	0	0	0	0	10
Total	**3**	**7**	**42**	**167**	**212**	**59**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**498**
Percent	**0.6%**	**1.4%**	**8.4%**	**33.5%**	**42.6%**	**11.8%**	**1.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.4	mph	Mean (Average) Speed	25.3	mph
85th Percentile	29.4	mph	10 mph Pace	20.6 - 30.6	mph
95th Percentile	32.2	mph	Percent in Pace	77.3	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Saturday, November 5, 2016
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	5
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	4
6:00 AM	0	0	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	7
7:00 AM	0	0	0	3	5	5	2	1	0	0	0	0	0	0	0	0	0	16
8:00 AM	0	0	0	6	8	5	1	0	0	0	0	0	0	0	0	0	0	20
9:00 AM	1	0	1	3	11	16	3	0	0	0	0	0	0	0	0	0	0	35
10:00 AM	0	0	2	10	13	14	3	0	0	0	0	0	0	0	0	0	0	42
11:00 AM	0	0	1	4	24	4	2	0	0	0	0	0	0	0	0	0	0	35
12:00 PM	0	0	1	5	29	15	2	0	0	0	0	0	0	0	0	0	0	52
1:00 PM	0	0	2	11	29	13	0	0	0	0	0	0	0	0	0	0	0	55
2:00 PM	0	0	1	5	16	17	2	0	0	0	0	0	0	0	0	0	0	41
3:00 PM	0	1	1	14	20	4	0	0	0	0	0	0	0	0	0	0	0	40
4:00 PM	0	0	1	16	27	8	0	0	0	0	0	0	0	0	0	0	0	52
5:00 PM	0	0	5	6	12	6	0	1	0	0	0	0	0	0	0	0	0	30
6:00 PM	0	0	1	5	10	1	0	0	0	0	0	0	0	0	0	0	0	17
7:00 PM	0	0	0	2	6	0	1	0	0	0	0	0	0	0	0	0	0	9
8:00 PM	0	0	0	1	8	3	0	0	0	0	0	0	0	0	0	0	0	12
9:00 PM	0	0	2	3	5	2	1	0	0	0	0	0	0	0	0	0	0	13
10:00 PM	0	0	0	3	5	2	0	0	0	0	0	0	0	0	0	0	0	10
11:00 PM	0	0	3	1	6	2	0	0	0	0	0	0	0	0	0	0	0	12
Total	**1**	**1**	**21**	**104**	**247**	**117**	**17**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**510**
Percent	**0.2%**	**0.2%**	**4.1%**	**20.4%**	**48.4%**	**22.9%**	**3.3%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	27.3	mph	Mean (Average) Speed	27.5	mph
85th Percentile	31.8	mph	10 mph Pace	23.2 - 33.2	mph
95th Percentile	34.3	mph	Percent in Pace	79.4	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Sunday, November 6, 2016
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
6:00 AM	0	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	4
7:00 AM	0	0	0	2	4	2	1	0	0	0	0	0	0	0	0	0	0	9
8:00 AM	0	0	1	4	6	2	0	0	0	0	0	0	0	0	0	0	0	13
9:00 AM	0	0	3	9	9	1	0	0	0	0	0	0	0	0	0	0	0	22
10:00 AM	0	0	1	12	16	6	1	0	0	0	0	0	0	0	0	0	0	36
11:00 AM	0	0	1	10	13	3	0	0	0	0	0	0	0	0	0	0	0	27
12:00 PM	0	0	0	9	14	5	1	0	0	0	0	0	0	0	0	0	0	29
1:00 PM	0	0	3	10	15	3	0	0	0	0	0	0	0	0	0	0	0	31
2:00 PM	0	0	1	12	18	4	0	0	0	0	0	0	0	0	0	0	0	35
3:00 PM	0	0	1	12	18	3	1	0	0	0	0	0	0	0	0	0	0	35
4:00 PM	0	0	0	16	7	2	1	0	0	0	0	0	0	0	0	0	0	26
5:00 PM	0	0	3	9	13	4	0	0	0	0	0	0	0	0	0	0	0	29
6:00 PM	0	0	2	11	12	2	0	0	0	0	0	0	0	0	0	0	0	27
7:00 PM	0	0	1	4	4	0	0	0	0	0	0	0	0	0	0	0	0	9
8:00 PM	0	0	1	3	3	0	0	0	0	0	0	0	0	0	0	0	0	7
9:00 PM	0	0	1	3	3	0	0	0	0	0	0	0	0	0	0	0	0	7
10:00 PM	0	0	1	1	4	0	0	0	0	0	0	0	0	0	0	0	0	6
11:00 PM	0	0	0	4	0	2	0	0	0	0	0	0	0	0	0	0	0	6
Total	**0**	**1**	**21**	**132**	**168**	**40**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**367**
Percent	**0.0%**	**0.3%**	**5.7%**	**36.0%**	**45.8%**	**10.9%**	**1.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.6	mph	Mean (Average) Speed	25.7	mph
85th Percentile	29.5	mph	10 mph Pace	20.8 - 30.8	mph
95th Percentile	32.3	mph	Percent in Pace	82.6	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Sunday, November 6, 2016
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	**4**
1:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	**2**
7:00 AM	0	0	0	1	6	3	0	0	0	0	0	0	0	0	0	0	0	**10**
8:00 AM	0	0	1	3	3	0	0	0	0	0	0	0	0	0	0	0	0	**7**
9:00 AM	0	0	4	5	5	5	0	0	0	0	0	0	0	0	0	0	0	**19**
10:00 AM	0	0	0	10	11	11	0	0	0	0	0	0	0	0	0	0	0	**32**
11:00 AM	0	0	4	7	11	5	0	0	0	0	0	0	0	0	0	0	0	**27**
12:00 PM	0	0	4	6	23	6	1	0	0	0	0	0	0	0	0	0	0	**40**
1:00 PM	0	0	3	11	18	6	1	0	0	0	0	0	0	0	0	0	0	**39**
2:00 PM	0	0	1	12	17	6	0	0	0	0	0	0	0	0	0	0	0	**36**
3:00 PM	0	0	2	7	12	8	0	0	0	0	0	0	0	0	0	0	0	**29**
4:00 PM	0	0	0	7	17	6	0	0	0	0	0	0	0	0	0	0	0	**30**
5:00 PM	1	0	0	5	12	13	1	0	0	0	0	0	0	0	0	0	0	**32**
6:00 PM	1	0	0	11	14	2	1	0	0	0	0	0	0	0	0	0	0	**29**
7:00 PM	0	0	5	3	9	2	2	0	0	0	0	0	0	0	0	0	0	**21**
8:00 PM	0	0	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	**7**
9:00 PM	0	0	0	2	8	2	0	0	0	0	0	0	0	0	0	0	0	**12**
10:00 PM	0	0	0	0	3	2	1	0	0	0	0	0	0	0	0	0	0	**6**
11:00 PM	0	0	2	0	5	2	0	0	0	0	0	0	0	0	0	0	0	**9**
Total	**2**	**0**	**27**	**93**	**185**	**81**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**396**
Percent	**0.5%**	**0.0%**	**6.8%**	**23.5%**	**46.7%**	**20.5%**	**2.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	27.1	mph	Mean (Average) Speed	26.9	mph
85th Percentile	30.9	mph	10 mph Pace	21.3 - 31.3	mph
95th Percentile	33.4	mph	Percent in Pace	77	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Monday, November 7, 2016
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	**6**
7:00 AM	0	1	0	9	9	6	0	0	0	0	0	0	0	0	0	0	0	**25**
8:00 AM	1	2	5	20	39	14	0	0	0	0	0	0	0	0	0	0	0	**81**
9:00 AM	0	1	2	25	35	11	1	0	0	0	0	0	0	0	0	0	0	**75**
10:00 AM	1	0	2	21	33	9	0	0	0	0	0	0	0	0	0	0	0	**66**
11:00 AM	0	1	8	34	20	10	2	0	0	0	0	0	0	0	0	0	0	**75**
12:00 PM	0	2	6	41	34	10	1	0	0	0	0	0	0	0	0	0	0	**94**
1:00 PM	1	1	6	26	36	10	1	0	0	0	0	0	0	0	0	0	0	**81**
2:00 PM	0	0	5	36	28	6	0	0	0	0	0	0	0	0	0	0	0	**75**
3:00 PM	0	0	7	26	33	11	0	0	0	0	0	0	0	0	0	0	0	**77**
4:00 PM	0	1	7	38	34	9	1	0	0	0	0	0	0	0	0	0	0	**90**
5:00 PM	0	2	4	61	62	12	0	0	0	0	0	0	0	0	0	0	0	**141**
6:00 PM	0	2	6	51	44	8	0	0	0	0	0	0	0	0	0	0	0	**111**
7:00 PM	0	2	4	25	16	7	0	0	0	0	0	0	0	0	0	0	0	**54**
8:00 PM	0	0	1	4	6	3	1	0	0	0	0	0	0	0	0	0	0	**15**
9:00 PM	0	0	1	1	2	2	1	0	0	0	0	0	0	0	0	0	0	**7**
10:00 PM	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	**6**
11:00 PM	0	0	0	3	1	1	0	0	0	0	0	0	0	0	0	0	0	**5**
Total	**3**	**15**	**65**	**425**	**439**	**137**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,092**
Percent	**0.3%**	**1.4%**	**6.0%**	**38.9%**	**40.2%**	**12.5%**	**0.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.2	mph	Mean (Average) Speed	25.5	mph
85th Percentile	29.6	mph	10 mph Pace	20.6 - 30.6	mph
95th Percentile	31.9	mph	Percent in Pace	80.4	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Monday, November 7, 2016
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	0	0	2	3	1	0	0	0	0	0	0	0	0	0	0	0	**6**
7:00 AM	0	0	1	15	23	12	4	0	0	0	0	0	0	0	0	0	0	**55**
8:00 AM	1	0	5	37	83	23	1	0	0	0	0	0	0	0	0	0	0	**150**
9:00 AM	1	1	1	39	71	23	1	0	0	0	0	0	0	0	0	0	0	**137**
10:00 AM	0	0	1	23	49	13	1	0	0	0	0	0	0	0	0	0	0	**87**
11:00 AM	0	0	3	20	42	24	4	1	0	0	0	0	0	0	0	0	0	**94**
12:00 PM	0	1	2	20	44	22	3	0	0	0	0	0	0	0	0	0	0	**92**
1:00 PM	0	1	4	35	58	19	0	1	0	0	0	0	0	0	0	0	0	**118**
2:00 PM	0	1	1	36	43	14	0	0	0	0	0	0	0	0	0	0	0	**95**
3:00 PM	1	0	2	20	35	19	1	0	0	0	0	0	0	0	0	0	0	**78**
4:00 PM	0	0	3	17	50	29	2	0	0	0	0	0	0	0	0	0	0	**101**
5:00 PM	0	1	1	27	67	25	4	0	0	0	0	0	0	0	0	0	0	**125**
6:00 PM	0	0	2	49	88	28	2	0	0	0	0	0	0	0	0	0	0	**169**
7:00 PM	0	0	3	10	17	3	0	0	0	0	0	0	0	0	0	0	0	**33**
8:00 PM	0	0	0	2	9	5	1	0	0	0	0	0	0	0	0	0	0	**17**
9:00 PM	0	0	3	3	6	4	1	0	0	0	0	0	0	0	0	0	0	**17**
10:00 PM	0	0	0	6	1	2	0	0	0	0	0	0	0	0	0	0	0	**9**
11:00 PM	0	0	0	3	5	1	0	0	0	0	0	0	0	0	0	0	0	**9**
Total	**3**	**5**	**32**	**364**	**697**	**272**	**25**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,400**
Percent	**0.2%**	**0.4%**	**2.3%**	**26.0%**	**49.8%**	**19.4%**	**1.8%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	26.9	mph	Mean (Average) Speed	27	mph
85th Percentile	30.6	mph	10 mph Pace	22.0 - 32.0	mph
95th Percentile	32.8	mph	Percent in Pace	83.1	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Tuesday, November 8, 2016
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	0	0	0	4	2	0	1	0	0	0	0	0	0	0	0	0	**7**
7:00 AM	0	1	1	5	8	5	0	0	0	0	0	0	0	0	0	0	0	**20**
8:00 AM	0	2	1	29	54	15	1	0	0	0	0	0	0	0	0	0	0	**102**
9:00 AM	0	0	3	28	40	12	0	0	0	0	0	0	0	0	0	0	0	**83**
10:00 AM	0	0	5	25	37	6	0	0	0	0	0	0	0	0	0	0	0	**73**
11:00 AM	0	2	4	36	33	9	0	0	0	0	0	0	0	0	0	0	0	**84**
12:00 PM	2	5	4	36	49	6	2	0	0	0	0	0	0	0	0	0	0	**104**
1:00 PM	0	1	4	27	45	9	1	0	0	0	0	0	0	0	0	0	0	**87**
2:00 PM	1	0	6	35	46	5	0	0	0	0	0	0	0	0	0	0	0	**93**
3:00 PM	2	0	5	27	42	17	2	0	0	0	0	0	0	0	0	0	0	**95**
4:00 PM	0	0	3	31	48	9	0	0	0	0	0	0	0	0	0	0	0	**91**
5:00 PM	0	0	7	54	70	15	1	0	0	0	0	0	0	0	0	0	0	**147**
6:00 PM	1	2	8	55	41	10	1	0	0	0	0	0	0	0	0	0	0	**118**
7:00 PM	0	0	1	17	15	4	0	0	0	0	0	0	0	0	0	0	0	**37**
8:00 PM	0	1	2	3	11	5	0	0	0	0	0	0	0	0	0	0	0	**22**
9:00 PM	0	0	1	6	6	1	0	0	0	0	0	0	0	0	0	0	0	**14**
10:00 PM	0	0	0	5	2	3	0	0	0	0	0	0	0	0	0	0	0	**10**
11:00 PM	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	**4**
Total	**6**	**14**	**55**	**423**	**557**	**135**	**8**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,199**
Percent	**0.5%**	**1.2%**	**4.6%**	**35.3%**	**46.5%**	**11.3%**	**0.7%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.6	mph	Mean (Average) Speed	25.7	mph
85th Percentile	29.4	mph	10 mph Pace	20.7 - 30.7	mph
95th Percentile	31.7	mph	Percent in Pace	82.2	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Tuesday, November 8, 2016
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	0	0	1	6	2	0	0	0	0	0	0	0	0	0	0	0	**9**
7:00 AM	0	0	3	10	27	9	2	0	0	0	0	0	0	0	0	0	0	**51**
8:00 AM	0	1	3	25	80	18	5	0	0	0	0	0	0	0	0	0	0	**132**
9:00 AM	0	1	0	27	62	21	2	0	0	0	0	0	0	0	0	0	0	**113**
10:00 AM	0	0	4	34	54	17	3	0	0	0	0	0	0	0	0	0	0	**112**
11:00 AM	0	2	5	18	41	17	2	0	0	0	0	0	0	0	0	0	0	**85**
12:00 PM	1	0	3	21	29	11	1	0	0	0	0	0	0	0	0	0	0	**66**
1:00 PM	0	1	5	45	67	10	1	0	0	0	0	0	0	0	0	0	0	**129**
2:00 PM	0	1	3	39	40	4	0	0	0	0	0	0	0	0	0	0	0	**87**
3:00 PM	0	0	2	13	54	23	2	0	0	0	0	0	0	0	0	0	0	**94**
4:00 PM	0	0	1	34	43	14	0	0	0	0	0	0	0	0	0	0	0	**92**
5:00 PM	0	0	0	24	61	20	1	0	0	0	0	0	0	0	0	0	0	**106**
6:00 PM	0	6	11	25	60	29	0	0	0	0	0	0	0	0	0	0	0	**131**
7:00 PM	0	0	2	6	24	7	0	0	0	0	0	0	0	0	0	0	0	**39**
8:00 PM	0	1	1	12	11	8	0	0	0	0	0	0	0	0	0	0	0	**33**
9:00 PM	0	0	3	4	9	0	0	0	0	0	0	0	0	0	0	0	0	**16**
10:00 PM	0	1	0	3	8	0	0	0	0	0	0	0	0	0	0	0	0	**12**
11:00 PM	0	0	0	4	7	0	0	0	0	0	0	0	0	0	0	0	0	**11**
Total	**1**	**14**	**47**	**347**	**689**	**213**	**19**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,330**
Percent	**0.1%**	**1.1%**	**3.5%**	**26.1%**	**51.8%**	**16.0%**	**1.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	26.7	mph	Mean (Average) Speed	26.6	mph
85th Percentile	30.3	mph	10 mph Pace	21.5 - 31.5	mph
95th Percentile	32.7	mph	Percent in Pace	83.3	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Wednesday, November 9, 2016
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	**4**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	0	0	1	3	4	1	0	0	0	0	0	0	0	0	0	0	**9**
7:00 AM	0	1	2	2	11	3	0	0	0	0	0	0	0	0	0	0	0	**19**
8:00 AM	1	1	1	21	52	14	0	0	0	0	0	0	0	0	0	0	0	**90**
9:00 AM	1	2	5	23	37	10	0	0	0	0	0	0	0	0	0	0	0	**78**
10:00 AM	0	0	2	16	28	5	0	0	0	0	0	0	0	0	0	0	0	**51**
11:00 AM	1	0	2	18	24	9	0	0	0	0	0	0	0	0	0	0	0	**54**
12:00 PM	0	1	5	18	28	10	0	0	0	0	0	0	0	0	0	0	0	**62**
1:00 PM	0	1	7	40	59	6	0	0	0	0	0	0	0	0	0	0	0	**113**
2:00 PM	2	1	4	12	34	11	0	0	0	0	0	0	0	0	0	0	0	**64**
3:00 PM	1	3	7	23	28	6	0	0	0	0	0	0	0	0	0	0	0	**68**
4:00 PM	0	1	2	26	38	13	2	1	0	0	0	0	0	0	0	0	0	**83**
5:00 PM	0	1	6	37	68	12	2	0	0	0	0	0	0	0	0	0	0	**126**
6:00 PM	1	2	9	51	50	10	0	0	0	0	0	0	0	0	0	0	0	**123**
7:00 PM	0	1	9	25	14	4	0	0	0	0	0	0	0	0	0	0	0	**53**
8:00 PM	0	0	3	7	12	4	0	0	0	0	0	0	0	0	0	0	0	**26**
9:00 PM	0	0	0	5	3	2	0	0	0	0	0	0	0	0	0	0	0	**10**
10:00 PM	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	**6**
11:00 PM	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
Total	**7**	**15**	**65**	**329**	**500**	**126**	**5**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,048**
Percent	**0.7%**	**1.4%**	**6.2%**	**31.4%**	**47.7%**	**12.0%**	**0.5%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.8	mph	Mean (Average) Speed	25.6	mph
85th Percentile	29.5	mph	10 mph Pace	21.5 - 31.5	mph
95th Percentile	31.6	mph	Percent in Pace	81.4	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Wednesday, November 9, 2016
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	4	4	1	0	0	0	0	0	0	0	0	0	0	0	**9**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	0	0	1	4	1	0	0	0	0	0	0	0	0	0	0	0	**6**
7:00 AM	6	5	8	27	13	2	0	0	0	0	0	0	0	0	0	0	0	**61**
8:00 AM	4	4	8	25	66	19	2	0	0	0	0	0	0	0	0	0	0	**128**
9:00 AM	1	0	1	19	70	23	4	1	0	0	0	0	0	0	0	0	0	**119**
10:00 AM	0	0	1	18	57	16	2	0	0	0	0	0	0	0	0	0	0	**94**
11:00 AM	2	0	4	16	34	11	0	0	0	0	0	0	0	0	0	0	0	**67**
12:00 PM	0	1	2	13	38	14	2	0	0	0	0	0	0	0	0	0	0	**70**
1:00 PM	0	0	3	35	49	18	1	0	0	0	0	0	0	0	0	0	0	**106**
2:00 PM	0	0	3	26	44	19	2	0	0	0	0	0	0	0	0	0	0	**94**
3:00 PM	0	0	5	24	35	14	1	0	0	0	0	0	0	0	0	0	0	**79**
4:00 PM	0	0	2	20	37	15	4	0	0	0	0	0	0	0	0	0	0	**78**
5:00 PM	0	2	2	19	70	44	3	0	0	0	0	0	0	0	0	0	0	**140**
6:00 PM	0	2	8	25	77	30	1	0	0	0	0	0	0	0	0	0	0	**143**
7:00 PM	0	0	4	13	13	7	1	0	0	0	0	0	0	0	0	0	0	**38**
8:00 PM	0	0	4	6	10	5	0	0	0	0	0	0	0	0	0	0	0	**25**
9:00 PM	0	0	0	3	5	3	0	0	0	0	0	0	0	0	0	0	0	**11**
10:00 PM	0	0	3	1	4	1	0	0	0	0	0	0	0	0	0	0	0	**9**
11:00 PM	0	0	0	5	3	5	0	0	0	0	0	0	0	0	0	0	0	**13**
Total	**13**	**14**	**58**	**303**	**634**	**248**	**23**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,294**
Percent	**1.0%**	**1.1%**	**4.5%**	**23.4%**	**49.0%**	**19.2%**	**1.8%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	26.9	mph	Mean (Average) Speed	26.7	mph
85th Percentile	30.8	mph	10 mph Pace	21.9 - 31.9	mph
95th Percentile	33.2	mph	Percent in Pace	79.5	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Total Study Average
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	0	0	2	6	3	0	0	0	0	0	0	0	0	0	0	0	**11**
7:00 AM	0	1	2	9	18	6	0	0	0	0	0	0	0	0	0	0	0	**36**
8:00 AM	0	1	3	18	34	9	1	0	0	0	0	0	0	0	0	0	0	**66**
9:00 AM	0	1	5	20	26	7	0	0	0	0	0	0	0	0	0	0	0	**59**
10:00 AM	1	0	4	18	24	6	1	0	0	0	0	0	0	0	0	0	0	**54**
11:00 AM	0	1	3	25	30	8	1	0	0	0	0	0	0	0	0	0	0	**68**
12:00 PM	1	1	5	28	32	8	1	0	0	0	0	0	0	0	0	0	0	**76**
1:00 PM	0	1	5	27	34	6	1	0	0	0	0	0	0	0	0	0	0	**74**
2:00 PM	0	1	4	22	31	8	0	0	0	0	0	0	0	0	0	0	0	**66**
3:00 PM	0	0	3	23	33	11	1	0	0	0	0	0	0	0	0	0	0	**71**
4:00 PM	0	0	3	31	38	10	1	0	0	0	0	0	0	0	0	0	0	**83**
5:00 PM	0	1	4	35	44	8	1	0	0	0	0	0	0	0	0	0	0	**93**
6:00 PM	0	1	5	30	28	6	0	0	0	0	0	0	0	0	0	0	0	**70**
7:00 PM	0	1	3	13	10	3	0	0	0	0	0	0	0	0	0	0	0	**30**
8:00 PM	0	0	2	5	6	2	0	0	0	0	0	0	0	0	0	0	0	**15**
9:00 PM	0	0	0	3	4	1	0	0	0	0	0	0	0	0	0	0	0	**8**
10:00 PM	0	0	0	3	3	1	0	0	0	0	0	0	0	0	0	0	0	**7**
11:00 PM	0	0	0	3	1	1	0	0	0	0	0	0	0	0	0	0	0	**5**
Total	**2**	**10**	**51**	**318**	**407**	**106**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**902**
Percent	**0.2%**	**1.1%**	**5.7%**	**35.3%**	**45.1%**	**11.8%**	**0.9%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	25.6	mph	Mean (Average) Speed	25.6	mph
85th Percentile	29.5	mph	10 mph Pace	20.8 - 30.8	mph
95th Percentile	31.9	mph	Percent in Pace	80.8	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 to 11/9/2016
Site Code: 03

Total Study Average
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	**4**
1:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	**4**
6:00 AM	0	0	0	4	8	2	0	0	0	0	0	0	0	0	0	0	0	**14**
7:00 AM	1	1	3	16	27	9	2	0	0	0	0	0	0	0	0	0	0	**59**
8:00 AM	1	1	4	24	49	12	1	0	0	0	0	0	0	0	0	0	0	**92**
9:00 AM	1	0	2	19	47	16	2	0	0	0	0	0	0	0	0	0	0	**87**
10:00 AM	0	0	2	17	34	14	2	0	0	0	0	0	0	0	0	0	0	**69**
11:00 AM	0	1	2	15	33	11	1	0	0	0	0	0	0	0	0	0	0	**63**
12:00 PM	0	0	3	20	40	14	2	0	0	0	0	0	0	0	0	0	0	**79**
1:00 PM	0	0	4	27	46	15	1	0	0	0	0	0	0	0	0	0	0	**93**
2:00 PM	0	0	2	23	36	11	1	0	0	0	0	0	0	0	0	0	0	**73**
3:00 PM	0	0	2	17	36	13	1	0	0	0	0	0	0	0	0	0	0	**69**
4:00 PM	0	0	2	22	44	18	2	0	0	0	0	0	0	0	0	0	0	**88**
5:00 PM	0	0	2	19	55	24	2	0	0	0	0	0	0	0	0	0	0	**102**
6:00 PM	0	1	4	20	42	16	1	0	0	0	0	0	0	0	0	0	0	**84**
7:00 PM	0	0	2	7	12	4	1	0	0	0	0	0	0	0	0	0	0	**26**
8:00 PM	0	0	1	5	8	4	0	0	0	0	0	0	0	0	0	0	0	**18**
9:00 PM	0	0	1	3	7	3	0	0	0	0	0	0	0	0	0	0	0	**14**
10:00 PM	0	0	1	3	4	2	0	0	0	0	0	0	0	0	0	0	0	**10**
11:00 PM	0	0	1	2	5	2	0	0	0	0	0	0	0	0	0	0	0	**10**
Total	**3**	**4**	**38**	**266**	**538**	**192**	**19**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,060**
Percent	**0.3%**	**0.4%**	**3.6%**	**25.1%**	**50.8%**	**18.1%**	**1.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	26.8	mph	Mean (Average) Speed	26.8	mph
85th Percentile	30.6	mph	10 mph Pace	21.9 - 31.9	mph
95th Percentile	33.1	mph	Percent in Pace	82.0	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd W/O Mitcher St
Date Range: 11/3/2016 - 11/9/2016
Site Code: 03

Time	Thursday 11/3/2016			Friday 11/4/2016			Saturday 11/5/2016			Sunday 11/6/2016			Monday 11/7/2016			Tuesday 11/8/2016			Wednesday 11/9/2016			Mid-Week Average		
	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total
12:00 AM	1	3	4	1	1	2	1	1	2	2	4	6	2	3	5	3	3	6	4	9	13	3	5	8
1:00 AM	3	0	3	0	1	1	3	5	8	0	1	1	1	0	1	0	1	1	0	0	0	1	0	1
2:00 AM	3	3	6	1	0	1	2	0	2	0	0	0	0	0	0	0	3	3	0	2	2	1	3	4
3:00 AM	3	1	4	1	2	3	1	1	2	2	3	5	1	2	3	3	0	3	4	0	4	3	0	4
4:00 AM	1	0	1	2	1	3	0	1	1	4	0	4	2	1	3	1	2	3	0	1	1	1	1	2
5:00 AM	6	10	16	4	6	10	3	4	7	1	1	2	2	2	4	1	3	4	2	1	3	3	5	8
6:00 AM	23	40	63	23	36	59	13	7	20	4	2	6	6	6	12	7	9	16	9	6	15	13	18	31
7:00 AM	83	129	212	74	85	159	17	16	33	9	10	19	25	55	80	20	51	71	19	61	80	41	80	121
8:00 AM	77	123	200	70	82	152	30	20	50	13	7	20	81	150	231	102	132	234	90	128	218	90	128	217
9:00 AM	64	90	154	63	96	159	29	35	64	22	19	41	75	137	212	83	113	196	78	119	197	75	107	182
10:00 AM	50	57	107	62	66	128	37	42	79	36	32	68	66	87	153	73	112	185	51	94	145	58	88	146
11:00 AM	86	63	149	92	73	165	59	35	94	27	27	54	75	94	169	84	85	169	54	67	121	75	72	146
12:00 PM	98	114	212	83	121	204	54	52	106	29	40	69	94	92	186	104	66	170	62	70	132	88	83	171
1:00 PM	74	94	168	85	110	195	48	55	103	31	39	70	81	118	199	87	129	216	113	106	219	91	110	201
2:00 PM	71	78	149	84	86	170	44	41	85	35	36	71	75	95	170	93	87	180	64	94	158	76	86	162
3:00 PM	100	66	166	95	99	194	36	40	76	35	29	64	77	78	155	95	94	189	68	79	147	88	80	167
4:00 PM	132	126	258	117	133	250	39	52	91	26	30	56	90	101	191	91	92	183	83	78	161	102	99	201
5:00 PM	91	149	240	85	131	216	30	30	60	29	32	61	141	125	266	147	106	253	126	140	266	121	132	253
6:00 PM	52	58	110	46	41	87	19	17	36	27	29	56	111	169	280	118	131	249	123	143	266	98	111	208
7:00 PM	20	25	45	23	16	39	7	9	16	9	21	30	54	33	87	37	39	76	53	38	91	37	34	71
8:00 PM	12	19	31	20	20	40	7	12	19	7	7	14	15	17	32	22	33	55	26	25	51	20	26	46
9:00 PM	6	13	19	11	15	26	3	13	16	7	12	19	7	17	24	14	16	30	10	11	21	10	13	23
10:00 PM	6	11	17	8	12	20	6	10	16	6	6	12	6	9	15	10	12	22	6	9	15	7	11	18
11:00 PM	4	5	9	2	6	8	10	12	22	6	9	15	5	9	14	4	11	15	3	13	16	4	10	13
Total	**1,066**	**1,277**	**2,343**	**1,052**	**1,239**	**2,291**	**498**	**510**	**1,008**	**367**	**396**	**763**	**1,092**	**1,400**	**2,492**	**1,199**	**1,330**	**2,529**	**1,048**	**1,294**	**2,342**	**1,104**	**1,300**	**2,405**
Percent	**45%**	**55%**	-	**46%**	**54%**	-	**49%**	**51%**	-	**48%**	**52%**	-	**44%**	**56%**	-	**47%**	**53%**	-	**45%**	**55%**	-	**46%**	**54%**	-

1. Mid-week average includes data between Tuesday and Thursday.

Deon Fouche: (415) 757-7714
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Vehicle Classification Report Summary

Location: Airport Rd W/O Euclid Ave
Count Direction: Eastbound / Westbound
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

	FHWA Vehicle Classification													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total														
Eastbound	66	3,654	883	4	344	55	0	1	3	3	0	0	3	5,016
Percent	1.3%	72.8%	17.6%	0.1%	6.9%	1.1%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.1%	100%
Westbound	50	4,213	1,191	1	435	19	0	4	2	1	0	0	1	5,917
Percent	0.8%	71.2%	20.1%	0.0%	7.4%	0.3%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	116	7,867	2,074	5	779	74	0	5	5	4	0	0	4	10,933
Percent	1.1%	72.0%	19.0%	0.0%	7.1%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

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Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Thursday, November 3, 2016
Westbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	9	1	0	2	0	0	0	0	0	0	0	0	**12**
7:00 AM	0	26	24	0	5	0	0	0	0	0	0	0	0	**55**
8:00 AM	0	45	12	0	6	0	0	0	0	0	0	0	0	**63**
9:00 AM	1	35	14	0	2	0	0	0	0	0	0	0	0	**52**
10:00 AM	0	35	10	0	5	0	0	0	0	0	0	0	0	**50**
11:00 AM	1	33	18	0	5	0	0	0	0	0	0	0	0	**57**
12:00 PM	0	60	15	0	7	1	0	1	1	0	0	0	0	**85**
1:00 PM	0	49	18	1	9	0	0	0	0	0	0	0	0	**77**
2:00 PM	2	48	15	0	8	0	0	0	0	0	0	0	0	**73**
3:00 PM	0	53	20	0	5	0	0	0	0	0	0	0	0	**78**
4:00 PM	2	107	24	0	7	0	0	0	0	0	0	0	0	**140**
5:00 PM	3	141	19	0	4	1	0	0	0	0	0	0	0	**168**
6:00 PM	0	55	8	0	1	0	0	0	0	0	0	0	0	**64**
7:00 PM	0	20	3	0	1	0	0	0	0	0	0	0	0	**24**
8:00 PM	0	16	0	0	0	0	0	0	0	0	0	0	0	**16**
9:00 PM	0	9	3	0	0	0	0	0	0	0	0	0	0	**12**
10:00 PM	0	7	0	0	1	0	0	0	0	0	0	0	0	**8**
11:00 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
Total	**9**	**756**	**206**	**1**	**70**	**2**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**1,046**
Percent	**0.9%**	**72.3%**	**19.7%**	**0.1%**	**6.7%**	**0.2%**	**0.0%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Friday, November 4, 2016
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
6:00 AM	0	16	3	0	3	1	0	0	0	0	0	0	0	**23**
7:00 AM	2	58	10	0	3	1	0	0	0	0	0	0	1	**75**
8:00 AM	1	57	14	0	5	1	0	0	0	0	0	0	0	**78**
9:00 AM	1	49	15	0	1	0	0	0	0	0	0	0	0	**66**
10:00 AM	2	38	10	0	6	1	0	0	0	0	0	0	0	**57**
11:00 AM	0	45	11	0	5	0	0	0	0	0	0	0	0	**61**
12:00 PM	0	45	15	0	3	3	0	0	0	0	0	0	0	**66**
1:00 PM	1	63	12	0	10	1	0	0	0	0	0	0	0	**87**
2:00 PM	0	46	14	0	11	1	0	0	0	0	0	0	0	**72**
3:00 PM	1	48	16	1	6	0	0	0	0	0	0	0	0	**72**
4:00 PM	0	45	16	0	5	0	0	0	0	0	0	0	0	**66**
5:00 PM	1	47	5	1	0	2	0	0	0	0	0	0	0	**56**
6:00 PM	1	18	4	0	2	0	0	0	0	0	0	0	0	**25**
7:00 PM	0	11	2	0	3	1	0	0	0	0	0	0	0	**17**
8:00 PM	0	15	2	0	1	1	0	0	0	0	0	0	0	**19**
9:00 PM	0	8	0	0	0	0	0	0	0	0	0	0	0	**8**
10:00 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**10**	**620**	**151**	**2**	**64**	**13**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**861**
Percent	**1.2%**	**72.0%**	**17.5%**	**0.2%**	**7.4%**	**1.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	

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Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Friday, November 4, 2016
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	6	3	0	1	0	0	0	0	0	0	0	0	**10**
7:00 AM	0	23	16	0	3	0	0	0	0	0	0	0	0	**42**
8:00 AM	0	26	13	0	3	0	0	0	0	0	0	0	0	**42**
9:00 AM	0	37	9	0	5	0	0	0	0	0	0	0	0	**51**
10:00 AM	1	32	18	0	6	0	0	0	0	0	0	0	0	**57**
11:00 AM	0	49	15	0	6	0	0	2	0	0	0	0	0	**72**
12:00 PM	2	77	16	0	10	1	0	0	0	0	0	0	0	**106**
1:00 PM	0	57	19	0	8	0	0	0	0	0	0	0	1	**85**
2:00 PM	1	51	26	0	7	0	0	0	0	0	0	0	0	**85**
3:00 PM	0	72	23	0	8	0	0	0	0	0	0	0	0	**103**
4:00 PM	1	108	20	0	12	0	0	0	0	0	0	0	0	**141**
5:00 PM	2	117	15	0	6	1	0	0	0	0	0	0	0	**141**
6:00 PM	0	30	9	0	2	0	0	0	0	0	0	0	0	**41**
7:00 PM	0	12	5	0	0	0	0	0	0	0	0	0	0	**17**
8:00 PM	0	17	0	0	1	0	0	0	0	0	0	0	0	**18**
9:00 PM	0	9	1	0	1	0	0	0	0	0	0	0	0	**11**
10:00 PM	0	9	1	0	0	0	0	0	0	0	0	0	0	**10**
11:00 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
Total	**7**	**740**	**212**	**0**	**79**	**2**	**0**	**2**	**0**	**0**	**0**	**0**	**1**	**1,043**
Percent	**0.7%**	**70.9%**	**20.3%**	**0.0%**	**7.6%**	**0.2%**	**0.0%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	

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Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Saturday, November 5, 2016
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
2:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
6:00 AM	0	12	1	0	1	0	0	0	0	0	0	0	0	14
7:00 AM	0	10	1	0	1	0	0	0	0	0	0	0	0	12
8:00 AM	0	15	12	0	2	1	0	0	0	0	0	0	0	30
9:00 AM	1	23	3	0	1	1	0	0	0	0	0	0	0	29
10:00 AM	0	20	8	0	6	1	0	0	0	0	0	0	0	35
11:00 AM	1	42	10	0	5	0	0	0	0	0	0	0	0	58
12:00 PM	0	40	4	0	4	0	0	0	0	0	0	0	0	48
1:00 PM	1	35	9	0	3	0	0	0	0	0	0	0	0	48
2:00 PM	1	29	6	0	2	0	0	0	0	0	0	0	0	38
3:00 PM	0	28	6	0	1	0	0	0	0	0	0	0	0	35
4:00 PM	0	33	7	0	1	0	0	0	0	0	0	0	0	41
5:00 PM	0	26	3	0	1	0	0	0	0	0	0	0	0	30
6:00 PM	1	12	1	0	1	1	0	0	0	0	0	0	0	16
7:00 PM	0	5	2	0	0	0	0	0	0	0	0	0	0	7
8:00 PM	0	5	0	0	1	0	0	0	0	0	0	0	0	6
9:00 PM	0	2	0	0	1	0	0	0	0	0	0	0	0	3
10:00 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
11:00 PM	0	7	0	0	0	0	0	0	0	0	0	0	0	7
Total	**5**	**358**	**74**	**0**	**31**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**472**
Percent	**1.1%**	**75.8%**	**15.7%**	**0.0%**	**6.6%**	**0.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Saturday, November 5, 2016
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	1	1	0	1	0	0	0	0	0	0	0	0	3
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	2
6:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	6
7:00 AM	0	6	9	0	1	0	0	0	0	0	0	0	0	16
8:00 AM	0	11	6	0	0	0	0	0	0	0	0	0	0	17
9:00 AM	2	26	4	0	3	0	0	0	0	0	0	0	0	35
10:00 AM	0	33	3	0	5	0	0	0	0	0	0	0	0	41
11:00 AM	1	19	11	0	1	0	0	0	0	0	0	0	0	32
12:00 PM	0	32	12	0	7	0	0	0	0	0	0	0	0	51
1:00 PM	0	45	4	0	2	0	0	0	0	0	0	0	0	51
2:00 PM	0	24	9	0	5	0	0	0	0	0	0	0	0	38
3:00 PM	0	32	8	0	0	0	0	0	0	0	0	0	0	40
4:00 PM	1	37	5	0	4	0	0	0	0	0	0	0	0	47
5:00 PM	1	26	5	0	1	0	0	0	0	0	0	0	0	33
6:00 PM	0	14	1	0	0	0	0	0	0	0	0	0	0	15
7:00 PM	0	7	2	0	0	0	0	0	0	0	0	0	0	9
8:00 PM	0	10	0	0	1	0	0	0	0	0	0	0	0	11
9:00 PM	0	12	0	0	0	0	0	0	0	0	0	0	0	12
10:00 PM	0	8	1	0	0	0	0	0	0	0	0	0	0	9
11:00 PM	0	10	1	0	0	0	0	0	0	0	0	0	0	11
Total	**5**	**361**	**85**	**0**	**31**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**482**
Percent	**1.0%**	**74.9%**	**17.6%**	**0.0%**	**6.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Sunday, November 6, 2016
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	1	0	0	2	0	0	0	0	0	0	0	0	**3**
7:00 AM	0	6	2	0	0	0	0	0	0	0	0	0	0	**8**
8:00 AM	0	10	0	0	0	0	0	0	0	0	0	0	0	**10**
9:00 AM	0	14	5	0	0	0	0	0	0	0	0	0	0	**19**
10:00 AM	1	31	5	0	0	0	0	0	0	0	0	0	0	**37**
11:00 AM	0	29	3	0	1	0	0	0	0	0	0	0	0	**33**
12:00 PM	0	23	4	0	1	1	0	0	0	0	0	0	0	**29**
1:00 PM	1	25	5	0	0	0	0	0	0	0	0	0	0	**31**
2:00 PM	0	25	2	0	4	0	0	0	0	0	0	0	0	**31**
3:00 PM	1	24	6	0	2	0	0	0	0	0	0	0	0	**33**
4:00 PM	1	20	2	0	1	0	0	0	0	0	0	0	0	**24**
5:00 PM	0	20	3	0	4	1	0	0	0	0	0	0	0	**28**
6:00 PM	0	22	5	0	3	0	0	0	0	0	0	0	0	**30**
7:00 PM	0	9	0	0	1	0	0	0	0	0	0	0	0	**10**
8:00 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
9:00 PM	0	6	1	0	0	0	0	0	0	0	0	0	0	**7**
10:00 PM	0	3	0	0	1	1	0	0	0	0	0	0	0	**5**
11:00 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
Total	**4**	**281**	**45**	**0**	**20**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**353**
Percent	**1.1%**	**79.6%**	**12.7%**	**0.0%**	**5.7%**	**0.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Sunday, November 6, 2016
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
7:00 AM	0	4	2	0	0	0	0	0	0	0	0	0	0	**6**
8:00 AM	0	5	1	0	1	0	0	0	0	0	0	0	0	**7**
9:00 AM	0	11	5	0	1	0	0	0	0	0	0	0	0	**17**
10:00 AM	0	21	6	0	2	0	0	0	0	0	0	0	0	**29**
11:00 AM	0	24	1	0	2	0	0	0	0	0	0	0	0	**27**
12:00 PM	0	31	6	0	3	0	0	0	0	0	0	0	0	**40**
1:00 PM	2	29	6	0	4	0	0	0	0	0	0	0	0	**41**
2:00 PM	0	31	2	0	2	0	0	0	0	0	0	0	0	**35**
3:00 PM	0	15	6	0	4	0	0	0	0	0	0	0	0	**25**
4:00 PM	0	24	6	0	2	0	0	0	0	0	0	0	0	**32**
5:00 PM	0	20	7	0	5	0	0	0	0	0	0	0	0	**32**
6:00 PM	1	30	4	0	0	0	0	0	0	0	0	0	0	**35**
7:00 PM	0	16	1	0	1	0	0	0	0	0	0	0	0	**18**
8:00 PM	0	7	0	0	0	0	0	0	0	0	0	0	0	**7**
9:00 PM	0	7	4	0	1	0	0	0	0	0	0	0	0	**12**
10:00 PM	0	4	0	0	1	0	0	0	0	0	0	0	0	**5**
11:00 PM	0	4	2	0	0	0	0	0	0	0	0	0	0	**6**
Total	**3**	**289**	**60**	**0**	**29**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**381**
Percent	**0.8%**	**75.9%**	**15.7%**	**0.0%**	**7.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Monday, November 7, 2016
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
6:00 AM	0	4	1	0	1	0	0	0	0	0	0	0	0	6
7:00 AM	1	17	5	0	1	0	0	1	0	0	0	0	0	25
8:00 AM	1	68	22	0	4	3	0	0	0	0	0	0	1	99
9:00 AM	2	69	16	0	8	0	0	0	0	0	0	0	0	95
10:00 AM	0	41	22	0	4	0	0	0	0	0	0	0	0	67
11:00 AM	0	35	18	0	7	1	0	0	0	0	0	0	0	61
12:00 PM	0	46	13	0	3	0	0	0	0	0	0	0	0	62
1:00 PM	0	63	16	0	6	0	0	0	0	0	0	0	0	85
2:00 PM	1	46	14	0	6	1	0	0	0	0	0	0	0	68
3:00 PM	3	59	9	1	3	1	0	0	0	0	0	0	0	76
4:00 PM	0	42	8	0	6	3	0	0	0	0	0	0	0	59
5:00 PM	2	61	11	0	3	0	0	0	0	0	0	0	0	77
6:00 PM	1	43	10	0	4	2	0	0	0	0	0	0	0	60
7:00 PM	0	32	5	0	1	1	0	0	0	0	0	0	0	39
8:00 PM	0	11	1	0	0	0	0	0	0	0	0	0	0	12
9:00 PM	0	5	2	0	0	0	0	0	0	0	0	0	0	7
10:00 PM	0	5	1	0	0	0	0	0	0	0	0	0	0	6
11:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
Total	**11**	**653**	**177**	**1**	**57**	**12**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**913**
Percent	**1.2%**	**71.5%**	**19.4%**	**0.1%**	**6.2%**	**1.3%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Monday, November 7, 2016
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	2
6:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
7:00 AM	0	11	5	0	3	0	0	0	0	0	0	0	0	19
8:00 AM	0	30	25	0	7	0	0	0	0	0	0	0	0	62
9:00 AM	0	57	23	0	5	0	0	0	0	0	0	0	0	85
10:00 AM	1	38	13	0	6	0	0	1	0	0	0	0	0	59
11:00 AM	0	48	20	0	7	1	0	0	0	0	0	0	0	76
12:00 PM	1	74	18	0	12	0	0	0	0	0	0	0	0	105
1:00 PM	1	60	22	0	7	0	0	0	0	0	0	0	0	90
2:00 PM	1	52	18	0	4	1	0	0	0	0	0	0	0	76
3:00 PM	1	42	21	0	5	1	0	0	0	0	0	0	0	70
4:00 PM	1	79	20	0	8	1	0	0	0	0	0	0	0	109
5:00 PM	0	104	28	0	6	0	0	0	0	0	0	0	0	138
6:00 PM	2	140	32	0	6	4	0	0	0	0	0	0	0	184
7:00 PM	0	32	4	0	2	0	0	0	0	0	0	0	0	38
8:00 PM	0	16	2	0	0	0	0	0	0	0	0	0	0	18
9:00 PM	0	12	3	0	0	0	0	0	0	0	0	0	0	15
10:00 PM	0	7	2	0	0	0	0	0	0	0	0	0	0	9
11:00 PM	0	7	0	0	0	0	0	0	0	0	0	0	0	7
Total	**8**	**816**	**257**	**0**	**79**	**8**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1,169**
Percent	**0.7%**	**69.8%**	**22.0%**	**0.0%**	**6.8%**	**0.7%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Tuesday, November 8, 2016
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	7	2	0	0	0	0	0	0	0	0	0	0	**9**
7:00 AM	1	25	6	0	2	1	0	0	0	0	0	0	0	**35**
8:00 AM	2	83	18	0	6	2	0	0	0	0	0	0	0	**111**
9:00 AM	0	71	15	0	8	0	0	0	0	0	0	0	0	**94**
10:00 AM	0	56	10	0	6	0	0	0	0	0	0	0	0	**72**
11:00 AM	1	46	14	0	6	0	0	0	0	0	0	0	0	**67**
12:00 PM	2	55	11	0	5	0	0	0	0	1	0	0	0	**74**
1:00 PM	2	63	17	0	1	0	0	0	0	0	0	0	0	**83**
2:00 PM	3	46	16	0	14	0	0	0	0	0	0	0	0	**79**
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 PM	0	25	4	0	2	2	0	0	0	0	0	0	0	**33**
7:00 PM	1	21	2	0	0	0	0	0	0	0	0	0	0	**24**
8:00 PM	0	17	4	0	0	0	0	0	0	0	0	0	0	**21**
9:00 PM	0	11	0	0	0	0	0	0	0	0	0	0	0	**11**
10:00 PM	0	9	0	0	0	0	0	0	0	0	0	0	0	**9**
11:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
Total	**12**	**539**	**121**	**0**	**50**	**5**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**728**
Percent	**1.6%**	**74.0%**	**16.6%**	**0.0%**	**6.9%**	**0.7%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Tuesday, November 8, 2016
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	**6**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
7:00 AM	0	11	4	0	2	0	0	0	0	0	0	0	0	**17**
8:00 AM	2	34	19	0	7	0	0	0	0	0	0	0	0	**62**
9:00 AM	1	33	20	0	6	0	0	0	0	0	0	0	0	**60**
10:00 AM	0	51	15	0	7	0	0	0	0	0	0	0	0	**73**
11:00 AM	1	52	14	0	9	0	0	0	1	0	0	0	0	**77**
12:00 PM	0	55	13	0	5	0	0	0	0	0	0	0	0	**73**
1:00 PM	0	63	21	0	10	0	0	0	0	0	0	0	0	**94**
2:00 PM	2	35	10	0	10	0	0	0	0	0	0	0	0	**57**
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 PM	0	58	15	0	3	0	0	0	0	0	0	0	0	**76**
7:00 PM	1	37	6	0	2	0	0	0	0	0	0	0	0	**46**
8:00 PM	0	26	5	0	0	0	0	0	0	0	0	0	0	**31**
9:00 PM	0	11	3	0	0	0	0	0	0	0	0	0	0	**14**
10:00 PM	0	10	1	0	0	1	0	0	0	0	0	0	0	**12**
11:00 PM	0	7	0	0	0	0	0	0	0	0	0	0	0	**7**
Total	**7**	**495**	**149**	**0**	**61**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**714**
Percent	**1.0%**	**69.3%**	**20.9%**	**0.0%**	**8.5%**	**0.1%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Wednesday, November 9, 2016
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	7	1	0	1	0	0	0	0	0	0	0	0	**9**
7:00 AM	1	19	5	0	1	0	0	0	0	0	0	0	0	**26**
8:00 AM	2	60	28	0	8	0	0	0	0	0	0	0	0	**98**
9:00 AM	2	71	9	0	8	3	0	0	0	1	0	0	0	**94**
10:00 AM	0	40	9	0	5	0	0	0	0	0	0	0	0	**54**
11:00 AM	0	32	10	0	3	0	0	0	0	0	0	0	0	**45**
12:00 PM	1	23	9	0	4	0	0	0	0	0	0	0	0	**37**
1:00 PM	2	67	21	0	5	0	0	0	0	0	0	0	1	**96**
2:00 PM	1	49	11	0	5	1	0	0	0	0	0	0	0	**67**
3:00 PM	1	40	4	0	7	1	0	0	1	0	0	0	0	**54**
4:00 PM	2	30	14	0	8	3	0	0	0	0	0	0	0	**57**
5:00 PM	1	44	13	0	4	1	0	0	0	0	0	0	0	**63**
6:00 PM	3	50	14	0	0	0	0	0	0	0	0	0	0	**67**
7:00 PM	0	30	1	0	4	0	0	0	0	0	0	0	0	**35**
8:00 PM	0	14	7	0	1	1	0	0	0	0	0	0	0	**23**
9:00 PM	0	8	0	0	0	0	0	0	0	0	0	0	0	**8**
10:00 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
11:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
Total	**16**	**594**	**158**	**0**	**64**	**10**	**0**	**0**	**1**	**1**	**0**	**0**	**1**	**845**
Percent	**1.9%**	**70.3%**	**18.7%**	**0.0%**	**7.6%**	**1.2%**	**0.0%**	**0.0%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.1%**	

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Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Wednesday, November 9, 2016
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	9	0	0	0	1	0	0	0	0	0	0	0	**10**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	**2**
7:00 AM	0	9	9	0	1	1	0	0	0	0	0	0	0	**20**
8:00 AM	0	30	19	0	8	0	0	0	0	0	0	0	0	**57**
9:00 AM	0	38	22	0	6	0	0	0	0	0	0	0	0	**66**
10:00 AM	0	31	15	0	7	0	0	0	0	0	0	0	0	**53**
11:00 AM	1	30	16	0	3	0	0	0	0	0	0	0	0	**50**
12:00 PM	3	58	14	0	5	1	0	0	0	1	0	0	0	**82**
1:00 PM	1	60	24	0	6	1	0	0	0	0	0	0	0	**92**
2:00 PM	0	51	16	0	6	0	0	0	0	0	0	0	0	**73**
3:00 PM	1	43	15	0	12	0	0	0	0	0	0	0	0	**71**
4:00 PM	0	69	13	0	7	0	0	0	0	0	0	0	0	**89**
5:00 PM	3	109	20	0	14	0	0	0	0	0	0	0	0	**146**
6:00 PM	2	135	29	0	5	2	0	0	0	0	0	0	0	**173**
7:00 PM	0	32	4	0	4	0	0	0	0	0	0	0	0	**40**
8:00 PM	0	22	3	0	1	0	0	0	0	0	0	0	0	**26**
9:00 PM	0	10	1	0	0	0	0	0	0	0	0	0	0	**11**
10:00 PM	0	6	1	0	0	0	0	0	0	0	0	0	0	**7**
11:00 PM	0	10	0	0	0	0	0	0	0	0	0	0	0	**10**
Total	**11**	**756**	**222**	**0**	**86**	**6**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1,082**
Percent	**1.0%**	**69.9%**	**20.5%**	**0.0%**	**7.9%**	**0.6%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Total Study Average
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
6:00 AM	0	10	1	0	1	0	0	0	0	0	0	0	0	12
7:00 AM	1	29	6	0	2	1	0	0	0	0	0	0	0	39
8:00 AM	1	52	16	0	4	1	0	0	0	0	0	0	0	74
9:00 AM	1	49	11	0	4	1	0	0	0	0	0	0	0	66
10:00 AM	1	36	11	0	4	0	0	0	0	0	0	0	0	52
11:00 AM	0	37	10	0	4	0	0	0	0	0	0	0	0	51
12:00 PM	1	42	11	0	4	1	0	0	0	0	0	0	0	59
1:00 PM	1	51	13	0	5	0	0	0	0	0	0	0	0	70
2:00 PM	1	40	11	0	7	0	0	0	0	0	0	0	0	59
3:00 PM	1	34	7	0	5	0	0	0	0	0	0	0	0	47
4:00 PM	0	31	9	0	3	1	0	0	0	0	0	0	0	44
5:00 PM	1	34	6	0	2	1	0	0	0	0	0	0	0	44
6:00 PM	1	28	6	0	2	1	0	0	0	0	0	0	0	38
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	11	2	0	0	0	0	0	0	0	0	0	0	13
9:00 PM	0	6	1	0	0	0	0	0	0	0	0	0	0	7
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
Total	**10**	**499**	**122**	**0**	**47**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**685**
Percent	**1.5%**	**72.8%**	**17.8%**	**0.0%**	**6.9%**	**1.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Deon Fouche: (415) 757-7714
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Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Total Study Average
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
6:00 AM	0	4	1	0	1	0	0	0	0	0	0	0	0	6
7:00 AM	0	13	10	0	2	0	0	0	0	0	0	0	0	25
8:00 AM	0	26	14	0	5	0	0	0	0	0	0	0	0	45
9:00 AM	1	34	14	0	4	0	0	0	0	0	0	0	0	53
10:00 AM	0	34	11	0	5	0	0	0	0	0	0	0	0	50
11:00 AM	1	36	14	0	5	0	0	0	0	0	0	0	0	56
12:00 PM	1	55	13	0	7	0	0	0	0	0	0	0	0	76
1:00 PM	1	52	16	0	7	0	0	0	0	0	0	0	0	76
2:00 PM	1	42	14	0	6	0	0	0	0	0	0	0	0	63
3:00 PM	0	37	13	0	5	0	0	0	0	0	0	0	0	55
4:00 PM	1	61	13	0	6	0	0	0	0	0	0	0	0	81
5:00 PM	1	74	13	0	5	0	0	0	0	0	0	0	0	93
6:00 PM	1	66	14	0	2	1	0	0	0	0	0	0	0	84
7:00 PM	0	22	4	0	1	0	0	0	0	0	0	0	0	27
8:00 PM	0	16	1	0	0	0	0	0	0	0	0	0	0	17
9:00 PM	0	10	2	0	0	0	0	0	0	0	0	0	0	12
10:00 PM	0	7	1	0	0	0	0	0	0	0	0	0	0	8
11:00 PM	0	7	0	0	0	0	0	0	0	0	0	0	0	7
Total	**8**	**601**	**169**	**0**	**61**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**840**
Percent	**1.0%**	**71.5%**	**20.1%**	**0.0%**	**7.3%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

3-Day (Tuesday - Thursday) Average
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	7	2	0	0	0	0	0	0	0	0	0	0	**9**
7:00 AM	1	25	6	0	2	1	0	0	0	0	0	0	0	**35**
8:00 AM	2	83	18	0	6	2	0	0	0	0	0	0	0	**111**
9:00 AM	0	71	15	0	8	0	0	0	0	0	0	0	0	**94**
10:00 AM	0	56	10	0	6	0	0	0	0	0	0	0	0	**72**
11:00 AM	1	46	14	0	6	0	0	0	0	0	0	0	0	**67**
12:00 PM	2	55	11	0	5	0	0	0	0	1	0	0	0	**74**
1:00 PM	2	63	17	0	1	0	0	0	0	0	0	0	0	**83**
2:00 PM	3	46	16	0	14	0	0	0	0	0	0	0	0	**79**
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 PM	0	25	4	0	2	2	0	0	0	0	0	0	0	**33**
7:00 PM	1	21	2	0	0	0	0	0	0	0	0	0	0	**24**
8:00 PM	0	17	4	0	0	0	0	0	0	0	0	0	0	**21**
9:00 PM	0	11	0	0	0	0	0	0	0	0	0	0	0	**11**
10:00 PM	0	9	0	0	0	0	0	0	0	0	0	0	0	**9**
11:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
Total	**12**	**539**	**121**	**0**	**50**	**5**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**728**
Percent	**1.6%**	**74.0%**	**16.6%**	**0.0%**	**6.9%**	**0.7%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

3-Day (Tuesday - Thursday) Average
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	**6**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
7:00 AM	0	11	4	0	2	0	0	0	0	0	0	0	0	**17**
8:00 AM	2	34	19	0	7	0	0	0	0	0	0	0	0	**62**
9:00 AM	1	33	20	0	6	0	0	0	0	0	0	0	0	**60**
10:00 AM	0	51	15	0	7	0	0	0	0	0	0	0	0	**73**
11:00 AM	1	52	14	0	9	0	0	0	1	0	0	0	0	**77**
12:00 PM	0	55	13	0	5	0	0	0	0	0	0	0	0	**73**
1:00 PM	0	63	21	0	10	0	0	0	0	0	0	0	0	**94**
2:00 PM	2	35	10	0	10	0	0	0	0	0	0	0	0	**57**
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 PM	0	58	15	0	3	0	0	0	0	0	0	0	0	**76**
7:00 PM	1	37	6	0	2	0	0	0	0	0	0	0	0	**46**
8:00 PM	0	26	5	0	0	0	0	0	0	0	0	0	0	**31**
9:00 PM	0	11	3	0	0	0	0	0	0	0	0	0	0	**14**
10:00 PM	0	10	1	0	0	1	0	0	0	0	0	0	0	**12**
11:00 PM	0	7	0	0	0	0	0	0	0	0	0	0	0	**7**
Total	**7**	**495**	**149**	**0**	**61**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**714**
Percent	**1.0%**	**69.3%**	**20.9%**	**0.0%**	**8.5%**	**0.1%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Vehicle Speed Report Summary

Location: Airport Rd W/O Euclid Ave
Count Direction: Eastbound / Westbound
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

	Speed Range (mph)																	Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
Study Total																		
Eastbound	45	68	395	1,850	2,059	522	68	2	0	3	3	1	0	0	0	0	0	5,016
Percent	0.9%	1.4%	7.9%	36.9%	41.0%	10.4%	1.4%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Westbound	27	49	197	1,086	2,623	1,638	273	22	1	1	0	0	0	0	0	0	0	5,917
Percent	0.5%	0.8%	3.3%	18.4%	44.3%	27.7%	4.6%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	72	117	592	2,936	4,682	2,160	341	24	1	4	3	1	0	0	0	0	0	10,933
Percent	0.7%	1.1%	5.4%	26.9%	42.8%	19.8%	3.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Eastbound			**Eastbound**		
50th Percentile (Median)	25.2	mph	Mean (Average) Speed	25.2	mph
85th Percentile	29.2	mph	10 mph Pace	20.5 - 30.5	mph
95th Percentile	32.2	mph	Percent in Pace	78.2	%
Westbound			**Westbound**		
50th Percentile (Median)	28.0	mph	Mean (Average) Speed	27.9	mph
85th Percentile	32.2	mph	10 mph Pace	23.4 - 33.4	mph
95th Percentile	34.9	mph	Percent in Pace	76.0	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Thursday, November 3, 2016
Eastbound

	Speed Range (mph)																	Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	0	4	0	1	0	0	0	0	0	0	0	0	0	0	0	**5**
6:00 AM	0	1	1	8	12	3	0	0	0	0	0	0	0	0	0	0	0	**25**
7:00 AM	0	1	8	33	30	15	2	0	0	0	0	0	0	0	0	0	0	**89**
8:00 AM	4	3	10	47	28	3	1	0	0	0	0	0	0	0	0	0	0	**96**
9:00 AM	0	0	9	28	21	4	1	0	0	0	0	0	0	0	0	0	0	**63**
10:00 AM	3	1	5	17	14	4	1	1	0	0	0	0	0	0	0	0	0	**46**
11:00 AM	0	0	2	11	25	4	1	0	0	0	0	0	0	0	0	0	0	**43**
12:00 PM	0	1	3	39	35	6	1	0	0	0	0	0	0	0	0	0	0	**85**
1:00 PM	0	2	1	28	27	9	1	0	0	0	0	0	0	0	0	0	0	**68**
2:00 PM	0	2	7	15	26	8	2	0	0	0	0	0	0	0	0	0	0	**60**
3:00 PM	0	0	3	25	29	7	0	0	0	0	0	0	0	0	0	0	0	**64**
4:00 PM	1	0	3	14	39	9	0	0	0	0	0	0	0	0	0	0	0	**66**
5:00 PM	0	1	3	25	16	5	2	0	0	0	0	0	0	0	0	0	0	**52**
6:00 PM	0	1	2	14	17	4	0	0	0	0	0	0	0	0	0	0	0	**38**
7:00 PM	0	0	0	2	7	2	0	0	0	0	0	0	0	0	0	0	0	**11**
8:00 PM	1	1	2	5	4	0	0	0	0	0	0	0	0	0	0	0	0	**13**
9:00 PM	0	0	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	**5**
10:00 PM	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
11:00 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	**2**
Total	**9**	**15**	**60**	**321**	**338**	**88**	**12**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**844**
Percent	1.1%	1.8%	7.1%	38.0%	40.0%	10.4%	1.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.1	mph	Mean (Average) Speed	25.0	mph
85th Percentile	29.2	mph	10 mph Pace	20.6 - 30.6	mph
95th Percentile	32.1	mph	Percent in Pace	79.6	%

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Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Thursday, November 3, 2016
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	0	0	4	3	5	0	0	0	0	0	0	0	0	0	0	0	**12**
7:00 AM	0	0	1	9	27	14	4	0	0	0	0	0	0	0	0	0	0	**55**
8:00 AM	0	1	1	10	33	17	1	0	0	0	0	0	0	0	0	0	0	**63**
9:00 AM	1	0	3	5	28	14	1	0	0	0	0	0	0	0	0	0	0	**52**
10:00 AM	0	1	1	6	18	16	7	1	0	0	0	0	0	0	0	0	0	**50**
11:00 AM	0	0	3	11	29	13	1	0	0	0	0	0	0	0	0	0	0	**57**
12:00 PM	1	0	5	20	35	19	4	1	0	0	0	0	0	0	0	0	0	**85**
1:00 PM	0	0	5	9	29	27	7	0	0	0	0	0	0	0	0	0	0	**77**
2:00 PM	0	1	2	18	25	21	6	0	0	0	0	0	0	0	0	0	0	**73**
3:00 PM	1	1	3	12	36	24	1	0	0	0	0	0	0	0	0	0	0	**78**
4:00 PM	0	1	2	19	60	52	6	0	0	0	0	0	0	0	0	0	0	**140**
5:00 PM	0	1	4	33	72	48	10	0	0	0	0	0	0	0	0	0	0	**168**
6:00 PM	0	0	5	20	20	19	0	0	0	0	0	0	0	0	0	0	0	**64**
7:00 PM	0	1	2	5	9	6	1	0	0	0	0	0	0	0	0	0	0	**24**
8:00 PM	0	0	0	8	4	4	0	0	0	0	0	0	0	0	0	0	0	**16**
9:00 PM	0	0	0	1	6	4	1	0	0	0	0	0	0	0	0	0	0	**12**
10:00 PM	0	0	0	2	4	1	1	0	0	0	0	0	0	0	0	0	0	**8**
11:00 PM	0	0	0	1	2	0	2	0	0	0	0	0	0	0	0	0	0	**5**
Total	**3**	**7**	**38**	**194**	**441**	**305**	**56**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,046**
Percent	**0.3%**	**0.7%**	**3.6%**	**18.5%**	**42.2%**	**29.2%**	**5.4%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	28.0	mph	Mean (Average) Speed	28	mph
85th Percentile	32.4	mph	10 mph Pace	23.0 - 33.0	mph
95th Percentile	35.2	mph	Percent in Pace	74.6	%

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Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Friday, November 4, 2016
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	**4**
6:00 AM	0	0	3	9	8	3	0	0	0	0	0	0	0	0	0	0	0	**23**
7:00 AM	1	0	4	30	31	9	0	0	0	0	0	0	0	0	0	0	0	**75**
8:00 AM	2	1	6	29	33	6	1	0	0	0	0	0	0	0	0	0	0	**78**
9:00 AM	1	0	6	27	25	7	0	0	0	0	0	0	0	0	0	0	0	**66**
10:00 AM	1	1	6	19	20	7	3	0	0	0	0	0	0	0	0	0	0	**57**
11:00 AM	0	0	3	18	34	4	2	0	0	0	0	0	0	0	0	0	0	**61**
12:00 PM	0	1	8	25	25	6	1	0	0	0	0	0	0	0	0	0	0	**66**
1:00 PM	1	0	9	39	31	7	0	0	0	0	0	0	0	0	0	0	0	**87**
2:00 PM	1	0	3	24	33	9	2	0	0	0	0	0	0	0	0	0	0	**72**
3:00 PM	0	0	4	26	37	3	2	0	0	0	0	0	0	0	0	0	0	**72**
4:00 PM	0	1	3	20	32	9	1	0	0	0	0	0	0	0	0	0	0	**66**
5:00 PM	1	1	3	19	24	4	1	0	0	0	3	0	0	0	0	0	0	**56**
6:00 PM	0	1	1	11	7	5	0	0	0	0	0	0	0	0	0	0	0	**25**
7:00 PM	0	0	3	6	6	1	1	0	0	0	0	0	0	0	0	0	0	**17**
8:00 PM	0	0	4	9	6	0	0	0	0	0	0	0	0	0	0	0	0	**19**
9:00 PM	0	0	0	1	6	1	0	0	0	0	0	0	0	0	0	0	0	**8**
10:00 PM	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	**5**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**8**	**6**	**66**	**315**	**364**	**85**	**14**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**861**
Percent	**0.9%**	**0.7%**	**7.7%**	**36.6%**	**42.3%**	**9.9%**	**1.6%**	**0.0%**	**0.0%**	**0.0%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.3	mph	Mean (Average) Speed	25.5	mph
85th Percentile	29.5	mph	10 mph Pace	19.9 - 29.9	mph
95th Percentile	32.4	mph	Percent in Pace	78.7	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Friday, November 4, 2016
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	3
6:00 AM	0	0	0	0	6	3	1	0	0	0	0	0	0	0	0	0	0	10
7:00 AM	0	0	0	6	21	13	2	0	0	0	0	0	0	0	0	0	0	42
8:00 AM	0	2	1	3	24	11	1	0	0	0	0	0	0	0	0	0	0	42
9:00 AM	0	1	3	7	21	15	3	1	0	0	0	0	0	0	0	0	0	51
10:00 AM	0	0	1	9	27	14	5	1	0	0	0	0	0	0	0	0	0	57
11:00 AM	0	0	1	12	34	19	6	0	0	0	0	0	0	0	0	0	0	72
12:00 PM	0	3	3	25	49	21	4	1	0	0	0	0	0	0	0	0	0	106
1:00 PM	0	0	3	16	38	25	3	0	0	0	0	0	0	0	0	0	0	85
2:00 PM	2	0	1	14	32	32	3	1	0	0	0	0	0	0	0	0	0	85
3:00 PM	0	0	3	14	54	30	1	1	0	0	0	0	0	0	0	0	0	103
4:00 PM	0	1	2	26	56	52	4	0	0	0	0	0	0	0	0	0	0	141
5:00 PM	0	0	3	29	60	43	5	1	0	0	0	0	0	0	0	0	0	141
6:00 PM	0	0	2	7	20	8	4	0	0	0	0	0	0	0	0	0	0	41
7:00 PM	0	0	0	6	8	1	2	0	0	0	0	0	0	0	0	0	0	17
8:00 PM	0	0	0	3	11	4	0	0	0	0	0	0	0	0	0	0	0	18
9:00 PM	0	0	0	1	5	4	1	0	0	0	0	0	0	0	0	0	0	11
10:00 PM	0	0	0	1	7	0	2	0	0	0	0	0	0	0	0	0	0	10
11:00 PM	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
Total	**2**	**7**	**23**	**182**	**477**	**299**	**47**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,043**
Percent	**0.2%**	**0.7%**	**2.2%**	**17.4%**	**45.7%**	**28.7%**	**4.5%**	**0.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	28.3	mph	Mean (Average) Speed	28.3	mph
85th Percentile	32.4	mph	10 mph Pace	22.7 - 32.7	mph
95th Percentile	35.0	mph	Percent in Pace	78.4	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Saturday, November 5, 2016
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	4
2:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
6:00 AM	0	0	2	2	7	3	0	0	0	0	0	0	0	0	0	0	0	14
7:00 AM	0	0	0	6	5	1	0	0	0	0	0	0	0	0	0	0	0	12
8:00 AM	0	2	1	10	10	5	2	0	0	0	0	0	0	0	0	0	0	30
9:00 AM	2	0	3	6	13	5	0	0	0	0	0	0	0	0	0	0	0	29
10:00 AM	1	0	2	13	12	6	0	1	0	0	0	0	0	0	0	0	0	35
11:00 AM	0	1	2	13	35	6	1	0	0	0	0	0	0	0	0	0	0	58
12:00 PM	0	0	7	19	17	5	0	0	0	0	0	0	0	0	0	0	0	48
1:00 PM	1	0	6	19	18	3	1	0	0	0	0	0	0	0	0	0	0	48
2:00 PM	0	0	4	15	16	2	1	0	0	0	0	0	0	0	0	0	0	38
3:00 PM	0	0	1	14	13	5	2	0	0	0	0	0	0	0	0	0	0	35
4:00 PM	0	0	7	16	12	5	1	0	0	0	0	0	0	0	0	0	0	41
5:00 PM	0	1	3	12	11	3	0	0	0	0	0	0	0	0	0	0	0	30
6:00 PM	0	1	4	4	6	1	0	0	0	0	0	0	0	0	0	0	0	16
7:00 PM	0	0	1	3	3	0	0	0	0	0	0	0	0	0	0	0	0	7
8:00 PM	0	0	1	1	4	0	0	0	0	0	0	0	0	0	0	0	0	6
9:00 PM	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	3
10:00 PM	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	5
11:00 PM	0	0	0	1	4	2	0	0	0	0	0	0	0	0	0	0	0	7
Total	**4**	**5**	**47**	**160**	**193**	**54**	**8**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**472**
Percent	**0.8%**	**1.1%**	**10.0%**	**33.9%**	**40.9%**	**11.4%**	**1.7%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.3	mph	Mean (Average) Speed	25.3	mph
85th Percentile	29.6	mph	10 mph Pace	19.5 - 29.5	mph
95th Percentile	33.1	mph	Percent in Pace	75.6	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Saturday, November 5, 2016
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	0	1	0	0	5	0	0	0	0	0	0	0	0	0	0	0	**6**
7:00 AM	0	0	1	1	5	7	2	0	0	0	0	0	0	0	0	0	0	**16**
8:00 AM	0	0	0	2	9	4	2	0	0	0	0	0	0	0	0	0	0	**17**
9:00 AM	1	2	0	1	10	19	1	1	0	0	0	0	0	0	0	0	0	**35**
10:00 AM	0	0	1	2	14	20	3	1	0	0	0	0	0	0	0	0	0	**41**
11:00 AM	0	1	0	4	15	9	3	0	0	0	0	0	0	0	0	0	0	**32**
12:00 PM	0	0	0	6	24	19	1	1	0	0	0	0	0	0	0	0	0	**51**
1:00 PM	0	0	1	5	23	18	4	0	0	0	0	0	0	0	0	0	0	**51**
2:00 PM	0	0	1	8	13	11	4	1	0	0	0	0	0	0	0	0	0	**38**
3:00 PM	0	0	0	11	18	11	0	0	0	0	0	0	0	0	0	0	0	**40**
4:00 PM	0	1	0	6	27	12	1	0	0	0	0	0	0	0	0	0	0	**47**
5:00 PM	1	0	2	6	10	8	5	0	0	1	0	0	0	0	0	0	0	**33**
6:00 PM	0	0	0	3	7	4	1	0	0	0	0	0	0	0	0	0	0	**15**
7:00 PM	0	0	0	1	5	3	0	0	0	0	0	0	0	0	0	0	0	**9**
8:00 PM	0	0	0	2	2	5	2	0	0	0	0	0	0	0	0	0	0	**11**
9:00 PM	0	0	0	2	5	3	2	0	0	0	0	0	0	0	0	0	0	**12**
10:00 PM	0	0	0	1	7	1	0	0	0	0	0	0	0	0	0	0	0	**9**
11:00 PM	0	0	0	2	4	3	2	0	0	0	0	0	0	0	0	0	0	**11**
Total	**2**	**4**	**7**	**66**	**200**	**163**	**35**	**4**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**482**
Percent	**0.4%**	**0.8%**	**1.5%**	**13.7%**	**41.5%**	**33.8%**	**7.3%**	**0.8%**	**0.0%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	29.0	mph	Mean (Average) Speed	29	mph
85th Percentile	33.2	mph	10 mph Pace	24.0 - 34.0	mph
95th Percentile	36.2	mph	Percent in Pace	76.6	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Sunday, November 6, 2016
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	**3**
7:00 AM	0	0	1	0	4	2	1	0	0	0	0	0	0	0	0	0	0	**8**
8:00 AM	0	0	0	4	5	1	0	0	0	0	0	0	0	0	0	0	0	**10**
9:00 AM	0	0	0	4	11	3	1	0	0	0	0	0	0	0	0	0	0	**19**
10:00 AM	0	0	3	7	21	5	1	0	0	0	0	0	0	0	0	0	0	**37**
11:00 AM	0	0	0	9	16	7	1	0	0	0	0	0	0	0	0	0	0	**33**
12:00 PM	0	0	1	11	10	5	2	0	0	0	0	0	0	0	0	0	0	**29**
1:00 PM	0	1	2	7	19	2	0	0	0	0	0	0	0	0	0	0	0	**31**
2:00 PM	0	1	0	8	18	4	0	0	0	0	0	0	0	0	0	0	0	**31**
3:00 PM	0	0	3	14	10	6	0	0	0	0	0	0	0	0	0	0	0	**33**
4:00 PM	1	0	3	9	7	3	1	0	0	0	0	0	0	0	0	0	0	**24**
5:00 PM	0	0	3	10	14	1	0	0	0	0	0	0	0	0	0	0	0	**28**
6:00 PM	0	1	3	9	13	3	1	0	0	0	0	0	0	0	0	0	0	**30**
7:00 PM	0	0	2	6	2	0	0	0	0	0	0	0	0	0	0	0	0	**10**
8:00 PM	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	**4**
9:00 PM	0	2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
10:00 PM	0	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**5**
11:00 PM	0	1	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	**4**
Total	**1**	**6**	**23**	**111**	**160**	**43**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**353**
Percent	**0.3%**	**1.7%**	**6.5%**	**31.4%**	**45.3%**	**12.2%**	**2.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.8	mph	Mean (Average) Speed	25.8	mph
85th Percentile	29.9	mph	10 mph Pace	20.5 - 30.5	mph
95th Percentile	33.3	mph	Percent in Pace	78.5	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Sunday, November 6, 2016
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
7:00 AM	0	0	0	1	2	2	1	0	0	0	0	0	0	0	0	0	0	**6**
8:00 AM	0	0	0	1	4	2	0	0	0	0	0	0	0	0	0	0	0	**7**
9:00 AM	0	0	3	3	7	3	1	0	0	0	0	0	0	0	0	0	0	**17**
10:00 AM	0	1	0	5	13	8	2	0	0	0	0	0	0	0	0	0	0	**29**
11:00 AM	1	0	0	7	6	9	4	0	0	0	0	0	0	0	0	0	0	**27**
12:00 PM	0	0	1	5	18	11	3	2	0	0	0	0	0	0	0	0	0	**40**
1:00 PM	1	0	1	7	17	12	3	0	0	0	0	0	0	0	0	0	0	**41**
2:00 PM	0	0	0	7	13	14	1	0	0	0	0	0	0	0	0	0	0	**35**
3:00 PM	0	0	0	6	10	7	2	0	0	0	0	0	0	0	0	0	0	**25**
4:00 PM	0	1	0	3	19	8	1	0	0	0	0	0	0	0	0	0	0	**32**
5:00 PM	0	1	1	2	11	14	3	0	0	0	0	0	0	0	0	0	0	**32**
6:00 PM	0	1	3	6	20	4	1	0	0	0	0	0	0	0	0	0	0	**35**
7:00 PM	0	0	0	4	8	4	2	0	0	0	0	0	0	0	0	0	0	**18**
8:00 PM	0	0	0	1	5	1	0	0	0	0	0	0	0	0	0	0	0	**7**
9:00 PM	0	0	1	3	7	1	0	0	0	0	0	0	0	0	0	0	0	**12**
10:00 PM	0	0	0	1	1	2	1	0	0	0	0	0	0	0	0	0	0	**5**
11:00 PM	0	0	1	1	2	2	0	0	0	0	0	0	0	0	0	0	0	**6**
Total	**2**	**4**	**11**	**63**	**165**	**109**	**25**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**381**
Percent	**0.5%**	**1.0%**	**2.9%**	**16.5%**	**43.3%**	**28.6%**	**6.6%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	28.3	mph	Mean (Average) Speed	28.3	mph
85th Percentile	32.5	mph	10 mph Pace	23.4 - 33.4	mph
95th Percentile	35.3	mph	Percent in Pace	77.4	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Monday, November 7, 2016
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	**6**
7:00 AM	0	1	1	9	8	6	0	0	0	0	0	0	0	0	0	0	0	**25**
8:00 AM	0	0	10	36	42	11	0	0	0	0	0	0	0	0	0	0	0	**99**
9:00 AM	3	2	5	37	40	7	1	0	0	0	0	0	0	0	0	0	0	**95**
10:00 AM	1	0	8	25	25	7	1	0	0	0	0	0	0	0	0	0	0	**67**
11:00 AM	0	2	6	17	27	5	4	0	0	0	0	0	0	0	0	0	0	**61**
12:00 PM	0	0	8	29	18	7	0	0	0	0	0	0	0	0	0	0	0	**62**
1:00 PM	0	1	3	39	32	10	0	0	0	0	0	0	0	0	0	0	0	**85**
2:00 PM	1	0	2	32	28	5	0	0	0	0	0	0	0	0	0	0	0	**68**
3:00 PM	3	2	3	29	32	7	0	0	0	0	0	0	0	0	0	0	0	**76**
4:00 PM	0	0	5	23	23	8	0	0	0	0	0	0	0	0	0	0	0	**59**
5:00 PM	0	0	10	29	31	4	0	0	0	3	0	0	0	0	0	0	0	**77**
6:00 PM	1	0	5	31	17	4	2	0	0	0	0	0	0	0	0	0	0	**60**
7:00 PM	0	0	4	12	18	4	1	0	0	0	0	0	0	0	0	0	0	**39**
8:00 PM	0	0	0	4	5	2	1	0	0	0	0	0	0	0	0	0	0	**12**
9:00 PM	0	0	1	3	1	2	0	0	0	0	0	0	0	0	0	0	0	**7**
10:00 PM	1	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	**6**
11:00 PM	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	**3**
Total	**11**	**8**	**71**	**360**	**356**	**94**	**10**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**913**
Percent	**1.2%**	**0.9%**	**7.8%**	**39.4%**	**39.0%**	**10.3%**	**1.1%**	**0.0%**	**0.0%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	24.9	mph	Mean (Average) Speed	25.1	mph
85th Percentile	29.2	mph	10 mph Pace	19.9 - 29.9	mph
95th Percentile	32.1	mph	Percent in Pace	78.5	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Monday, November 7, 2016
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	**3**
7:00 AM	0	0	0	4	4	10	1	0	0	0	0	0	0	0	0	0	0	**19**
8:00 AM	0	0	3	7	29	22	1	0	0	0	0	0	0	0	0	0	0	**62**
9:00 AM	1	0	5	9	43	26	1	0	0	0	0	0	0	0	0	0	0	**85**
10:00 AM	0	1	1	9	34	10	3	1	0	0	0	0	0	0	0	0	0	**59**
11:00 AM	0	0	1	11	27	29	8	0	0	0	0	0	0	0	0	0	0	**76**
12:00 PM	0	1	3	30	36	29	6	0	0	0	0	0	0	0	0	0	0	**105**
1:00 PM	2	0	5	21	42	19	1	0	0	0	0	0	0	0	0	0	0	**90**
2:00 PM	1	0	3	14	34	21	3	0	0	0	0	0	0	0	0	0	0	**76**
3:00 PM	1	0	2	15	24	24	3	1	0	0	0	0	0	0	0	0	0	**70**
4:00 PM	1	2	3	24	42	28	8	0	1	0	0	0	0	0	0	0	0	**109**
5:00 PM	0	0	6	27	63	38	3	1	0	0	0	0	0	0	0	0	0	**138**
6:00 PM	1	1	8	40	89	38	7	0	0	0	0	0	0	0	0	0	0	**184**
7:00 PM	0	0	2	9	14	12	0	1	0	0	0	0	0	0	0	0	0	**38**
8:00 PM	0	0	1	3	5	7	2	0	0	0	0	0	0	0	0	0	0	**18**
9:00 PM	0	0	1	2	11	1	0	0	0	0	0	0	0	0	0	0	0	**15**
10:00 PM	1	0	0	1	4	2	1	0	0	0	0	0	0	0	0	0	0	**9**
11:00 PM	0	0	0	2	2	2	1	0	0	0	0	0	0	0	0	0	0	**7**
Total	**8**	**5**	**45**	**229**	**505**	**323**	**49**	**4**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,169**
Percent	**0.7%**	**0.4%**	**3.8%**	**19.6%**	**43.2%**	**27.6%**	**4.2%**	**0.3%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	28.0	mph	Mean (Average) Speed	27.8	mph
85th Percentile	32.0	mph	10 mph Pace	23.4 - 33.4	mph
95th Percentile	34.7	mph	Percent in Pace	76.4	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Tuesday, November 8, 2016
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	0	0	2	4	3	0	0	0	0	0	0	0	0	0	0	0	**9**
7:00 AM	0	1	5	14	12	3	0	0	0	0	0	0	0	0	0	0	0	**35**
8:00 AM	0	1	7	31	57	13	2	0	0	0	0	0	0	0	0	0	0	**111**
9:00 AM	0	0	5	43	38	8	0	0	0	0	0	0	0	0	0	0	0	**94**
10:00 AM	0	1	3	27	33	8	0	0	0	0	0	0	0	0	0	0	0	**72**
11:00 AM	0	1	7	28	23	7	1	0	0	0	0	0	0	0	0	0	0	**67**
12:00 PM	1	1	8	27	28	8	1	0	0	0	0	0	0	0	0	0	0	**74**
1:00 PM	1	0	10	25	34	12	1	0	0	0	0	0	0	0	0	0	0	**83**
2:00 PM	0	0	9	35	29	6	0	0	0	0	0	0	0	0	0	0	0	**79**
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 PM	0	2	2	12	15	2	0	0	0	0	0	0	0	0	0	0	0	**33**
7:00 PM	2	1	0	7	10	4	0	0	0	0	0	0	0	0	0	0	0	**24**
8:00 PM	0	0	1	7	10	3	0	0	0	0	0	0	0	0	0	0	0	**21**
9:00 PM	0	2	0	3	6	0	0	0	0	0	0	0	0	0	0	0	0	**11**
10:00 PM	0	0	0	3	4	1	1	0	0	0	0	0	0	0	0	0	0	**9**
11:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
Total	**4**	**10**	**57**	**266**	**306**	**79**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**728**
Percent	**0.5%**	**1.4%**	**7.8%**	**36.5%**	**42.0%**	**10.9%**	**0.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.2	mph	Mean (Average) Speed	25.2	mph
85th Percentile	29.2	mph	10 mph Pace	20.4 - 30.4	mph
95th Percentile	31.7	mph	Percent in Pace	79.7	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Tuesday, November 8, 2016
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	4	1	0	0	0	0	0	0	0	0	0	0	0	**6**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	**3**
7:00 AM	0	0	0	3	7	7	0	0	0	0	0	0	0	0	0	0	0	**17**
8:00 AM	0	1	1	6	31	23	0	0	0	0	0	0	0	0	0	0	0	**62**
9:00 AM	1	2	1	10	27	17	2	0	0	0	0	0	0	0	0	0	0	**60**
10:00 AM	0	1	2	10	36	22	2	0	0	0	0	0	0	0	0	0	0	**73**
11:00 AM	0	2	1	7	43	21	2	1	0	0	0	0	0	0	0	0	0	**77**
12:00 PM	0	1	5	20	32	12	3	0	0	0	0	0	0	0	0	0	0	**73**
1:00 PM	0	0	3	19	44	25	3	0	0	0	0	0	0	0	0	0	0	**94**
2:00 PM	0	0	2	11	33	10	1	0	0	0	0	0	0	0	0	0	0	**57**
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 PM	0	2	10	11	38	14	1	0	0	0	0	0	0	0	0	0	0	**76**
7:00 PM	0	1	1	9	16	15	4	0	0	0	0	0	0	0	0	0	0	**46**
8:00 PM	0	0	1	6	18	6	0	0	0	0	0	0	0	0	0	0	0	**31**
9:00 PM	0	0	1	1	12	0	0	0	0	0	0	0	0	0	0	0	0	**14**
10:00 PM	0	0	1	1	9	1	0	0	0	0	0	0	0	0	0	0	0	**12**
11:00 PM	0	0	0	1	5	1	0	0	0	0	0	0	0	0	0	0	0	**7**
Total	**1**	**10**	**30**	**117**	**357**	**179**	**19**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**714**
Percent	**0.1%**	**1.4%**	**4.2%**	**16.4%**	**50.0%**	**25.1%**	**2.7%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	27.6	mph	Mean (Average) Speed	27.5	mph
85th Percentile	31.8	mph	10 mph Pace	22.8 - 32.8	mph
95th Percentile	34.0	mph	Percent in Pace	77.7	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Wednesday, November 9, 2016
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	0	0	1	6	1	1	0	0	0	0	0	0	0	0	0	0	**9**
7:00 AM	0	1	2	13	7	2	1	0	0	0	0	0	0	0	0	0	0	**26**
8:00 AM	0	2	4	41	35	15	1	0	0	0	0	0	0	0	0	0	0	**98**
9:00 AM	0	2	7	38	41	4	1	0	0	0	0	1	0	0	0	0	0	**94**
10:00 AM	0	1	5	17	25	6	0	0	0	0	0	0	0	0	0	0	0	**54**
11:00 AM	1	1	1	18	18	5	1	0	0	0	0	0	0	0	0	0	0	**45**
12:00 PM	0	2	6	10	14	5	0	0	0	0	0	0	0	0	0	0	0	**37**
1:00 PM	2	2	6	40	40	6	0	0	0	0	0	0	0	0	0	0	0	**96**
2:00 PM	0	0	9	26	26	5	1	0	0	0	0	0	0	0	0	0	0	**67**
3:00 PM	1	3	4	24	18	4	0	0	0	0	0	0	0	0	0	0	0	**54**
4:00 PM	0	0	3	22	26	5	1	0	0	0	0	0	0	0	0	0	0	**57**
5:00 PM	0	1	9	20	27	6	0	0	0	0	0	0	0	0	0	0	0	**63**
6:00 PM	2	1	8	17	34	4	1	0	0	0	0	0	0	0	0	0	0	**67**
7:00 PM	0	1	4	17	10	3	0	0	0	0	0	0	0	0	0	0	0	**35**
8:00 PM	1	1	2	6	9	3	1	0	0	0	0	0	0	0	0	0	0	**23**
9:00 PM	0	0	1	3	2	2	0	0	0	0	0	0	0	0	0	0	0	**8**
10:00 PM	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	**4**
11:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
Total	**8**	**18**	**71**	**317**	**342**	**79**	**9**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**845**
Percent	**0.9%**	**2.1%**	**8.4%**	**37.5%**	**40.5%**	**9.3%**	**1.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	24.9	mph	Mean (Average) Speed	24.9	mph
85th Percentile	28.9	mph	10 mph Pace	20.4 - 30.4	mph
95th Percentile	32.1	mph	Percent in Pace	78.9	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Wednesday, November 9, 2016
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	2	4	4	0	0	0	0	0	0	0	0	0	0	0	**10**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	**2**
7:00 AM	0	1	3	4	9	1	2	0	0	0	0	0	0	0	0	0	0	**20**
8:00 AM	0	0	2	5	27	22	1	0	0	0	0	0	0	0	0	0	0	**57**
9:00 AM	0	0	0	8	32	24	2	0	0	0	0	0	0	0	0	0	0	**66**
10:00 AM	1	1	0	9	28	12	2	0	0	0	0	0	0	0	0	0	0	**53**
11:00 AM	0	0	1	9	22	15	3	0	0	0	0	0	0	0	0	0	0	**50**
12:00 PM	0	3	3	21	36	17	2	0	0	0	0	0	0	0	0	0	0	**82**
1:00 PM	1	1	7	28	36	14	4	1	0	0	0	0	0	0	0	0	0	**92**
2:00 PM	0	1	4	21	31	14	2	0	0	0	0	0	0	0	0	0	0	**73**
3:00 PM	0	0	5	14	34	16	2	0	0	0	0	0	0	0	0	0	0	**71**
4:00 PM	1	0	5	21	40	19	3	0	0	0	0	0	0	0	0	0	0	**89**
5:00 PM	0	2	5	28	61	45	4	1	0	0	0	0	0	0	0	0	0	**146**
6:00 PM	4	1	6	41	77	35	9	0	0	0	0	0	0	0	0	0	0	**173**
7:00 PM	0	0	1	9	16	12	1	1	0	0	0	0	0	0	0	0	0	**40**
8:00 PM	2	1	0	5	13	4	1	0	0	0	0	0	0	0	0	0	0	**26**
9:00 PM	0	0	0	2	6	3	0	0	0	0	0	0	0	0	0	0	0	**11**
10:00 PM	0	1	1	1	2	2	0	0	0	0	0	0	0	0	0	0	0	**7**
11:00 PM	0	0	0	4	1	1	4	0	0	0	0	0	0	0	0	0	0	**10**
Total	**9**	**12**	**43**	**235**	**478**	**260**	**42**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,082**
Percent	**0.8%**	**1.1%**	**4.0%**	**21.7%**	**44.2%**	**24.0%**	**3.9%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	27.6	mph	Mean (Average) Speed	27.3	mph
85th Percentile	31.8	mph	10 mph Pace	23.0 - 33.0	mph
95th Percentile	34.4	mph	Percent in Pace	74	%

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Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Total Study Average
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	0	1	3	6	2	0	0	0	0	0	0	0	0	0	0	0	**12**
7:00 AM	0	1	3	15	14	5	1	0	0	0	0	0	0	0	0	0	0	**39**
8:00 AM	1	1	5	28	30	8	1	0	0	0	0	0	0	0	0	0	0	**74**
9:00 AM	1	1	5	26	27	5	1	0	0	0	0	0	0	0	0	0	0	**66**
10:00 AM	1	1	5	18	21	6	1	0	0	0	0	0	0	0	0	0	0	**53**
11:00 AM	0	1	3	16	25	5	2	0	0	0	0	0	0	0	0	0	0	**52**
12:00 PM	0	1	6	23	21	6	1	0	0	0	0	0	0	0	0	0	0	**58**
1:00 PM	1	1	5	28	29	7	0	0	0	0	0	0	0	0	0	0	0	**71**
2:00 PM	0	0	5	22	25	6	1	0	0	0	0	0	0	0	0	0	0	**59**
3:00 PM	1	1	3	19	20	5	1	0	0	0	0	0	0	0	0	0	0	**50**
4:00 PM	0	0	3	15	20	6	1	0	0	0	0	0	0	0	0	0	0	**45**
5:00 PM	0	1	4	16	18	3	0	0	0	0	0	0	0	0	0	0	0	**42**
6:00 PM	0	1	4	14	16	3	1	0	0	0	0	0	0	0	0	0	0	**39**
7:00 PM	0	0	2	8	8	2	0	0	0	0	0	0	0	0	0	0	0	**20**
8:00 PM	0	0	1	5	6	1	0	0	0	0	0	0	0	0	0	0	0	**13**
9:00 PM	0	1	0	2	3	1	0	0	0	0	0	0	0	0	0	0	0	**7**
10:00 PM	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	**4**
11:00 PM	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	**3**
Total	**5**	**11**	**55**	**263**	**295**	**74**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**714**
Percent	**0.7%**	**1.5%**	**7.7%**	**36.8%**	**41.3%**	**10.4%**	**1.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	25.2	mph	Mean (Average) Speed	25.2	mph
85th Percentile	29.2	mph	10 mph Pace	20.5 - 30.5	mph
95th Percentile	32.2	mph	Percent in Pace	78.2	%

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Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 04

Total Study Average
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	**5**
7:00 AM	0	0	1	4	11	8	2	0	0	0	0	0	0	0	0	0	0	**26**
8:00 AM	0	1	1	5	22	14	1	0	0	0	0	0	0	0	0	0	0	**44**
9:00 AM	1	1	2	6	24	17	2	0	0	0	0	0	0	0	0	0	0	**53**
10:00 AM	0	1	1	7	24	15	3	1	0	0	0	0	0	0	0	0	0	**52**
11:00 AM	0	0	1	9	25	16	4	0	0	0	0	0	0	0	0	0	0	**55**
12:00 PM	0	1	3	18	33	18	3	1	0	0	0	0	0	0	0	0	0	**77**
1:00 PM	1	0	4	15	33	20	4	0	0	0	0	0	0	0	0	0	0	**77**
2:00 PM	0	0	2	13	26	18	3	0	0	0	0	0	0	0	0	0	0	**62**
3:00 PM	0	0	2	10	25	16	1	0	0	0	0	0	0	0	0	0	0	**54**
4:00 PM	0	1	2	14	35	24	3	0	0	0	0	0	0	0	0	0	0	**79**
5:00 PM	0	1	3	18	40	28	4	0	0	0	0	0	0	0	0	0	0	**94**
6:00 PM	1	1	5	18	39	17	3	0	0	0	0	0	0	0	0	0	0	**84**
7:00 PM	0	0	1	6	11	8	1	0	0	0	0	0	0	0	0	0	0	**27**
8:00 PM	0	0	0	4	8	4	1	0	0	0	0	0	0	0	0	0	0	**17**
9:00 PM	0	0	0	2	7	2	1	0	0	0	0	0	0	0	0	0	0	**12**
10:00 PM	0	0	0	1	5	1	1	0	0	0	0	0	0	0	0	0	0	**8**
11:00 PM	0	0	0	2	3	1	1	0	0	0	0	0	0	0	0	0	0	**7**
Total	**3**	**7**	**28**	**153**	**375**	**231**	**38**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**837**
Percent	**0.4%**	**0.8%**	**3.3%**	**18.3%**	**44.8%**	**27.6%**	**4.5%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	28.0	mph	Mean (Average) Speed	27.9	mph
85th Percentile	32.2	mph	10 mph Pace	23.4 - 33.4	mph
95th Percentile	34.9	mph	Percent in Pace	76.0	%

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Location: Airport Rd W/O Euclid Ave
Date Range: 11/3/2016 - 11/9/2016
Site Code: 04

	Thursday			Friday			Saturday			Sunday			Monday			Tuesday			Wednesday			Mid-Week Average		
	11/3/2016			11/4/2016			11/5/2016			11/6/2016			11/7/2016			11/8/2016			11/9/2016					
Time	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total
12:00 AM	1	2	3	0	1	1	1	1	2	2	3	5	1	2	3	1	6	7	1	10	11	1	6	7
1:00 AM	3	0	3	1	1	2	4	3	7	0	1	1	1	0	1	0	0	0	0	0	0	1	0	1
2:00 AM	2	2	4	1	0	1	2	0	2	0	0	0	0	0	0	0	2	2	0	1	1	1	2	2
3:00 AM	3	1	4	1	2	3	1	1	2	1	1	2	1	1	2	2	0	2	4	1	5	3	1	4
4:00 AM	1	0	1	1	0	1	0	1	1	3	0	3	1	1	2	1	1	2	0	1	1	1	1	1
5:00 AM	5	2	7	4	3	7	2	2	4	1	1	2	2	2	4	0	3	3	1	1	2	2	2	4
6:00 AM	25	12	37	23	10	33	14	6	20	3	1	4	6	3	9	9	3	12	9	2	11	14	6	20
7:00 AM	89	55	144	75	42	117	12	16	28	8	6	14	25	19	44	35	17	52	26	20	46	50	31	81
8:00 AM	96	63	159	78	42	120	30	17	47	10	7	17	99	62	161	111	62	173	98	57	155	102	61	162
9:00 AM	63	52	115	66	51	117	29	35	64	19	17	36	95	85	180	94	60	154	94	66	160	84	59	143
10:00 AM	46	50	96	57	57	114	35	41	76	37	29	66	67	59	126	72	73	145	54	53	107	57	59	116
11:00 AM	43	57	100	61	72	133	58	32	90	33	27	60	61	76	137	67	77	144	45	50	95	52	61	113
12:00 PM	85	85	170	66	106	172	48	51	99	29	40	69	62	105	167	74	73	147	37	82	119	65	80	145
1:00 PM	68	77	145	87	85	172	48	51	99	31	41	72	85	90	175	83	94	177	96	92	188	82	88	170
2:00 PM	60	73	133	72	85	157	38	38	76	31	35	66	68	76	144	79	57	136	67	73	140	69	68	136
3:00 PM	64	78	142	72	103	175	35	40	75	33	25	58	76	70	146	0	0	0	54	71	125	39	50	89
4:00 PM	66	140	206	66	141	207	41	47	88	24	32	56	59	109	168	0	0	0	57	89	146	41	76	117
5:00 PM	52	168	220	56	141	197	30	33	63	28	32	60	77	138	215	0	0	0	63	146	209	38	105	143
6:00 PM	38	64	102	25	41	66	16	15	31	30	35	65	60	184	244	33	76	109	67	173	240	46	104	150
7:00 PM	11	24	35	17	17	34	7	9	16	10	18	28	39	38	77	24	46	70	35	40	75	23	37	60
8:00 PM	13	16	29	19	18	37	6	11	17	4	7	11	12	18	30	21	31	52	23	26	49	19	24	43
9:00 PM	5	12	17	8	11	19	3	12	15	7	12	19	7	15	22	11	14	25	8	11	19	8	12	20
10:00 PM	3	8	11	5	10	15	5	9	14	5	5	10	6	9	15	9	12	21	4	7	11	5	9	14
11:00 PM	2	5	7	0	4	4	7	11	18	4	6	10	3	7	10	2	7	9	2	10	12	2	7	9
Total	**844**	**1,046**	**1,890**	**861**	**1,043**	**1,904**	**472**	**482**	**954**	**353**	**381**	**734**	**913**	**1,169**	**2,082**	**728**	**714**	**1,442**	**845**	**1,082**	**1,927**	**806**	**947**	**1,753**
Percent	**45%**	**55%**	-	**45%**	**55%**	-	**49%**	**51%**	-	**48%**	**52%**	-	**44%**	**56%**	-	**50%**	**50%**	-	**44%**	**56%**	-	**46%**	**54%**	-

1. Mid-week average includes data between Tuesday and Thursday.

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Vehicle Classification Report Summary

Location: Airport Rd S/O Euclid Ave
Count Direction: Northbound / Southbound
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

	FHWA Vehicle Classification													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total														
Northbound	47	2,288	1,260	2	510	11	0	1	1	0	0	0	0	4,120
Percent	1.1%	55.5%	30.6%	0.0%	12.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	51	2,037	1,231	5	725	12	0	2	1	0	0	0	0	4,064
Percent	1.3%	50.1%	30.3%	0.1%	17.8%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	98	4,325	2,491	7	1,235	23	0	3	2	0	0	0	0	8,184
Percent	1.2%	52.8%	30.4%	0.1%	15.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

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Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Thursday, November 3, 2016
Southbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	**2**
6:00 AM	0	16	7	0	2	1	0	0	0	0	0	0	0	**26**
7:00 AM	1	31	25	0	23	1	0	0	0	0	0	0	0	**81**
8:00 AM	0	45	21	0	12	0	0	0	0	0	0	0	0	**78**
9:00 AM	1	23	17	0	8	0	0	0	0	0	0	0	0	**49**
10:00 AM	0	24	11	0	12	0	0	0	0	0	0	0	0	**47**
11:00 AM	1	14	14	0	7	0	0	0	0	0	0	0	0	**36**
12:00 PM	3	30	20	0	9	2	0	0	0	0	0	0	0	**64**
1:00 PM	0	28	18	1	17	0	0	0	0	0	0	0	0	**64**
2:00 PM	0	27	14	0	11	0	0	0	0	0	0	0	0	**52**
3:00 PM	0	20	20	0	9	0	0	0	0	0	0	0	0	**49**
4:00 PM	0	15	9	0	8	0	0	0	0	0	0	0	0	**32**
5:00 PM	0	27	11	0	4	0	0	0	0	0	0	0	0	**42**
6:00 PM	2	11	4	0	2	0	0	0	0	0	0	0	0	**19**
7:00 PM	0	4	0	0	2	0	0	0	0	0	0	0	0	**6**
8:00 PM	0	2	1	0	3	0	0	0	0	0	0	0	0	**6**
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 PM	0	2	1	0	1	0	0	0	0	0	0	0	0	**4**
11:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	**1**
Total	**8**	**320**	**193**	**2**	**133**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**661**
Percent	**1.2%**	**48.4%**	**29.2%**	**0.3%**	**20.1%**	**0.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Friday, November 4, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	5	1	0	2	0	0	0	0	0	0	0	0	**8**
7:00 AM	0	13	15	0	3	0	0	0	0	0	0	0	0	**31**
8:00 AM	0	21	27	0	6	0	0	0	0	0	0	0	0	**54**
9:00 AM	1	18	17	0	3	0	0	0	0	0	0	0	0	**39**
10:00 AM	1	16	16	0	12	0	0	0	0	0	0	0	0	**45**
11:00 AM	0	28	15	0	10	0	0	0	0	0	0	0	0	**53**
12:00 PM	0	38	24	0	5	1	0	0	0	0	0	0	0	**68**
1:00 PM	1	30	12	0	15	0	0	0	0	0	0	0	0	**58**
2:00 PM	1	34	14	0	10	0	0	0	0	0	0	0	0	**59**
3:00 PM	1	35	26	0	6	0	0	0	0	0	0	0	0	**68**
4:00 PM	2	37	26	0	13	0	0	0	0	0	0	0	0	**78**
5:00 PM	0	31	15	0	3	0	0	0	0	0	0	0	0	**49**
6:00 PM	0	14	3	0	3	0	0	0	0	0	0	0	0	**20**
7:00 PM	0	8	2	0	3	0	0	0	0	0	0	0	0	**13**
8:00 PM	0	6	1	0	1	0	0	0	0	0	0	0	0	**8**
9:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
10:00 PM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
11:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**7**	**340**	**217**	**0**	**95**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**660**
Percent	**1.1%**	**51.5%**	**32.9%**	**0.0%**	**14.4%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Friday, November 4, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	13	10	0	2	0	0	0	0	0	0	0	0	**25**
7:00 AM	1	33	25	0	16	0	0	0	0	0	0	0	0	**75**
8:00 AM	0	34	18	0	10	0	0	0	0	0	0	0	0	**62**
9:00 AM	0	24	9	0	7	0	0	0	0	0	0	0	0	**40**
10:00 AM	1	22	26	0	12	0	0	0	0	0	0	0	0	**61**
11:00 AM	0	22	23	0	9	1	0	1	0	0	0	0	0	**56**
12:00 PM	2	36	11	0	16	0	0	0	0	0	0	0	0	**65**
1:00 PM	2	28	18	1	14	0	0	0	0	0	0	0	0	**63**
2:00 PM	2	18	16	0	11	0	0	0	0	0	0	0	0	**47**
3:00 PM	1	26	22	0	10	0	0	0	0	0	0	0	0	**59**
4:00 PM	1	14	15	0	13	0	0	0	0	0	0	0	0	**43**
5:00 PM	0	16	6	0	4	0	0	0	0	0	0	0	0	**26**
6:00 PM	0	9	1	0	3	0	0	0	0	0	0	0	0	**13**
7:00 PM	0	4	3	0	2	0	0	0	0	0	0	0	0	**9**
8:00 PM	0	3	0	0	1	0	0	0	0	0	0	0	0	**4**
9:00 PM	1	4	2	0	1	0	0	0	0	0	0	0	0	**8**
10:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**11**	**308**	**207**	**1**	**131**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**660**
Percent	**1.7%**	**46.7%**	**31.4%**	**0.2%**	**19.8%**	**0.2%**	**0.0%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Saturday, November 5, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
7:00 AM	0	5	6	0	2	0	0	0	0	0	0	0	0	13
8:00 AM	0	4	12	0	4	0	0	0	0	0	0	0	0	20
9:00 AM	0	11	2	0	4	0	0	0	0	0	0	0	0	17
10:00 AM	0	17	9	0	6	0	0	0	0	0	0	0	0	32
11:00 AM	1	42	15	0	3	0	0	0	0	0	0	0	0	61
12:00 PM	1	30	6	0	5	0	0	0	0	0	0	0	0	42
1:00 PM	0	34	9	0	6	0	0	0	0	0	0	0	0	49
2:00 PM	1	17	9	0	3	0	0	0	0	0	0	0	0	30
3:00 PM	0	16	13	0	3	0	0	0	0	0	0	0	0	32
4:00 PM	0	25	5	0	3	0	0	0	0	0	0	0	0	33
5:00 PM	1	12	1	0	0	0	0	0	0	0	0	0	0	14
6:00 PM	0	8	1	0	1	0	0	0	0	0	0	0	0	10
7:00 PM	0	3	5	0	0	0	0	0	0	0	0	0	0	8
8:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	4
9:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	2
10:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
11:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	**4**	**234**	**94**	**0**	**43**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**375**
Percent	**1.1%**	**62.4%**	**25.1%**	**0.0%**	**11.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Saturday, November 5, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	3
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	2
6:00 AM	0	5	3	0	0	0	0	0	0	0	0	0	0	8
7:00 AM	0	14	9	0	3	0	0	0	0	0	0	0	0	26
8:00 AM	0	14	9	0	2	0	0	0	0	0	0	0	0	25
9:00 AM	1	26	9	0	6	0	0	0	0	0	0	0	0	42
10:00 AM	0	29	7	0	7	0	0	0	0	0	0	0	0	43
11:00 AM	1	23	11	0	4	0	0	0	0	0	0	0	0	39
12:00 PM	0	28	12	0	6	0	0	0	0	0	0	0	0	46
1:00 PM	1	28	10	0	4	0	0	0	0	0	0	0	0	43
2:00 PM	0	17	8	0	7	0	0	0	0	0	0	0	0	32
3:00 PM	0	9	7	0	2	0	0	0	0	0	0	0	0	18
4:00 PM	0	11	6	0	4	0	0	0	0	0	0	0	0	21
5:00 PM	0	8	3	0	2	0	0	0	0	0	0	0	0	13
6:00 PM	1	5	1	0	1	0	0	0	0	0	0	0	0	8
7:00 PM	0	1	1	0	1	0	0	0	0	0	0	0	0	3
8:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	4
9:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
10:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**4**	**227**	**96**	**0**	**53**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**380**
Percent	**1.1%**	**59.7%**	**25.3%**	**0.0%**	**13.9%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Sunday, November 6, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	**1**
7:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	**2**
8:00 AM	0	3	1	0	1	0	0	0	0	0	0	0	0	**5**
9:00 AM	0	5	3	0	0	0	0	0	0	0	0	0	0	**8**
10:00 AM	0	18	3	0	0	0	0	0	0	0	0	0	0	**21**
11:00 AM	0	14	5	0	2	0	0	0	0	0	0	0	0	**21**
12:00 PM	1	18	6	0	3	0	0	0	0	0	0	0	0	**28**
1:00 PM	0	16	6	0	1	0	0	0	0	0	0	0	0	**23**
2:00 PM	1	16	3	0	4	0	0	0	0	0	0	0	0	**24**
3:00 PM	0	11	7	0	5	0	0	0	0	0	0	0	0	**23**
4:00 PM	1	18	5	0	0	0	0	0	0	0	0	0	0	**24**
5:00 PM	0	15	5	0	5	0	0	0	0	0	0	0	0	**25**
6:00 PM	0	15	5	0	3	0	0	0	0	0	0	0	0	**23**
7:00 PM	0	8	2	0	1	0	0	0	0	0	0	0	0	**11**
8:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
9:00 PM	0	1	2	0	0	0	0	0	0	0	0	0	0	**3**
10:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	**2**
11:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	**2**
Total	**3**	**162**	**55**	**0**	**28**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**248**
Percent	**1.2%**	**65.3%**	**22.2%**	**0.0%**	**11.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Sunday, November 6, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
7:00 AM	0	1	4	0	0	0	0	0	0	0	0	0	0	**5**
8:00 AM	0	4	3	0	1	0	0	0	0	0	0	0	0	**8**
9:00 AM	0	13	1	0	2	0	0	0	0	0	0	0	0	**16**
10:00 AM	0	16	6	0	4	0	0	0	0	0	0	0	0	**26**
11:00 AM	0	11	5	0	2	0	0	0	0	0	0	0	0	**18**
12:00 PM	0	14	11	0	3	0	0	0	0	0	0	0	0	**28**
1:00 PM	0	20	3	0	5	0	0	0	0	0	0	0	0	**28**
2:00 PM	0	16	2	0	7	1	0	0	0	0	0	0	0	**26**
3:00 PM	0	11	6	0	3	0	0	0	0	0	0	0	0	**20**
4:00 PM	1	14	7	0	4	0	0	0	0	0	0	0	0	**26**
5:00 PM	0	5	3	0	7	0	0	0	0	0	0	0	0	**15**
6:00 PM	0	9	6	0	1	0	0	0	0	0	0	0	0	**16**
7:00 PM	0	4	2	0	0	0	0	0	0	0	0	0	0	**6**
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 PM	0	5	0	0	2	0	0	0	0	0	0	0	0	**7**
10:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	**1**
11:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
Total	**1**	**144**	**62**	**0**	**42**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**250**
Percent	**0.4%**	**57.6%**	**24.8%**	**0.0%**	**16.8%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Monday, November 7, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 AM	0	6	8	0	1	0	0	0	0	0	0	0	0	**15**
8:00 AM	0	17	24	0	7	0	0	0	1	0	0	0	0	**49**
9:00 AM	0	23	23	0	9	0	0	0	0	0	0	0	0	**55**
10:00 AM	1	33	17	0	6	0	0	0	0	0	0	0	0	**57**
11:00 AM	1	37	20	0	7	1	0	0	0	0	0	0	0	**66**
12:00 PM	1	39	17	0	6	0	0	0	0	0	0	0	0	**63**
1:00 PM	1	54	23	0	5	0	0	0	0	0	0	0	0	**83**
2:00 PM	0	32	18	0	6	0	0	0	0	0	0	0	0	**56**
3:00 PM	3	44	9	0	4	0	0	0	0	0	0	0	0	**60**
4:00 PM	0	43	16	0	6	0	0	0	0	0	0	0	0	**65**
5:00 PM	4	60	28	0	7	0	0	0	0	0	0	0	0	**99**
6:00 PM	0	27	16	0	12	0	0	0	0	0	0	0	0	**55**
7:00 PM	0	29	8	0	4	0	0	0	0	0	0	0	0	**41**
8:00 PM	0	13	3	0	0	0	0	0	0	0	0	0	0	**16**
9:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
10:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**11**	**464**	**231**	**0**	**80**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**788**
Percent	**1.4%**	**58.9%**	**29.3%**	**0.0%**	**10.2%**	**0.1%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Monday, November 7, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 AM	0	20	13	0	6	0	0	0	0	0	0	0	0	**39**
8:00 AM	0	45	35	0	17	0	0	0	0	0	0	0	0	**97**
9:00 AM	0	34	23	0	9	0	0	0	0	0	0	0	0	**66**
10:00 AM	3	37	15	0	7	0	0	1	0	0	0	0	0	**63**
11:00 AM	0	36	24	1	10	0	0	0	0	0	0	0	0	**71**
12:00 PM	0	37	19	0	8	0	0	0	0	0	0	0	0	**64**
1:00 PM	2	39	19	0	8	0	0	0	0	0	0	0	0	**68**
2:00 PM	2	35	26	0	10	0	0	0	0	0	0	0	0	**73**
3:00 PM	2	33	16	0	9	0	0	0	0	0	0	0	0	**60**
4:00 PM	0	37	18	0	10	0	0	0	0	0	0	0	0	**65**
5:00 PM	1	19	14	0	9	0	0	0	0	0	0	0	0	**43**
6:00 PM	0	17	7	0	9	0	0	0	0	0	0	0	0	**33**
7:00 PM	0	9	4	0	2	0	0	0	0	0	0	0	0	**15**
8:00 PM	0	6	1	0	1	0	0	0	0	0	0	0	0	**8**
9:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
10:00 PM	0	2	1	0	1	0	0	0	0	0	0	0	0	**4**
11:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**10**	**410**	**236**	**1**	**118**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**776**
Percent	**1.3%**	**52.8%**	**30.4%**	**0.1%**	**15.2%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Tuesday, November 8, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
7:00 AM	0	2	2	0	1	0	0	0	0	0	0	0	0	**5**
8:00 AM	1	15	19	0	9	0	0	0	0	0	0	0	0	**44**
9:00 AM	0	18	27	0	9	0	0	0	0	0	0	0	0	**54**
10:00 AM	0	23	16	0	5	0	0	0	0	0	0	0	0	**44**
11:00 AM	0	42	18	0	8	0	0	0	0	0	0	0	0	**68**
12:00 PM	1	30	11	1	6	1	0	0	0	0	0	0	0	**50**
1:00 PM	0	30	28	0	7	0	0	0	0	0	0	0	0	**65**
2:00 PM	2	21	23	0	13	0	0	0	0	0	0	0	0	**59**
3:00 PM	1	39	15	0	6	0	0	0	0	0	0	0	0	**61**
4:00 PM	0	40	22	0	8	1	0	0	0	0	0	0	0	**71**
5:00 PM	3	53	21	0	3	0	0	0	0	0	0	0	0	**80**
6:00 PM	0	29	16	0	12	0	0	0	0	0	0	0	0	**57**
7:00 PM	0	12	5	0	2	0	0	0	0	0	0	0	0	**19**
8:00 PM	0	8	3	0	0	0	0	0	0	0	0	0	0	**11**
9:00 PM	0	7	2	0	0	0	0	0	0	0	0	0	0	**9**
10:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**8**	**377**	**228**	**1**	**89**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**705**
Percent	**1.1%**	**53.5%**	**32.3%**	**0.1%**	**12.6%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Tuesday, November 8, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	**4**
7:00 AM	0	12	12	0	4	0	0	0	0	0	0	0	0	**28**
8:00 AM	1	40	32	0	13	0	0	0	0	0	0	0	0	**86**
9:00 AM	1	30	26	0	16	0	0	0	0	0	0	0	0	**73**
10:00 AM	1	21	17	0	18	0	0	0	0	0	0	0	0	**57**
11:00 AM	1	44	15	0	11	0	0	0	1	0	0	0	0	**72**
12:00 PM	0	24	15	0	5	0	0	0	0	0	0	0	0	**44**
1:00 PM	0	26	16	0	11	0	0	0	0	0	0	0	0	**53**
2:00 PM	2	27	15	0	20	0	0	0	0	0	0	0	0	**64**
3:00 PM	1	25	18	0	12	0	0	0	0	0	0	0	0	**56**
4:00 PM	1	21	24	0	9	1	0	0	0	0	0	0	0	**56**
5:00 PM	1	18	9	0	5	0	0	0	0	0	0	0	0	**33**
6:00 PM	0	11	7	0	4	0	0	0	0	0	0	0	0	**22**
7:00 PM	0	8	2	0	3	0	0	0	0	0	0	0	0	**13**
8:00 PM	0	4	0	0	1	0	0	0	0	0	0	0	0	**5**
9:00 PM	0	4	2	0	1	0	0	0	0	0	0	0	0	**7**
10:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
11:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**9**	**321**	**213**	**0**	**133**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**678**
Percent	**1.3%**	**47.3%**	**31.4%**	**0.0%**	**19.6%**	**0.1%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Wednesday, November 9, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
6:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
7:00 AM	0	3	1	0	2	1	0	0	0	0	0	0	0	7
8:00 AM	1	12	24	0	7	0	0	0	0	0	0	0	0	44
9:00 AM	0	19	19	0	10	1	0	0	0	0	0	0	0	49
10:00 AM	0	20	18	0	8	0	0	0	0	0	0	0	0	46
11:00 AM	0	22	16	0	3	0	0	0	0	0	0	0	0	41
12:00 PM	0	24	10	0	7	0	0	0	0	0	0	0	0	41
1:00 PM	1	33	27	0	8	1	0	0	0	0	0	0	0	70
2:00 PM	1	18	15	0	6	0	0	0	0	0	0	0	0	40
3:00 PM	0	27	10	0	6	0	0	0	0	0	0	0	0	43
4:00 PM	0	47	25	0	5	0	0	0	0	0	0	0	0	77
5:00 PM	2	51	24	0	9	0	0	0	0	0	0	0	0	86
6:00 PM	1	42	20	0	6	0	0	0	0	0	0	0	0	69
7:00 PM	0	12	9	0	6	0	0	0	0	0	0	0	0	27
8:00 PM	0	12	3	0	1	0	0	0	0	0	0	0	0	16
9:00 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
10:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**6**	**351**	**221**	**0**	**84**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**665**
Percent	**0.9%**	**52.8%**	**33.2%**	**0.0%**	**12.6%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Wednesday, November 9, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	2
7:00 AM	0	16	9	0	3	1	0	0	0	0	0	0	0	29
8:00 AM	1	34	27	0	19	0	0	0	0	0	0	0	0	81
9:00 AM	1	40	27	0	7	0	0	0	0	0	0	0	0	75
10:00 AM	0	21	22	0	8	0	0	0	0	0	0	0	0	51
11:00 AM	3	24	19	0	5	0	0	0	0	0	0	0	0	51
12:00 PM	0	21	15	1	8	3	0	0	0	0	0	0	0	48
1:00 PM	0	23	22	0	11	0	0	0	0	0	0	0	0	56
2:00 PM	1	24	14	0	10	0	0	0	0	0	0	0	0	49
3:00 PM	1	22	19	0	11	0	0	0	0	0	0	0	0	53
4:00 PM	0	26	16	0	11	0	0	0	0	0	0	0	0	53
5:00 PM	1	27	20	0	14	0	0	0	0	0	0	0	0	62
6:00 PM	0	13	8	0	2	0	0	0	0	0	0	0	0	23
7:00 PM	0	5	4	0	4	0	0	0	0	0	0	0	0	13
8:00 PM	0	4	2	0	1	0	0	0	0	0	0	0	0	7
9:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
10:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
11:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	**8**	**307**	**224**	**1**	**115**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**659**
Percent	**1.2%**	**46.6%**	**34.0%**	**0.2%**	**17.5%**	**0.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Total Study Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	**3**
7:00 AM	0	6	7	0	2	0	0	0	0	0	0	0	0	**15**
8:00 AM	0	14	19	0	6	0	0	0	0	0	0	0	0	**39**
9:00 AM	0	17	15	0	7	0	0	0	0	0	0	0	0	**39**
10:00 AM	0	21	14	0	6	0	0	0	0	0	0	0	0	**41**
11:00 AM	0	30	14	0	6	0	0	0	0	0	0	0	0	**50**
12:00 PM	1	32	14	0	6	0	0	0	0	0	0	0	0	**53**
1:00 PM	0	31	18	0	7	0	0	0	0	0	0	0	0	**56**
2:00 PM	1	23	14	0	7	0	0	0	0	0	0	0	0	**45**
3:00 PM	1	30	14	0	7	0	0	0	0	0	0	0	0	**52**
4:00 PM	1	36	18	0	6	0	0	0	0	0	0	0	0	**61**
5:00 PM	1	37	15	0	5	0	0	0	0	0	0	0	0	**58**
6:00 PM	0	23	10	0	6	0	0	0	0	0	0	0	0	**39**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	6	2	0	1	0	0	0	0	0	0	0	0	**9**
9:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**5**	**312**	**175**	**0**	**73**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**565**
Percent	**0.9%**	**55.2%**	**31.0%**	**0.0%**	**12.9%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Total Study Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	5	3	0	1	0	0	0	0	0	0	0	0	**9**
7:00 AM	0	18	14	0	8	0	0	0	0	0	0	0	0	**40**
8:00 AM	0	31	21	0	11	0	0	0	0	0	0	0	0	**63**
9:00 AM	1	27	16	0	8	0	0	0	0	0	0	0	0	**52**
10:00 AM	1	24	15	0	10	0	0	0	0	0	0	0	0	**50**
11:00 AM	1	25	16	0	7	0	0	0	0	0	0	0	0	**49**
12:00 PM	1	27	15	0	8	1	0	0	0	0	0	0	0	**52**
1:00 PM	1	27	15	0	10	0	0	0	0	0	0	0	0	**53**
2:00 PM	1	23	14	0	11	0	0	0	0	0	0	0	0	**49**
3:00 PM	1	21	15	0	8	0	0	0	0	0	0	0	0	**45**
4:00 PM	0	20	14	0	8	0	0	0	0	0	0	0	0	**42**
5:00 PM	0	17	9	0	6	0	0	0	0	0	0	0	0	**32**
6:00 PM	0	11	5	0	3	0	0	0	0	0	0	0	0	**19**
7:00 PM	0	5	2	0	2	0	0	0	0	0	0	0	0	**9**
8:00 PM	0	3	1	0	1	0	0	0	0	0	0	0	0	**5**
9:00 PM	0	3	1	0	1	0	0	0	0	0	0	0	0	**5**
10:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**7**	**289**	**176**	**0**	**103**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**576**
Percent	**1.2%**	**50.2%**	**30.6%**	**0.0%**	**17.9%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

3-Day (Tuesday - Thursday) Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
7:00 AM	0	2	2	0	1	0	0	0	0	0	0	0	0	**5**
8:00 AM	1	15	19	0	9	0	0	0	0	0	0	0	0	**44**
9:00 AM	0	18	27	0	9	0	0	0	0	0	0	0	0	**54**
10:00 AM	0	23	16	0	5	0	0	0	0	0	0	0	0	**44**
11:00 AM	0	42	18	0	8	0	0	0	0	0	0	0	0	**68**
12:00 PM	1	30	11	1	6	1	0	0	0	0	0	0	0	**50**
1:00 PM	0	30	28	0	7	0	0	0	0	0	0	0	0	**65**
2:00 PM	2	21	23	0	13	0	0	0	0	0	0	0	0	**59**
3:00 PM	1	39	15	0	6	0	0	0	0	0	0	0	0	**61**
4:00 PM	0	40	22	0	8	1	0	0	0	0	0	0	0	**71**
5:00 PM	3	53	21	0	3	0	0	0	0	0	0	0	0	**80**
6:00 PM	0	29	16	0	12	0	0	0	0	0	0	0	0	**57**
7:00 PM	0	12	5	0	2	0	0	0	0	0	0	0	0	**19**
8:00 PM	0	8	3	0	0	0	0	0	0	0	0	0	0	**11**
9:00 PM	0	7	2	0	0	0	0	0	0	0	0	0	0	**9**
10:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**8**	**377**	**228**	**1**	**89**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**705**
Percent	**1.1%**	**53.5%**	**32.3%**	**0.1%**	**12.6%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

3-Day (Tuesday - Thursday) Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	**4**
7:00 AM	0	12	12	0	4	0	0	0	0	0	0	0	0	**28**
8:00 AM	1	40	32	0	13	0	0	0	0	0	0	0	0	**86**
9:00 AM	1	30	26	0	16	0	0	0	0	0	0	0	0	**73**
10:00 AM	1	21	17	0	18	0	0	0	0	0	0	0	0	**57**
11:00 AM	1	44	15	0	11	0	0	0	1	0	0	0	0	**72**
12:00 PM	0	24	15	0	5	0	0	0	0	0	0	0	0	**44**
1:00 PM	0	26	16	0	11	0	0	0	0	0	0	0	0	**53**
2:00 PM	2	27	15	0	20	0	0	0	0	0	0	0	0	**64**
3:00 PM	1	25	18	0	12	0	0	0	0	0	0	0	0	**56**
4:00 PM	1	21	24	0	9	1	0	0	0	0	0	0	0	**56**
5:00 PM	1	18	9	0	5	0	0	0	0	0	0	0	0	**33**
6:00 PM	0	11	7	0	4	0	0	0	0	0	0	0	0	**22**
7:00 PM	0	8	2	0	3	0	0	0	0	0	0	0	0	**13**
8:00 PM	0	4	0	0	1	0	0	0	0	0	0	0	0	**5**
9:00 PM	0	4	2	0	1	0	0	0	0	0	0	0	0	**7**
10:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
11:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**9**	**321**	**213**	**0**	**133**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**678**
Percent	**1.3%**	**47.3%**	**31.4%**	**0.0%**	**19.6%**	**0.1%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Vehicle Speed Report Summary

Location: Airport Rd S/O Euclid Ave
Count Direction: Northbound / Southbound
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

	Speed Range (mph)																	Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
Study Total																		
Northbound	56	354	1,992	1,572	136	8	2	0	0	0	0	0	0	0	0	0	0	4,120
Percent	1.4%	8.6%	48.3%	38.2%	3.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	30	248	1,074	1,716	859	130	6	0	1	0	0	0	0	0	0	0	0	4,064
Percent	0.7%	6.1%	26.4%	42.2%	21.1%	3.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	86	602	3,066	3,288	995	138	8	0	1	0	0	0	0	0	0	0	0	8,184
Percent	1.1%	7.4%	37.5%	40.2%	12.2%	1.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Northbound			**Northbound**		
50th Percentile (Median)	19.2	mph	Mean (Average) Speed	19.2	mph
85th Percentile	22.4	mph	10 mph Pace	14.2 - 24.2	mph
95th Percentile	24.4	mph	Percent in Pace	87.0	%
Southbound			**Southbound**		
50th Percentile (Median)	21.8	mph	Mean (Average) Speed	21.8	mph
85th Percentile	26.4	mph	10 mph Pace	17.1 - 27.1	mph
95th Percentile	29.1	mph	Percent in Pace	73.1	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Thursday, November 3, 2016
Northbound

	Speed Range (mph)																	Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
7:00 AM	0	6	17	11	2	0	0	0	0	0	0	0	0	0	0	0	0	**36**
8:00 AM	1	3	34	19	0	0	0	0	0	0	0	0	0	0	0	0	0	**57**
9:00 AM	1	10	24	14	1	0	0	0	0	0	0	0	0	0	0	0	0	**50**
10:00 AM	3	2	18	18	2	1	0	0	0	0	0	0	0	0	0	0	0	**44**
11:00 AM	0	3	17	20	2	0	0	0	0	0	0	0	0	0	0	0	0	**42**
12:00 PM	1	12	41	25	1	0	0	0	0	0	0	0	0	0	0	0	0	**80**
1:00 PM	1	0	20	23	3	0	0	0	0	0	0	0	0	0	0	0	0	**47**
2:00 PM	0	3	19	14	0	1	0	0	0	0	0	0	0	0	0	0	0	**37**
3:00 PM	0	3	31	43	1	0	0	0	0	0	0	0	0	0	0	0	0	**78**
4:00 PM	0	6	33	30	4	0	0	0	0	0	0	0	0	0	0	0	0	**73**
5:00 PM	1	4	36	18	2	1	0	0	0	0	0	0	0	0	0	0	0	**62**
6:00 PM	0	2	18	18	3	0	0	0	0	0	0	0	0	0	0	0	0	**41**
7:00 PM	0	2	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
8:00 PM	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
11:00 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
Total	**8**	**60**	**319**	**268**	**21**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**679**
Percent	**1.2%**	**8.8%**	**47.0%**	**39.5%**	**3.1%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.2	mph	Mean (Average) Speed	19.3	mph
85th Percentile	22.6	mph	10 mph Pace	14.5 - 24.5	mph
95th Percentile	24.6	mph	Percent in Pace	86.5	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Thursday, November 3, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
6:00 AM	2	3	5	11	4	1	0	0	0	0	0	0	0	0	0	0	0	26
7:00 AM	1	7	21	43	8	1	0	0	0	0	0	0	0	0	0	0	0	81
8:00 AM	0	2	19	40	13	4	0	0	0	0	0	0	0	0	0	0	0	78
9:00 AM	2	7	12	16	11	1	0	0	0	0	0	0	0	0	0	0	0	49
10:00 AM	0	2	13	15	12	5	0	0	0	0	0	0	0	0	0	0	0	47
11:00 AM	0	0	6	16	12	1	0	0	1	0	0	0	0	0	0	0	0	36
12:00 PM	0	2	16	24	21	1	0	0	0	0	0	0	0	0	0	0	0	64
1:00 PM	0	6	6	37	13	2	0	0	0	0	0	0	0	0	0	0	0	64
2:00 PM	1	3	17	11	18	2	0	0	0	0	0	0	0	0	0	0	0	52
3:00 PM	0	4	6	27	12	0	0	0	0	0	0	0	0	0	0	0	0	49
4:00 PM	0	1	7	13	8	3	0	0	0	0	0	0	0	0	0	0	0	32
5:00 PM	0	3	12	20	7	0	0	0	0	0	0	0	0	0	0	0	0	42
6:00 PM	0	3	8	5	3	0	0	0	0	0	0	0	0	0	0	0	0	19
7:00 PM	0	0	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	6
8:00 PM	0	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4
11:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	**6**	**46**	**158**	**286**	**143**	**21**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**661**
Percent	**0.9%**	**7.0%**	**23.9%**	**43.3%**	**21.6%**	**3.2%**	**0.0%**	**0.0%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	21.8	mph	Mean (Average) Speed	21.9	mph
85th Percentile	26.7	mph	10 mph Pace	17.2 - 27.2	mph
95th Percentile	29.2	mph	Percent in Pace	72	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Friday, November 4, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:00 AM	0	0	3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	8
7:00 AM	0	0	18	12	1	0	0	0	0	0	0	0	0	0	0	0	0	31
8:00 AM	3	6	28	17	0	0	0	0	0	0	0	0	0	0	0	0	0	54
9:00 AM	0	5	16	16	2	0	0	0	0	0	0	0	0	0	0	0	0	39
10:00 AM	0	3	19	22	1	0	0	0	0	0	0	0	0	0	0	0	0	45
11:00 AM	0	4	23	23	3	0	0	0	0	0	0	0	0	0	0	0	0	53
12:00 PM	0	5	37	25	1	0	0	0	0	0	0	0	0	0	0	0	0	68
1:00 PM	0	3	40	14	1	0	0	0	0	0	0	0	0	0	0	0	0	58
2:00 PM	0	6	20	32	1	0	0	0	0	0	0	0	0	0	0	0	0	59
3:00 PM	1	2	31	32	2	0	0	0	0	0	0	0	0	0	0	0	0	68
4:00 PM	0	5	40	30	2	0	1	0	0	0	0	0	0	0	0	0	0	78
5:00 PM	0	4	24	19	2	0	0	0	0	0	0	0	0	0	0	0	0	49
6:00 PM	0	1	9	8	2	0	0	0	0	0	0	0	0	0	0	0	0	20
7:00 PM	0	3	6	2	1	1	0	0	0	0	0	0	0	0	0	0	0	13
8:00 PM	0	0	3	4	1	0	0	0	0	0	0	0	0	0	0	0	0	8
9:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
10:00 PM	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
11:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	**4**	**47**	**320**	**267**	**20**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**660**
Percent	**0.6%**	**7.1%**	**48.5%**	**40.5%**	**3.0%**	**0.2%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.4	mph	Mean (Average) Speed	19.5	mph
85th Percentile	22.7	mph	10 mph Pace	14.2 - 24.2	mph
95th Percentile	24.3	mph	Percent in Pace	89.7	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Friday, November 4, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
6:00 AM	0	2	6	12	4	1	0	0	0	0	0	0	0	0	0	0	0	25
7:00 AM	0	1	23	30	20	1	0	0	0	0	0	0	0	0	0	0	0	75
8:00 AM	0	4	26	25	5	2	0	0	0	0	0	0	0	0	0	0	0	62
9:00 AM	0	3	12	13	10	1	1	0	0	0	0	0	0	0	0	0	0	40
10:00 AM	0	3	15	24	14	5	0	0	0	0	0	0	0	0	0	0	0	61
11:00 AM	0	6	17	21	9	3	0	0	0	0	0	0	0	0	0	0	0	56
12:00 PM	0	5	23	28	9	0	0	0	0	0	0	0	0	0	0	0	0	65
1:00 PM	1	6	23	22	9	2	0	0	0	0	0	0	0	0	0	0	0	63
2:00 PM	2	6	9	20	9	1	0	0	0	0	0	0	0	0	0	0	0	47
3:00 PM	0	3	12	26	13	5	0	0	0	0	0	0	0	0	0	0	0	59
4:00 PM	0	2	11	16	12	2	0	0	0	0	0	0	0	0	0	0	0	43
5:00 PM	0	0	9	8	8	1	0	0	0	0	0	0	0	0	0	0	0	26
6:00 PM	0	0	3	9	1	0	0	0	0	0	0	0	0	0	0	0	0	13
7:00 PM	0	2	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	9
8:00 PM	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4
9:00 PM	0	0	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	8
10:00 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**3**	**43**	**201**	**260**	**128**	**24**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**660**
Percent	**0.5%**	**6.5%**	**30.5%**	**39.4%**	**19.4%**	**3.6%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	21.2	mph	Mean (Average) Speed	21.5	mph
85th Percentile	26.4	mph	10 mph Pace	16.4 - 26.4	mph
95th Percentile	29.0	mph	Percent in Pace	73.8	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Saturday, November 5, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	4
7:00 AM	0	2	2	9	0	0	0	0	0	0	0	0	0	0	0	0	0	13
8:00 AM	2	2	7	8	1	0	0	0	0	0	0	0	0	0	0	0	0	20
9:00 AM	0	3	8	6	0	0	0	0	0	0	0	0	0	0	0	0	0	17
10:00 AM	1	8	14	9	0	0	0	0	0	0	0	0	0	0	0	0	0	32
11:00 AM	0	7	33	21	0	0	0	0	0	0	0	0	0	0	0	0	0	61
12:00 PM	0	0	22	20	0	0	0	0	0	0	0	0	0	0	0	0	0	42
1:00 PM	0	3	24	20	2	0	0	0	0	0	0	0	0	0	0	0	0	49
2:00 PM	1	0	20	9	0	0	0	0	0	0	0	0	0	0	0	0	0	30
3:00 PM	0	3	18	9	1	1	0	0	0	0	0	0	0	0	0	0	0	32
4:00 PM	0	6	14	12	1	0	0	0	0	0	0	0	0	0	0	0	0	33
5:00 PM	1	3	4	5	0	0	1	0	0	0	0	0	0	0	0	0	0	14
6:00 PM	0	1	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	10
7:00 PM	0	1	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	8
8:00 PM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	4
9:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
10:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	**5**	**40**	**184**	**138**	**6**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**375**
Percent	**1.3%**	**10.7%**	**49.1%**	**36.8%**	**1.6%**	**0.3%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.8	mph	Mean (Average) Speed	18.9	mph
85th Percentile	22.1	mph	10 mph Pace	14.2 - 24.2	mph
95th Percentile	24.0	mph	Percent in Pace	87.2	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Saturday, November 5, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
6:00 AM	0	0	3	2	2	1	0	0	0	0	0	0	0	0	0	0	0	8
7:00 AM	1	3	6	8	3	5	0	0	0	0	0	0	0	0	0	0	0	26
8:00 AM	0	1	13	7	2	1	1	0	0	0	0	0	0	0	0	0	0	25
9:00 AM	0	1	7	18	16	0	0	0	0	0	0	0	0	0	0	0	0	42
10:00 AM	1	2	21	9	8	2	0	0	0	0	0	0	0	0	0	0	0	43
11:00 AM	0	1	13	17	6	2	0	0	0	0	0	0	0	0	0	0	0	39
12:00 PM	0	1	12	23	9	1	0	0	0	0	0	0	0	0	0	0	0	46
1:00 PM	0	2	11	18	12	0	0	0	0	0	0	0	0	0	0	0	0	43
2:00 PM	0	4	10	13	5	0	0	0	0	0	0	0	0	0	0	0	0	32
3:00 PM	1	3	7	3	4	0	0	0	0	0	0	0	0	0	0	0	0	18
4:00 PM	0	1	4	13	3	0	0	0	0	0	0	0	0	0	0	0	0	21
5:00 PM	0	3	4	4	2	0	0	0	0	0	0	0	0	0	0	0	0	13
6:00 PM	0	0	2	5	0	0	1	0	0	0	0	0	0	0	0	0	0	8
7:00 PM	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3
8:00 PM	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4
9:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**3**	**25**	**119**	**146**	**73**	**12**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**380**
Percent	**0.8%**	**6.6%**	**31.3%**	**38.4%**	**19.2%**	**3.2%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	21.4	mph	Mean (Average) Speed	21.5	mph
85th Percentile	26.2	mph	10 mph Pace	16.6 - 26.6	mph
95th Percentile	28.8	mph	Percent in Pace	72.9	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Sunday, November 6, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:00 AM	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5
9:00 AM	0	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
10:00 AM	0	0	6	13	2	0	0	0	0	0	0	0	0	0	0	0	0	21
11:00 AM	0	2	7	11	1	0	0	0	0	0	0	0	0	0	0	0	0	21
12:00 PM	0	1	12	13	2	0	0	0	0	0	0	0	0	0	0	0	0	28
1:00 PM	0	5	12	6	0	0	0	0	0	0	0	0	0	0	0	0	0	23
2:00 PM	0	1	11	12	0	0	0	0	0	0	0	0	0	0	0	0	0	24
3:00 PM	0	1	15	5	2	0	0	0	0	0	0	0	0	0	0	0	0	23
4:00 PM	0	5	12	7	0	0	0	0	0	0	0	0	0	0	0	0	0	24
5:00 PM	0	2	10	11	2	0	0	0	0	0	0	0	0	0	0	0	0	25
6:00 PM	0	4	10	7	2	0	0	0	0	0	0	0	0	0	0	0	0	23
7:00 PM	0	1	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	11
8:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9:00 PM	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
10:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:00 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Total	**0**	**27**	**117**	**92**	**11**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**248**
Percent	**0.0%**	**10.9%**	**47.2%**	**37.1%**	**4.4%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.2	mph	Mean (Average) Speed	19.1	mph
85th Percentile	22.3	mph	10 mph Pace	14.1 - 24.1	mph
95th Percentile	25.1	mph	Percent in Pace	87.1	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Sunday, November 6, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
7:00 AM	0	0	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	**5**
8:00 AM	0	0	2	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**8**
9:00 AM	0	1	8	5	2	0	0	0	0	0	0	0	0	0	0	0	0	**16**
10:00 AM	0	2	5	15	4	0	0	0	0	0	0	0	0	0	0	0	0	**26**
11:00 AM	0	1	5	8	2	2	0	0	0	0	0	0	0	0	0	0	0	**18**
12:00 PM	1	2	8	10	7	0	0	0	0	0	0	0	0	0	0	0	0	**28**
1:00 PM	0	2	9	8	9	0	0	0	0	0	0	0	0	0	0	0	0	**28**
2:00 PM	0	3	6	12	5	0	0	0	0	0	0	0	0	0	0	0	0	**26**
3:00 PM	0	2	5	12	1	0	0	0	0	0	0	0	0	0	0	0	0	**20**
4:00 PM	0	2	5	15	4	0	0	0	0	0	0	0	0	0	0	0	0	**26**
5:00 PM	0	0	3	6	6	0	0	0	0	0	0	0	0	0	0	0	0	**15**
6:00 PM	0	2	4	7	3	0	0	0	0	0	0	0	0	0	0	0	0	**16**
7:00 PM	0	1	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	**6**
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 PM	0	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**7**
10:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
11:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**1**	**20**	**69**	**108**	**50**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**250**
Percent	**0.4%**	**8.0%**	**27.6%**	**43.2%**	**20.0%**	**0.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	21.2	mph	Mean (Average) Speed	21.2	mph
85th Percentile	26.0	mph	10 mph Pace	17.4 - 27.4	mph
95th Percentile	28.1	mph	Percent in Pace	74.8	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Monday, November 7, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 AM	0	0	10	4	1	0	0	0	0	0	0	0	0	0	0	0	0	**15**
8:00 AM	1	3	31	13	1	0	0	0	0	0	0	0	0	0	0	0	0	**49**
9:00 AM	0	6	21	25	3	0	0	0	0	0	0	0	0	0	0	0	0	**55**
10:00 AM	1	6	38	12	0	0	0	0	0	0	0	0	0	0	0	0	0	**57**
11:00 AM	4	6	30	25	1	0	0	0	0	0	0	0	0	0	0	0	0	**66**
12:00 PM	0	6	39	16	2	0	0	0	0	0	0	0	0	0	0	0	0	**63**
1:00 PM	1	7	39	34	2	0	0	0	0	0	0	0	0	0	0	0	0	**83**
2:00 PM	0	9	31	16	0	0	0	0	0	0	0	0	0	0	0	0	0	**56**
3:00 PM	1	8	28	20	3	0	0	0	0	0	0	0	0	0	0	0	0	**60**
4:00 PM	0	2	28	30	5	0	0	0	0	0	0	0	0	0	0	0	0	**65**
5:00 PM	0	8	41	47	2	1	0	0	0	0	0	0	0	0	0	0	0	**99**
6:00 PM	1	9	31	13	1	0	0	0	0	0	0	0	0	0	0	0	0	**55**
7:00 PM	3	2	27	9	0	0	0	0	0	0	0	0	0	0	0	0	0	**41**
8:00 PM	1	1	8	3	3	0	0	0	0	0	0	0	0	0	0	0	0	**16**
9:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
10:00 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**13**	**73**	**409**	**267**	**25**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**788**
Percent	**1.6%**	**9.3%**	**51.9%**	**33.9%**	**3.2%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.0	mph	Mean (Average) Speed	18.9	mph
85th Percentile	22.0	mph	10 mph Pace	13.4 - 23.4	mph
95th Percentile	24.1	mph	Percent in Pace	87.2	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Monday, November 7, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	5	10	13	8	3	0	0	0	0	0	0	0	0	0	0	0	39
8:00 AM	0	2	26	48	18	3	0	0	0	0	0	0	0	0	0	0	0	97
9:00 AM	0	1	23	26	13	3	0	0	0	0	0	0	0	0	0	0	0	66
10:00 AM	2	6	23	24	8	0	0	0	0	0	0	0	0	0	0	0	0	63
11:00 AM	0	7	16	28	16	4	0	0	0	0	0	0	0	0	0	0	0	71
12:00 PM	0	2	13	27	20	2	0	0	0	0	0	0	0	0	0	0	0	64
1:00 PM	0	4	20	31	12	1	0	0	0	0	0	0	0	0	0	0	0	68
2:00 PM	1	4	30	28	10	0	0	0	0	0	0	0	0	0	0	0	0	73
3:00 PM	3	6	14	22	12	3	0	0	0	0	0	0	0	0	0	0	0	60
4:00 PM	0	9	9	30	13	4	0	0	0	0	0	0	0	0	0	0	0	65
5:00 PM	0	1	13	16	12	1	0	0	0	0	0	0	0	0	0	0	0	43
6:00 PM	0	3	11	14	5	0	0	0	0	0	0	0	0	0	0	0	0	33
7:00 PM	0	1	3	9	2	0	0	0	0	0	0	0	0	0	0	0	0	15
8:00 PM	0	1	4	1	1	1	0	0	0	0	0	0	0	0	0	0	0	8
9:00 PM	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3
10:00 PM	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4
11:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	**7**	**54**	**218**	**321**	**151**	**25**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**776**
Percent	**0.9%**	**7.0%**	**28.1%**	**41.4%**	**19.5%**	**3.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	21.4	mph	Mean (Average) Speed	21.5	mph
85th Percentile	26.2	mph	10 mph Pace	15.9 - 25.9	mph
95th Percentile	28.9	mph	Percent in Pace	71.4	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Tuesday, November 8, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:00 AM	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5
8:00 AM	1	2	24	17	0	0	0	0	0	0	0	0	0	0	0	0	0	44
9:00 AM	1	3	30	19	1	0	0	0	0	0	0	0	0	0	0	0	0	54
10:00 AM	0	3	20	19	2	0	0	0	0	0	0	0	0	0	0	0	0	44
11:00 AM	0	15	29	22	1	1	0	0	0	0	0	0	0	0	0	0	0	68
12:00 PM	8	3	19	17	3	0	0	0	0	0	0	0	0	0	0	0	0	50
1:00 PM	2	2	26	32	3	0	0	0	0	0	0	0	0	0	0	0	0	65
2:00 PM	1	6	33	17	2	0	0	0	0	0	0	0	0	0	0	0	0	59
3:00 PM	4	6	23	27	1	0	0	0	0	0	0	0	0	0	0	0	0	61
4:00 PM	2	4	32	30	3	0	0	0	0	0	0	0	0	0	0	0	0	71
5:00 PM	2	5	41	27	5	0	0	0	0	0	0	0	0	0	0	0	0	80
6:00 PM	2	3	35	16	1	0	0	0	0	0	0	0	0	0	0	0	0	57
7:00 PM	0	2	12	5	0	0	0	0	0	0	0	0	0	0	0	0	0	19
8:00 PM	0	1	4	6	0	0	0	0	0	0	0	0	0	0	0	0	0	11
9:00 PM	0	1	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	9
10:00 PM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**23**	**57**	**341**	**261**	**22**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**705**
Percent	**3.3%**	**8.1%**	**48.4%**	**37.0%**	**3.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.0	mph	Mean (Average) Speed	19.0	mph
85th Percentile	22.2	mph	10 mph Pace	13.9 - 23.9	mph
95th Percentile	24.1	mph	Percent in Pace	86.8	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Tuesday, November 8, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**4**
7:00 AM	0	2	6	11	8	1	0	0	0	0	0	0	0	0	0	0	0	**28**
8:00 AM	0	3	21	45	16	1	0	0	0	0	0	0	0	0	0	0	0	**86**
9:00 AM	2	1	19	35	14	2	0	0	0	0	0	0	0	0	0	0	0	**73**
10:00 AM	0	2	13	24	16	2	0	0	0	0	0	0	0	0	0	0	0	**57**
11:00 AM	0	6	15	29	19	3	0	0	0	0	0	0	0	0	0	0	0	**72**
12:00 PM	1	3	10	21	9	0	0	0	0	0	0	0	0	0	0	0	0	**44**
1:00 PM	1	3	6	23	16	4	0	0	0	0	0	0	0	0	0	0	0	**53**
2:00 PM	0	2	15	36	10	1	0	0	0	0	0	0	0	0	0	0	0	**64**
3:00 PM	0	3	10	25	17	0	1	0	0	0	0	0	0	0	0	0	0	**56**
4:00 PM	0	2	16	21	15	2	0	0	0	0	0	0	0	0	0	0	0	**56**
5:00 PM	0	3	7	15	7	1	0	0	0	0	0	0	0	0	0	0	0	**33**
6:00 PM	0	0	6	13	3	0	0	0	0	0	0	0	0	0	0	0	0	**22**
7:00 PM	0	2	5	3	3	0	0	0	0	0	0	0	0	0	0	0	0	**13**
8:00 PM	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	**5**
9:00 PM	1	1	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	**7**
10:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
11:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**6**	**35**	**155**	**305**	**159**	**17**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**678**
Percent	**0.9%**	**5.2%**	**22.9%**	**45.0%**	**23.5%**	**2.5%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	22.2	mph	Mean (Average) Speed	22.1	mph
85th Percentile	26.4	mph	10 mph Pace	17.0 - 27.0	mph
95th Percentile	29.0	mph	Percent in Pace	75.2	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Wednesday, November 9, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
7:00 AM	0	2	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**7**
8:00 AM	0	0	24	19	1	0	0	0	0	0	0	0	0	0	0	0	0	**44**
9:00 AM	0	4	23	21	1	0	0	0	0	0	0	0	0	0	0	0	0	**49**
10:00 AM	1	3	21	20	1	0	0	0	0	0	0	0	0	0	0	0	0	**46**
11:00 AM	0	3	19	17	2	0	0	0	0	0	0	0	0	0	0	0	0	**41**
12:00 PM	1	5	14	20	1	0	0	0	0	0	0	0	0	0	0	0	0	**41**
1:00 PM	0	4	35	28	3	0	0	0	0	0	0	0	0	0	0	0	0	**70**
2:00 PM	0	3	21	14	2	0	0	0	0	0	0	0	0	0	0	0	0	**40**
3:00 PM	0	3	18	20	2	0	0	0	0	0	0	0	0	0	0	0	0	**43**
4:00 PM	0	4	30	37	6	0	0	0	0	0	0	0	0	0	0	0	0	**77**
5:00 PM	1	6	37	40	2	0	0	0	0	0	0	0	0	0	0	0	0	**86**
6:00 PM	0	8	35	22	4	0	0	0	0	0	0	0	0	0	0	0	0	**69**
7:00 PM	0	4	13	8	2	0	0	0	0	0	0	0	0	0	0	0	0	**27**
8:00 PM	0	0	4	10	2	0	0	0	0	0	0	0	0	0	0	0	0	**16**
9:00 PM	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
10:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**3**	**50**	**302**	**279**	**31**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**665**
Percent	**0.5%**	**7.5%**	**45.4%**	**42.0%**	**4.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.6	mph	Mean (Average) Speed	19.7	mph
85th Percentile	22.7	mph	10 mph Pace	14.8 - 24.8	mph
95th Percentile	24.9	mph	Percent in Pace	87.5	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Wednesday, November 9, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
7:00 AM	0	3	6	13	6	1	0	0	0	0	0	0	0	0	0	0	0	**29**
8:00 AM	0	2	14	42	22	1	0	0	0	0	0	0	0	0	0	0	0	**81**
9:00 AM	0	1	15	36	18	4	1	0	0	0	0	0	0	0	0	0	0	**75**
10:00 AM	1	4	17	15	11	3	0	0	0	0	0	0	0	0	0	0	0	**51**
11:00 AM	1	1	13	21	12	3	0	0	0	0	0	0	0	0	0	0	0	**51**
12:00 PM	2	3	5	18	15	5	0	0	0	0	0	0	0	0	0	0	0	**48**
1:00 PM	0	0	7	34	11	4	0	0	0	0	0	0	0	0	0	0	0	**56**
2:00 PM	0	1	12	24	10	2	0	0	0	0	0	0	0	0	0	0	0	**49**
3:00 PM	0	1	22	18	8	4	0	0	0	0	0	0	0	0	0	0	0	**53**
4:00 PM	0	3	12	23	13	1	1	0	0	0	0	0	0	0	0	0	0	**53**
5:00 PM	0	4	12	23	22	1	0	0	0	0	0	0	0	0	0	0	0	**62**
6:00 PM	0	1	7	10	5	0	0	0	0	0	0	0	0	0	0	0	0	**23**
7:00 PM	0	1	6	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**13**
8:00 PM	0	0	2	4	1	0	0	0	0	0	0	0	0	0	0	0	0	**7**
9:00 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
10:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
11:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**4**	**25**	**154**	**290**	**155**	**29**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**659**
Percent	**0.6%**	**3.8%**	**23.4%**	**44.0%**	**23.5%**	**4.4%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	22.6	mph	Mean (Average) Speed	22.6	mph
85th Percentile	27.0	mph	10 mph Pace	18.0 - 28.0	mph
95th Percentile	29.9	mph	Percent in Pace	76.9	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Total Study Average
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
7:00 AM	0	1	8	6	1	0	0	0	0	0	0	0	0	0	0	0	0	**16**
8:00 AM	1	2	21	14	0	0	0	0	0	0	0	0	0	0	0	0	0	**38**
9:00 AM	0	5	18	14	1	0	0	0	0	0	0	0	0	0	0	0	0	**38**
10:00 AM	1	4	19	16	1	0	0	0	0	0	0	0	0	0	0	0	0	**41**
11:00 AM	1	6	23	20	1	0	0	0	0	0	0	0	0	0	0	0	0	**51**
12:00 PM	1	5	26	19	1	0	0	0	0	0	0	0	0	0	0	0	0	**52**
1:00 PM	1	3	28	22	2	0	0	0	0	0	0	0	0	0	0	0	0	**56**
2:00 PM	0	4	22	16	1	0	0	0	0	0	0	0	0	0	0	0	0	**43**
3:00 PM	1	4	23	22	2	0	0	0	0	0	0	0	0	0	0	0	0	**52**
4:00 PM	0	5	27	25	3	0	0	0	0	0	0	0	0	0	0	0	0	**60**
5:00 PM	1	5	28	24	2	0	0	0	0	0	0	0	0	0	0	0	0	**60**
6:00 PM	0	4	21	12	2	0	0	0	0	0	0	0	0	0	0	0	0	**39**
7:00 PM	0	2	11	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**19**
8:00 PM	0	0	3	4	1	0	0	0	0	0	0	0	0	0	0	0	0	**8**
9:00 PM	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
10:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
11:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**7**	**51**	**283**	**224**	**19**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**584**
Percent	**1.2%**	**8.7%**	**48.5%**	**38.4%**	**3.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	19.2	mph	Mean (Average) Speed	19.2	mph
85th Percentile	22.4	mph	10 mph Pace	14.2 - 24.2	mph
95th Percentile	24.4	mph	Percent in Pace	87.0	%

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Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 05

Total Study Average
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	1	2	4	2	0	0	0	0	0	0	0	0	0	0	0	0	**9**
7:00 AM	0	3	11	17	8	2	0	0	0	0	0	0	0	0	0	0	0	**41**
8:00 AM	0	2	17	30	11	2	0	0	0	0	0	0	0	0	0	0	0	**62**
9:00 AM	1	2	14	21	12	2	0	0	0	0	0	0	0	0	0	0	0	**52**
10:00 AM	1	3	15	18	10	2	0	0	0	0	0	0	0	0	0	0	0	**49**
11:00 AM	0	3	12	20	11	3	0	0	0	0	0	0	0	0	0	0	0	**49**
12:00 PM	1	3	12	22	13	1	0	0	0	0	0	0	0	0	0	0	0	**52**
1:00 PM	0	3	12	25	12	2	0	0	0	0	0	0	0	0	0	0	0	**54**
2:00 PM	1	3	14	21	10	1	0	0	0	0	0	0	0	0	0	0	0	**50**
3:00 PM	1	3	11	19	10	2	0	0	0	0	0	0	0	0	0	0	0	**46**
4:00 PM	0	3	9	19	10	2	0	0	0	0	0	0	0	0	0	0	0	**43**
5:00 PM	0	2	9	13	9	1	0	0	0	0	0	0	0	0	0	0	0	**34**
6:00 PM	0	1	6	9	3	0	0	0	0	0	0	0	0	0	0	0	0	**19**
7:00 PM	0	1	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	**9**
8:00 PM	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**5**
9:00 PM	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
10:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**5**	**33**	**152**	**245**	**125**	**20**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**580**
Percent	**0.9%**	**5.7%**	**26.2%**	**42.2%**	**21.6%**	**3.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	21.8	mph	Mean (Average) Speed	21.8	mph
85th Percentile	26.4	mph	10 mph Pace	17.1 - 27.1	mph
95th Percentile	29.1	mph	Percent in Pace	73.1	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Euclid Ave
Date Range: 11/3/2016 - 11/9/2016
Site Code: 05

	Thursday			Friday			Saturday			Sunday			Monday			Tuesday			Wednesday			Mid-Week Average		
	11/3/2016			11/4/2016			11/5/2016			11/6/2016			11/7/2016			11/8/2016			11/9/2016					
Time	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	1	1	2	1	1	2	1	1	2	1	2	3	1	1	2	3	1	4	1	1	2	2	1	3
1:00 AM	2	1	3	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
2:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	2	0	2	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	1
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
5:00 AM	1	2	3	1	1	2	0	2	2	0	0	0	1	1	2	0	1	1	1	0	1	1	1	2
6:00 AM	5	26	31	8	25	33	4	8	12	1	1	2	0	0	0	2	4	6	1	2	3	3	11	13
7:00 AM	36	81	117	31	75	106	13	26	39	2	5	7	15	39	54	5	28	33	7	29	36	16	46	62
8:00 AM	57	78	135	54	62	116	20	25	45	5	8	13	49	97	146	44	86	130	44	81	125	48	82	130
9:00 AM	50	49	99	39	40	79	17	42	59	8	16	24	55	66	121	54	73	127	49	75	124	51	66	117
10:00 AM	44	47	91	45	61	106	32	43	75	21	26	47	57	63	120	44	57	101	46	51	97	45	52	96
11:00 AM	42	36	78	53	56	109	61	39	100	21	18	39	66	71	137	68	72	140	41	51	92	50	53	103
12:00 PM	80	64	144	68	65	133	42	46	88	28	28	56	63	64	127	50	44	94	41	48	89	57	52	109
1:00 PM	47	64	111	58	63	121	49	43	92	23	28	51	83	68	151	65	53	118	70	56	126	61	58	118
2:00 PM	37	52	89	59	47	106	30	32	62	24	26	50	56	73	129	59	64	123	40	49	89	45	55	100
3:00 PM	78	49	127	68	59	127	32	18	50	23	20	43	60	60	120	61	56	117	43	53	96	61	53	113
4:00 PM	73	32	105	78	43	121	33	21	54	24	26	50	65	65	130	71	56	127	77	53	130	74	47	121
5:00 PM	62	42	104	49	26	75	14	13	27	25	15	40	99	43	142	80	33	113	86	62	148	76	46	122
6:00 PM	41	19	60	20	13	33	10	8	18	23	16	39	55	33	88	57	22	79	69	23	92	56	21	77
7:00 PM	12	6	18	13	9	22	8	3	11	11	6	17	41	15	56	19	13	32	27	13	40	19	11	30
8:00 PM	5	6	11	8	4	12	4	4	8	1	0	1	16	8	24	11	5	16	16	7	23	11	6	17
9:00 PM	0	0	0	2	8	10	2	1	3	3	7	10	2	3	5	9	7	16	5	3	8	5	3	8
10:00 PM	2	4	6	4	2	6	1	2	3	2	1	3	3	4	7	3	2	5	1	1	2	2	2	4
11:00 PM	2	1	3	1	0	1	1	0	1	2	1	3	0	1	1	0	1	1	0	1	1	1	1	2
Total	**679**	**661**	**1,340**	**660**	**660**	**1,320**	**375**	**380**	**755**	**248**	**250**	**498**	**788**	**776**	**1,564**	**705**	**678**	**1,383**	**665**	**659**	**1,324**	**683**	**666**	**1,349**
Percent	**51%**	**49%**	-	**50%**	**50%**	-	**50%**	**50%**	-	**50%**	**50%**	-	**50%**	**50%**	-	**51%**	**49%**	-	**50%**	**50%**	-	**51%**	**49%**	-

1. Mid-week average includes data between Tuesday and Thursday.

Deon Fouche: (415) 757-7714
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Vehicle Classification Report Summary

Location: Ramona Ave S/O Littleness Ave
Count Direction: Northbound / Southbound
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

	FHWA Vehicle Classification													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total														
Northbound	42	2,090	678	0	232	142	0	0	1	0	0	0	1	3,186
Percent	1.3%	65.6%	21.3%	0.0%	7.3%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	36	2,557	615	0	156	28	0	1	0	4	0	0	0	3,397
Percent	1.1%	75.3%	18.1%	0.0%	4.6%	0.8%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	100%
Total	78	4,647	1,293	0	388	170	0	1	1	4	0	0	1	6,583
Percent	1.2%	70.6%	19.6%	0.0%	5.9%	2.6%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Thursday, November 3, 2016
Southbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	2	0	0	0	1	0	0	0	0	0	0	0	**3**
6:00 AM	0	12	2	0	0	2	0	0	0	0	0	0	0	**16**
7:00 AM	0	16	10	0	3	1	0	0	0	0	0	0	0	**30**
8:00 AM	0	26	7	0	1	0	0	0	0	0	0	0	0	**34**
9:00 AM	0	17	6	0	4	0	0	0	0	0	0	0	0	**27**
10:00 AM	1	15	6	0	2	1	0	0	0	0	0	0	0	**25**
11:00 AM	0	10	0	0	1	0	0	0	0	0	0	0	0	**11**
12:00 PM	0	22	11	0	4	1	0	0	0	0	0	0	0	**38**
1:00 PM	0	24	7	0	2	1	0	0	0	0	0	0	0	**34**
2:00 PM	0	19	10	0	1	0	0	0	0	0	0	0	0	**30**
3:00 PM	1	33	8	0	3	0	0	0	0	0	0	0	0	**45**
4:00 PM	1	59	11	0	2	0	0	0	0	0	0	0	0	**73**
5:00 PM	1	50	10	0	1	0	0	0	0	1	0	0	0	**63**
6:00 PM	1	22	4	0	0	0	0	0	0	0	0	0	0	**27**
7:00 PM	0	15	2	0	0	0	0	0	0	0	0	0	0	**17**
8:00 PM	1	14	2	0	0	0	0	0	0	0	0	0	0	**17**
9:00 PM	2	9	0	0	0	0	0	0	0	0	0	0	0	**11**
10:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
11:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
Total	**8**	**370**	**97**	**0**	**24**	**7**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**507**
Percent	**1.6%**	**73.0%**	**19.1%**	**0.0%**	**4.7%**	**1.4%**	**0.0%**	**0.0%**	**0.0%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Friday, November 4, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
5:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	1	12	2	0	0	1	0	0	0	0	0	0	0	**16**
7:00 AM	1	27	12	0	3	4	0	0	1	0	0	0	0	**48**
8:00 AM	0	11	7	0	1	2	0	0	0	0	0	0	0	**21**
9:00 AM	1	16	10	0	2	2	0	0	0	0	0	0	0	**31**
10:00 AM	0	15	9	0	3	1	0	0	0	0	0	0	0	**28**
11:00 AM	0	22	7	0	3	2	0	0	0	0	0	0	0	**34**
12:00 PM	0	21	8	0	4	1	0	0	0	0	0	0	0	**34**
1:00 PM	0	26	5	0	5	2	0	0	0	0	0	0	0	**38**
2:00 PM	2	30	3	0	1	3	0	0	0	0	0	0	0	**39**
3:00 PM	0	24	8	0	1	3	0	0	0	0	0	0	0	**36**
4:00 PM	1	34	9	0	9	2	0	0	0	0	0	0	0	**55**
5:00 PM	0	42	6	0	1	1	0	0	0	0	0	0	0	**50**
6:00 PM	0	19	3	0	2	1	0	0	0	0	0	0	0	**25**
7:00 PM	0	7	3	0	1	0	0	0	0	0	0	0	0	**11**
8:00 PM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
9:00 PM	0	4	3	0	0	0	0	0	0	0	0	0	0	**7**
10:00 PM	0	4	2	0	0	0	0	0	0	0	0	0	0	**6**
11:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**6**	**324**	**99**	**0**	**36**	**25**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**491**
Percent	**1.2%**	**66.0%**	**20.2%**	**0.0%**	**7.3%**	**5.1%**	**0.0%**	**0.0%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Friday, November 4, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	8	2	0	0	0	0	0	0	0	0	0	0	**10**
7:00 AM	1	14	11	0	3	0	0	0	0	0	0	0	0	**29**
8:00 AM	0	25	7	0	2	0	0	0	0	0	0	0	0	**34**
9:00 AM	1	14	5	0	3	1	0	0	0	0	0	0	0	**24**
10:00 AM	1	24	12	0	3	0	0	0	0	0	0	0	0	**40**
11:00 AM	0	24	6	0	1	0	0	0	0	0	0	0	0	**31**
12:00 PM	1	58	5	0	6	0	0	0	0	0	0	0	0	**70**
1:00 PM	0	31	5	0	4	0	0	0	0	0	0	0	0	**40**
2:00 PM	0	36	9	0	3	1	0	0	0	0	0	0	0	**49**
3:00 PM	0	27	10	0	0	1	0	0	0	0	0	0	0	**38**
4:00 PM	0	53	9	0	3	1	0	0	0	0	0	0	0	**66**
5:00 PM	1	45	8	0	1	1	0	0	0	0	0	0	0	**56**
6:00 PM	1	24	0	0	1	1	0	0	0	0	0	0	0	**27**
7:00 PM	0	12	6	0	1	0	0	0	0	0	0	0	0	**19**
8:00 PM	0	6	0	0	0	0	0	0	0	0	0	0	0	**6**
9:00 PM	0	3	2	0	0	0	0	0	0	0	0	0	0	**5**
10:00 PM	0	7	1	0	0	0	0	0	0	0	0	0	0	**8**
11:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
Total	**6**	**417**	**98**	**0**	**31**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**558**
Percent	**1.1%**	**74.7%**	**17.6%**	**0.0%**	**5.6%**	**1.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Saturday, November 5, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	5	2	0	0	0	0	0	0	0	0	0	0	**7**
6:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
7:00 AM	0	11	3	0	0	3	0	0	0	0	0	0	0	**17**
8:00 AM	1	8	8	0	1	2	0	0	0	0	0	0	0	**20**
9:00 AM	0	18	4	0	2	4	0	0	0	0	0	0	0	**28**
10:00 AM	0	20	7	0	1	2	0	0	0	0	0	0	0	**30**
11:00 AM	0	29	9	0	1	3	0	0	0	0	0	0	0	**42**
12:00 PM	1	23	5	0	2	0	0	0	0	0	0	0	0	**31**
1:00 PM	0	22	9	0	3	1	0	0	0	0	0	0	0	**35**
2:00 PM	0	17	7	0	2	6	0	0	0	0	0	0	0	**32**
3:00 PM	1	14	8	0	0	4	0	0	0	0	0	0	0	**27**
4:00 PM	1	27	6	0	0	1	0	0	0	0	0	0	0	**35**
5:00 PM	0	15	0	0	1	2	0	0	0	0	0	0	0	**18**
6:00 PM	0	25	7	0	3	0	0	0	0	0	0	0	0	**35**
7:00 PM	0	9	1	0	0	2	0	0	0	0	0	0	1	**13**
8:00 PM	0	4	2	0	1	0	0	0	0	0	0	0	0	**7**
9:00 PM	0	3	2	0	0	0	0	0	0	0	0	0	0	**5**
10:00 PM	0	5	1	0	0	1	0	0	0	0	0	0	0	**7**
11:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
Total	**4**	**259**	**81**	**0**	**17**	**32**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**394**
Percent	**1.0%**	**65.7%**	**20.6%**	**0.0%**	**4.3%**	**8.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.3%**	

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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Saturday, November 5, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	1	0	1	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
7:00 AM	0	10	2	0	0	0	0	0	0	0	0	0	0	**12**
8:00 AM	0	11	5	0	0	0	0	0	0	0	0	0	0	**16**
9:00 AM	0	16	4	0	1	0	0	0	0	0	0	0	0	**21**
10:00 AM	0	18	7	0	2	0	0	0	0	0	0	0	0	**27**
11:00 AM	0	23	2	0	4	1	0	0	0	0	0	0	0	**30**
12:00 PM	0	29	10	0	1	0	0	0	0	0	0	0	0	**40**
1:00 PM	0	26	5	0	1	0	0	0	0	0	0	0	0	**32**
2:00 PM	0	20	10	0	1	0	0	0	0	0	0	0	0	**31**
3:00 PM	0	18	5	0	4	0	0	0	0	0	0	0	0	**27**
4:00 PM	0	29	5	0	1	0	0	0	0	0	0	0	0	**35**
5:00 PM	1	19	5	0	0	0	0	0	0	0	0	0	0	**25**
6:00 PM	0	26	0	0	1	0	0	0	0	0	0	0	0	**27**
7:00 PM	0	16	2	0	1	1	0	0	0	0	0	0	0	**20**
8:00 PM	0	8	0	0	0	1	0	0	0	0	0	0	0	**9**
9:00 PM	0	9	1	0	0	0	0	0	0	0	0	0	0	**10**
10:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
11:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
Total	**2**	**293**	**67**	**0**	**17**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**382**
Percent	**0.5%**	**76.7%**	**17.5%**	**0.0%**	**4.5%**	**0.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Sunday, November 6, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	**1**
6:00 AM	0	5	0	0	0	1	0	0	0	0	0	0	0	**6**
7:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
8:00 AM	0	8	3	0	0	0	0	0	0	0	0	0	0	**11**
9:00 AM	0	13	3	0	1	2	0	0	0	0	0	0	0	**19**
10:00 AM	0	16	6	0	1	2	0	0	0	0	0	0	0	**25**
11:00 AM	0	27	6	0	3	2	0	0	0	0	0	0	0	**38**
12:00 PM	1	23	4	0	1	4	0	0	0	0	0	0	0	**33**
1:00 PM	1	12	3	0	1	1	0	0	0	0	0	0	0	**18**
2:00 PM	0	28	4	0	2	3	0	0	0	0	0	0	0	**37**
3:00 PM	0	20	6	0	2	1	0	0	0	0	0	0	0	**29**
4:00 PM	3	18	5	0	2	1	0	0	0	0	0	0	0	**29**
5:00 PM	0	14	2	0	2	1	0	0	0	0	0	0	0	**19**
6:00 PM	0	16	1	0	1	1	0	0	0	0	0	0	0	**19**
7:00 PM	1	10	3	0	1	1	0	0	0	0	0	0	0	**16**
8:00 PM	0	3	3	0	0	1	0	0	0	0	0	0	0	**7**
9:00 PM	0	3	3	0	0	1	0	0	0	0	0	0	0	**7**
10:00 PM	0	5	2	0	0	0	0	0	0	0	0	0	0	**7**
11:00 PM	0	2	1	0	1	1	0	0	0	0	0	0	0	**5**
Total	**7**	**228**	**57**	**0**	**18**	**25**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**335**
Percent	**2.1%**	**68.1%**	**17.0%**	**0.0%**	**5.4%**	**7.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Sunday, November 6, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
8:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	**6**
9:00 AM	0	12	1	0	2	1	0	0	0	0	0	0	0	**16**
10:00 AM	0	13	5	0	0	0	0	0	0	0	0	0	0	**18**
11:00 AM	0	20	4	0	1	0	0	0	0	0	0	0	0	**25**
12:00 PM	0	22	5	0	0	0	0	0	0	1	0	0	0	**28**
1:00 PM	1	20	1	0	0	1	0	0	0	0	0	0	0	**23**
2:00 PM	0	28	5	0	2	0	0	0	0	0	0	0	0	**35**
3:00 PM	0	17	2	0	2	0	0	0	0	0	0	0	0	**21**
4:00 PM	2	24	1	0	0	1	0	0	0	0	0	0	0	**28**
5:00 PM	0	15	0	0	0	0	0	0	0	0	0	0	0	**15**
6:00 PM	1	19	3	0	0	0	0	0	0	0	0	0	0	**23**
7:00 PM	0	12	1	0	0	0	0	0	0	0	0	0	0	**13**
8:00 PM	0	12	2	0	0	0	0	0	0	0	0	0	0	**14**
9:00 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
10:00 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
11:00 PM	0	4	2	0	0	0	0	0	0	0	0	0	0	**6**
Total	**4**	**239**	**34**	**0**	**7**	**3**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**288**
Percent	**1.4%**	**83.0%**	**11.8%**	**0.0%**	**2.4%**	**1.0%**	**0.0%**	**0.0%**	**0.0%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Monday, November 7, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	1	1	0	1	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
7:00 AM	0	11	6	0	1	1	0	0	0	0	0	0	0	**19**
8:00 AM	2	31	16	0	5	2	0	0	0	0	0	0	0	**56**
9:00 AM	0	17	9	0	5	1	0	0	0	0	0	0	0	**32**
10:00 AM	0	21	3	0	1	0	0	0	0	0	0	0	0	**25**
11:00 AM	0	30	9	0	2	0	0	0	0	0	0	0	0	**41**
12:00 PM	0	16	9	0	5	1	0	0	0	0	0	0	0	**31**
1:00 PM	1	20	7	0	2	2	0	0	0	0	0	0	0	**32**
2:00 PM	0	27	7	0	3	2	0	0	0	0	0	0	0	**39**
3:00 PM	1	16	8	0	4	1	0	0	0	0	0	0	0	**30**
4:00 PM	1	30	8	0	1	1	0	0	0	0	0	0	0	**41**
5:00 PM	1	37	7	0	8	0	0	0	0	0	0	0	0	**53**
6:00 PM	0	21	9	0	4	0	0	0	0	0	0	0	0	**34**
7:00 PM	0	10	3	0	3	1	0	0	0	0	0	0	0	**17**
8:00 PM	0	9	4	0	0	0	0	0	0	0	0	0	0	**13**
9:00 PM	0	8	2	0	0	1	0	0	0	0	0	0	0	**11**
10:00 PM	0	10	2	0	0	0	0	0	0	0	0	0	0	**12**
11:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	**1**
Total	**6**	**319**	**111**	**0**	**45**	**14**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**495**
Percent	**1.2%**	**64.4%**	**22.4%**	**0.0%**	**9.1%**	**2.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Monday, November 7, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
7:00 AM	0	11	6	0	0	0	0	0	0	0	0	0	0	**17**
8:00 AM	0	25	10	0	1	0	0	0	0	0	0	0	0	**36**
9:00 AM	0	10	5	0	2	1	0	0	0	0	0	0	0	**18**
10:00 AM	0	29	3	0	4	0	0	0	0	0	0	0	0	**36**
11:00 AM	0	34	9	0	2	0	0	0	0	0	0	0	0	**45**
12:00 PM	0	72	11	0	5	0	0	0	0	0	0	0	0	**88**
1:00 PM	1	92	14	0	5	0	0	0	0	0	0	0	0	**112**
2:00 PM	0	28	7	0	2	0	0	0	0	0	0	0	0	**37**
3:00 PM	0	30	8	0	3	0	0	0	0	0	0	0	0	**41**
4:00 PM	1	34	11	0	5	0	0	1	0	0	0	0	0	**52**
5:00 PM	1	49	19	0	1	1	0	0	0	0	0	0	0	**71**
6:00 PM	1	52	7	0	1	0	0	0	0	0	0	0	0	**61**
7:00 PM	0	21	5	0	1	0	0	0	0	0	0	0	0	**27**
8:00 PM	0	15	1	0	1	0	0	0	0	0	0	0	0	**17**
9:00 PM	0	7	1	0	0	0	0	0	0	0	0	0	0	**8**
10:00 PM	0	8	0	0	0	0	0	0	0	0	0	0	0	**8**
11:00 PM	0	6	1	0	0	0	0	0	0	0	0	0	0	**7**
Total	**4**	**527**	**118**	**0**	**33**	**2**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**685**
Percent	**0.6%**	**76.9%**	**17.2%**	**0.0%**	**4.8%**	**0.3%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Tuesday, November 8, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	2
6:00 AM	0	2	1	0	1	0	0	0	0	0	0	0	0	4
7:00 AM	0	7	1	0	0	4	0	0	0	0	0	0	0	12
8:00 AM	1	34	9	0	3	4	0	0	0	0	0	0	0	51
9:00 AM	0	14	12	0	2	1	0	0	0	0	0	0	0	29
10:00 AM	0	22	10	0	2	2	0	0	0	0	0	0	0	36
11:00 AM	0	20	9	0	4	0	0	0	0	0	0	0	0	33
12:00 PM	1	23	7	0	4	0	0	0	0	0	0	0	0	35
1:00 PM	0	17	8	0	4	1	0	0	0	0	0	0	0	30
2:00 PM	0	32	10	0	7	0	0	0	0	0	0	0	0	49
3:00 PM	1	23	11	0	3	2	0	0	0	0	0	0	0	40
4:00 PM	0	15	10	0	1	2	0	0	0	0	0	0	0	28
5:00 PM	1	37	8	0	4	0	0	0	0	0	0	0	0	50
6:00 PM	0	29	9	0	4	1	0	0	0	0	0	0	0	43
7:00 PM	0	15	5	0	1	3	0	0	0	0	0	0	0	24
8:00 PM	0	5	2	0	0	0	0	0	0	0	0	0	0	7
9:00 PM	0	5	2	0	0	0	0	0	0	0	0	0	0	7
10:00 PM	0	7	3	0	0	0	0	0	0	0	0	0	0	10
11:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
Total	**4**	**313**	**118**	**0**	**41**	**20**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**496**
Percent	**0.8%**	**63.1%**	**23.8%**	**0.0%**	**8.3%**	**4.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Tuesday, November 8, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
7:00 AM	0	13	2	0	0	0	0	0	0	0	0	0	0	15
8:00 AM	0	23	12	0	0	0	0	0	0	0	0	0	0	35
9:00 AM	0	20	9	0	2	2	0	0	0	0	0	0	0	33
10:00 AM	0	12	5	0	4	0	0	0	0	0	0	0	0	21
11:00 AM	0	16	4	0	2	2	0	0	0	0	0	0	0	24
12:00 PM	2	28	4	0	1	0	0	0	0	0	0	0	0	35
1:00 PM	0	32	5	0	2	0	0	0	0	0	0	0	0	39
2:00 PM	0	30	8	0	6	0	0	0	0	0	0	0	0	44
3:00 PM	0	21	14	0	2	0	0	0	0	0	0	0	0	37
4:00 PM	0	20	13	0	0	0	0	0	0	0	0	0	0	33
5:00 PM	1	26	6	0	0	0	0	0	0	0	0	0	0	33
6:00 PM	1	54	7	0	1	0	0	0	0	0	0	0	0	63
7:00 PM	1	25	8	0	1	0	0	0	0	0	0	0	0	35
8:00 PM	0	10	2	0	0	0	0	0	0	0	0	0	0	12
9:00 PM	0	13	1	0	1	0	0	0	0	0	0	0	0	15
10:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
11:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
Total	**5**	**352**	**101**	**0**	**22**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**484**
Percent	**1.0%**	**72.7%**	**20.9%**	**0.0%**	**4.5%**	**0.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Wednesday, November 9, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	1	1	0	1	0	0	0	0	0	0	0	0	3
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	11	5	0	2	0	0	0	0	0	0	0	0	18
8:00 AM	1	32	6	0	5	5	0	0	0	0	0	0	0	49
9:00 AM	0	19	9	0	4	3	0	0	0	0	0	0	0	35
10:00 AM	0	22	12	0	4	0	0	0	0	0	0	0	0	38
11:00 AM	0	26	7	0	2	0	0	0	0	0	0	0	0	35
12:00 PM	0	15	3	0	4	1	0	0	0	0	0	0	0	23
1:00 PM	0	18	9	0	3	1	0	0	0	0	0	0	0	31
2:00 PM	0	32	10	0	4	0	0	0	0	0	0	0	0	46
3:00 PM	2	30	6	0	4	0	0	0	0	0	0	0	0	42
4:00 PM	0	27	9	0	3	2	0	0	0	0	0	0	0	41
5:00 PM	0	36	11	0	3	2	0	0	0	0	0	0	0	52
6:00 PM	1	29	10	0	4	1	0	0	0	0	0	0	0	45
7:00 PM	1	13	7	0	0	1	0	0	0	0	0	0	0	22
8:00 PM	0	7	2	0	0	0	0	0	0	0	0	0	0	9
9:00 PM	0	4	2	0	0	0	0	0	0	0	0	0	0	6
10:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
11:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	**5**	**327**	**110**	**0**	**43**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**501**
Percent	**1.0%**	**65.3%**	**22.0%**	**0.0%**	**8.6%**	**3.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Wednesday, November 9, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
7:00 AM	0	14	2	0	1	0	0	0	0	0	0	0	0	17
8:00 AM	2	17	13	0	3	0	0	0	0	0	0	0	0	35
9:00 AM	0	25	6	0	1	1	0	0	0	0	0	0	0	33
10:00 AM	0	14	8	0	2	1	0	0	0	0	0	0	0	25
11:00 AM	1	21	4	0	3	0	0	0	0	0	0	0	0	29
12:00 PM	1	17	4	0	1	0	0	0	0	0	0	0	0	23
1:00 PM	0	26	7	0	3	0	0	0	0	0	0	0	0	36
2:00 PM	1	22	9	0	1	0	0	0	0	0	0	0	0	33
3:00 PM	0	28	10	0	1	0	0	0	0	0	0	0	0	39
4:00 PM	0	34	9	0	3	0	0	0	0	0	0	0	0	46
5:00 PM	1	50	7	0	2	0	0	0	0	1	0	0	0	61
6:00 PM	0	43	9	0	1	1	0	0	0	1	0	0	0	55
7:00 PM	1	16	6	0	0	0	0	0	0	0	0	0	0	23
8:00 PM	0	11	2	0	0	0	0	0	0	0	0	0	0	13
9:00 PM	0	8	3	0	0	0	0	0	0	0	0	0	0	11
10:00 PM	0	9	0	0	0	0	0	0	0	0	0	0	0	9
11:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
Total	**7**	**359**	**100**	**0**	**22**	**3**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**493**
Percent	**1.4%**	**72.8%**	**20.3%**	**0.0%**	**4.5%**	**0.6%**	**0.0%**	**0.0%**	**0.0%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Total Study Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
6:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	6
7:00 AM	0	14	5	0	1	2	0	0	0	0	0	0	0	22
8:00 AM	1	21	8	0	2	2	0	0	0	0	0	0	0	34
9:00 AM	0	17	8	0	2	2	0	0	0	0	0	0	0	29
10:00 AM	0	19	8	0	2	1	0	0	0	0	0	0	0	30
11:00 AM	0	25	7	0	3	1	0	0	0	0	0	0	0	36
12:00 PM	0	19	6	0	4	1	0	0	0	0	0	0	0	30
1:00 PM	0	19	7	0	3	1	0	0	0	0	0	0	0	30
2:00 PM	0	27	7	0	3	2	0	0	0	0	0	0	0	39
3:00 PM	1	22	8	0	2	2	0	0	0	0	0	0	0	35
4:00 PM	1	27	8	0	3	1	0	0	0	0	0	0	0	40
5:00 PM	1	29	6	0	3	1	0	0	0	0	0	0	0	40
6:00 PM	0	23	7	0	3	1	0	0	0	0	0	0	0	34
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	6	2	0	0	0	0	0	0	0	0	0	0	8
9:00 PM	0	5	2	0	0	0	0	0	0	0	0	0	0	7
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	**4**	**283**	**91**	**0**	**31**	**17**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**426**
Percent	**0.9%**	**66.4%**	**21.4%**	**0.0%**	**7.3%**	**4.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Deon Fouche: (415) 757-7714
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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Total Study Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
6:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	5
7:00 AM	0	11	5	0	1	0	0	0	0	0	0	0	0	17
8:00 AM	0	19	8	0	1	0	0	0	0	0	0	0	0	28
9:00 AM	0	16	5	0	2	1	0	0	0	0	0	0	0	24
10:00 AM	0	18	7	0	2	0	0	0	0	0	0	0	0	27
11:00 AM	0	21	4	0	2	0	0	0	0	0	0	0	0	27
12:00 PM	1	35	7	0	3	0	0	0	0	0	0	0	0	46
1:00 PM	0	36	6	0	2	0	0	0	0	0	0	0	0	44
2:00 PM	0	26	8	0	2	0	0	0	0	0	0	0	0	36
3:00 PM	0	25	8	0	2	0	0	0	0	0	0	0	0	35
4:00 PM	1	36	8	0	2	0	0	0	0	0	0	0	0	47
5:00 PM	1	36	8	0	1	0	0	0	0	0	0	0	0	46
6:00 PM	1	34	4	0	1	0	0	0	0	0	0	0	0	40
7:00 PM	0	17	4	0	1	0	0	0	0	0	0	0	0	22
8:00 PM	0	11	1	0	0	0	0	0	0	0	0	0	0	12
9:00 PM	0	8	1	0	0	0	0	0	0	0	0	0	0	9
10:00 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
11:00 PM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
Total	**4**	**365**	**86**	**0**	**22**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**478**
Percent	**0.8%**	**76.4%**	**18.0%**	**0.0%**	**4.6%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Deon Fouche: (415) 757-7714
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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

3-Day (Tuesday - Thursday) Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	2
6:00 AM	0	2	1	0	1	0	0	0	0	0	0	0	0	4
7:00 AM	0	7	1	0	0	4	0	0	0	0	0	0	0	12
8:00 AM	1	34	9	0	3	4	0	0	0	0	0	0	0	51
9:00 AM	0	14	12	0	2	1	0	0	0	0	0	0	0	29
10:00 AM	0	22	10	0	2	2	0	0	0	0	0	0	0	36
11:00 AM	0	20	9	0	4	0	0	0	0	0	0	0	0	33
12:00 PM	1	23	7	0	4	0	0	0	0	0	0	0	0	35
1:00 PM	0	17	8	0	4	1	0	0	0	0	0	0	0	30
2:00 PM	0	32	10	0	7	0	0	0	0	0	0	0	0	49
3:00 PM	1	23	11	0	3	2	0	0	0	0	0	0	0	40
4:00 PM	0	15	10	0	1	2	0	0	0	0	0	0	0	28
5:00 PM	1	37	8	0	4	0	0	0	0	0	0	0	0	50
6:00 PM	0	29	9	0	4	1	0	0	0	0	0	0	0	43
7:00 PM	0	15	5	0	1	3	0	0	0	0	0	0	0	24
8:00 PM	0	5	2	0	0	0	0	0	0	0	0	0	0	7
9:00 PM	0	5	2	0	0	0	0	0	0	0	0	0	0	7
10:00 PM	0	7	3	0	0	0	0	0	0	0	0	0	0	10
11:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
Total	**4**	**313**	**118**	**0**	**41**	**20**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**496**
Percent	**0.8%**	**63.1%**	**23.8%**	**0.0%**	**8.3%**	**4.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

3-Day (Tuesday - Thursday) Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
7:00 AM	0	13	2	0	0	0	0	0	0	0	0	0	0	15
8:00 AM	0	23	12	0	0	0	0	0	0	0	0	0	0	35
9:00 AM	0	20	9	0	2	2	0	0	0	0	0	0	0	33
10:00 AM	0	12	5	0	4	0	0	0	0	0	0	0	0	21
11:00 AM	0	16	4	0	2	2	0	0	0	0	0	0	0	24
12:00 PM	2	28	4	0	1	0	0	0	0	0	0	0	0	35
1:00 PM	0	32	5	0	2	0	0	0	0	0	0	0	0	39
2:00 PM	0	30	8	0	6	0	0	0	0	0	0	0	0	44
3:00 PM	0	21	14	0	2	0	0	0	0	0	0	0	0	37
4:00 PM	0	20	13	0	0	0	0	0	0	0	0	0	0	33
5:00 PM	1	26	6	0	0	0	0	0	0	0	0	0	0	33
6:00 PM	1	54	7	0	1	0	0	0	0	0	0	0	0	63
7:00 PM	1	25	8	0	1	0	0	0	0	0	0	0	0	35
8:00 PM	0	10	2	0	0	0	0	0	0	0	0	0	0	12
9:00 PM	0	13	1	0	1	0	0	0	0	0	0	0	0	15
10:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
11:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
Total	**5**	**352**	**101**	**0**	**22**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**484**
Percent	**1.0%**	**72.7%**	**20.9%**	**0.0%**	**4.5%**	**0.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Vehicle Speed Report Summary

Location: Ramona Ave S/O Littleness Ave
Count Direction: Northbound / Southbound
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

	Speed Range (mph)																	Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
Study Total																		
Northbound	27	175	361	893	1,213	423	86	7	1	0	0	0	0	0	0	0	0	3,186
Percent	0.8%	5.5%	11.3%	28.0%	38.1%	13.3%	2.7%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	25	120	431	1,052	1,312	397	52	8	0	0	0	0	0	0	0	0	0	3,397
Percent	0.7%	3.5%	12.7%	31.0%	38.6%	11.7%	1.5%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	52	295	792	1,945	2,525	820	138	15	1	0	0	0	0	0	0	0	0	6,583
Percent	0.8%	4.5%	12.0%	29.5%	38.4%	12.5%	2.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Northbound			**Northbound**		
50th Percentile (Median)	25.4	mph	Mean (Average) Speed	24.9	mph
85th Percentile	30.2	mph	10 mph Pace	20.9 - 30.9	mph
95th Percentile	33.2	mph	Percent in Pace	66.9	%
Southbound			**Southbound**		
50th Percentile (Median)	24.9	mph	Mean (Average) Speed	24.7	mph
85th Percentile	29.4	mph	10 mph Pace	20.9 - 30.9	mph
95th Percentile	32.2	mph	Percent in Pace	70.3	%

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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Thursday, November 3, 2016
Northbound

	Speed Range (mph)																	Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	1	0	2	1	2	0	0	0	0	0	0	0	0	0	0	0	**6**
6:00 AM	2	0	0	2	6	4	0	0	0	0	0	0	0	0	0	0	0	**14**
7:00 AM	0	3	1	5	21	9	0	0	0	0	0	0	0	0	0	0	0	**39**
8:00 AM	0	2	7	11	10	0	0	0	0	0	0	0	0	0	0	0	0	**30**
9:00 AM	1	0	6	12	4	3	1	0	0	0	0	0	0	0	0	0	0	**27**
10:00 AM	2	2	2	9	13	6	0	0	0	0	0	0	0	0	0	0	0	**34**
11:00 AM	0	1	4	9	8	5	0	0	0	0	0	0	0	0	0	0	0	**27**
12:00 PM	2	3	8	6	10	2	0	0	0	0	0	0	0	0	0	0	0	**31**
1:00 PM	0	2	3	12	8	5	0	0	0	0	0	0	0	0	0	0	0	**30**
2:00 PM	0	1	9	6	15	5	1	0	0	0	0	0	0	0	0	0	0	**37**
3:00 PM	1	0	3	7	23	6	2	0	0	0	0	0	0	0	0	0	0	**42**
4:00 PM	1	0	1	7	31	10	2	0	0	0	0	0	0	0	0	0	0	**52**
5:00 PM	2	5	6	11	12	2	0	0	0	0	0	0	0	0	0	0	0	**38**
6:00 PM	0	2	3	10	12	2	0	0	0	0	0	0	0	0	0	0	0	**29**
7:00 PM	0	1	3	2	7	1	0	0	0	0	0	0	0	0	0	0	0	**14**
8:00 PM	0	1	0	7	5	1	0	0	0	0	0	0	0	0	0	0	0	**14**
9:00 PM	0	1	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	**8**
10:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**11**	**25**	**56**	**122**	**190**	**64**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**474**
Percent	**2.3%**	**5.3%**	**11.8%**	**25.7%**	**40.1%**	**13.5%**	**1.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.8	mph	Mean (Average) Speed	24.7	mph
85th Percentile	29.8	mph	10 mph Pace	21.4 - 31.4	mph
95th Percentile	32.9	mph	Percent in Pace	67.7	%

Deon Fouche: (415) 757-7714
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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Thursday, November 3, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	1	0	4	9	2	0	0	0	0	0	0	0	0	0	0	0	**16**
7:00 AM	1	0	2	5	17	4	1	0	0	0	0	0	0	0	0	0	0	**30**
8:00 AM	0	1	4	15	10	4	0	0	0	0	0	0	0	0	0	0	0	**34**
9:00 AM	0	0	6	7	12	2	0	0	0	0	0	0	0	0	0	0	0	**27**
10:00 AM	1	2	1	7	12	1	1	0	0	0	0	0	0	0	0	0	0	**25**
11:00 AM	0	0	2	3	6	0	0	0	0	0	0	0	0	0	0	0	0	**11**
12:00 PM	1	1	5	6	21	3	1	0	0	0	0	0	0	0	0	0	0	**38**
1:00 PM	0	0	1	12	15	6	0	0	0	0	0	0	0	0	0	0	0	**34**
2:00 PM	0	0	4	10	12	4	0	0	0	0	0	0	0	0	0	0	0	**30**
3:00 PM	0	1	5	10	21	8	0	0	0	0	0	0	0	0	0	0	0	**45**
4:00 PM	1	0	5	18	37	10	1	1	0	0	0	0	0	0	0	0	0	**73**
5:00 PM	0	4	7	15	31	6	0	0	0	0	0	0	0	0	0	0	0	**63**
6:00 PM	0	1	1	13	10	1	1	0	0	0	0	0	0	0	0	0	0	**27**
7:00 PM	0	1	0	6	7	3	0	0	0	0	0	0	0	0	0	0	0	**17**
8:00 PM	0	3	3	5	6	0	0	0	0	0	0	0	0	0	0	0	0	**17**
9:00 PM	0	2	2	3	3	1	0	0	0	0	0	0	0	0	0	0	0	**11**
10:00 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**2**
11:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
Total	**4**	**17**	**50**	**141**	**232**	**57**	**5**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**507**
Percent	**0.8%**	**3.4%**	**9.9%**	**27.8%**	**45.8%**	**11.2%**	**1.0%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.6	mph	Mean (Average) Speed	25.1	mph
85th Percentile	29.4	mph	10 mph Pace	21.1 - 31.1	mph
95th Percentile	31.7	mph	Percent in Pace	74.8	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Friday, November 4, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
5:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	0	2	4	9	1	0	0	0	0	0	0	0	0	0	0	0	**16**
7:00 AM	0	8	8	4	14	12	1	1	0	0	0	0	0	0	0	0	0	**48**
8:00 AM	0	1	4	6	7	2	1	0	0	0	0	0	0	0	0	0	0	**21**
9:00 AM	2	3	4	10	7	3	2	0	0	0	0	0	0	0	0	0	0	**31**
10:00 AM	0	2	4	9	10	3	0	0	0	0	0	0	0	0	0	0	0	**28**
11:00 AM	0	1	7	6	17	2	1	0	0	0	0	0	0	0	0	0	0	**34**
12:00 PM	1	1	2	7	17	6	0	0	0	0	0	0	0	0	0	0	0	**34**
1:00 PM	0	2	6	10	17	2	1	0	0	0	0	0	0	0	0	0	0	**38**
2:00 PM	0	2	3	18	6	7	3	0	0	0	0	0	0	0	0	0	0	**39**
3:00 PM	0	2	3	9	14	6	2	0	0	0	0	0	0	0	0	0	0	**36**
4:00 PM	1	0	4	23	21	5	0	1	0	0	0	0	0	0	0	0	0	**55**
5:00 PM	0	1	4	11	24	7	3	0	0	0	0	0	0	0	0	0	0	**50**
6:00 PM	0	4	3	13	4	1	0	0	0	0	0	0	0	0	0	0	0	**25**
7:00 PM	0	0	1	3	6	1	0	0	0	0	0	0	0	0	0	0	0	**11**
8:00 PM	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
9:00 PM	0	0	1	4	2	0	0	0	0	0	0	0	0	0	0	0	0	**7**
10:00 PM	0	1	3	0	2	0	0	0	0	0	0	0	0	0	0	0	0	**6**
11:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**4**	**29**	**59**	**141**	**179**	**63**	**14**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**491**
Percent	**0.8%**	**5.9%**	**12.0%**	**28.7%**	**36.5%**	**12.8%**	**2.9%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.1	mph	Mean (Average) Speed	24.6	mph
85th Percentile	30.1	mph	10 mph Pace	20.7 - 30.7	mph
95th Percentile	33.8	mph	Percent in Pace	65.2	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Friday, November 4, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	0	0	1	8	1	0	0	0	0	0	0	0	0	0	0	0	**10**
7:00 AM	0	0	1	9	13	5	1	0	0	0	0	0	0	0	0	0	0	**29**
8:00 AM	0	3	1	10	18	2	0	0	0	0	0	0	0	0	0	0	0	**34**
9:00 AM	1	0	2	8	11	2	0	0	0	0	0	0	0	0	0	0	0	**24**
10:00 AM	0	2	4	13	16	4	0	1	0	0	0	0	0	0	0	0	0	**40**
11:00 AM	0	0	2	7	13	7	2	0	0	0	0	0	0	0	0	0	0	**31**
12:00 PM	0	2	4	30	26	6	2	0	0	0	0	0	0	0	0	0	0	**70**
1:00 PM	0	0	2	18	14	5	1	0	0	0	0	0	0	0	0	0	0	**40**
2:00 PM	0	0	5	10	26	6	2	0	0	0	0	0	0	0	0	0	0	**49**
3:00 PM	0	0	9	10	12	5	2	0	0	0	0	0	0	0	0	0	0	**38**
4:00 PM	0	0	8	27	15	14	2	0	0	0	0	0	0	0	0	0	0	**66**
5:00 PM	0	2	6	15	22	10	1	0	0	0	0	0	0	0	0	0	0	**56**
6:00 PM	3	1	10	7	4	2	0	0	0	0	0	0	0	0	0	0	0	**27**
7:00 PM	0	0	3	7	8	0	0	1	0	0	0	0	0	0	0	0	0	**19**
8:00 PM	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	**6**
9:00 PM	0	1	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	**5**
10:00 PM	0	0	1	3	2	2	0	0	0	0	0	0	0	0	0	0	0	**8**
11:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
Total	**4**	**11**	**60**	**181**	**215**	**72**	**13**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**558**
Percent	**0.7%**	**2.0%**	**10.8%**	**32.4%**	**38.5%**	**12.9%**	**2.3%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.3	mph	Mean (Average) Speed	25.3	mph
85th Percentile	30.0	mph	10 mph Pace	20.2 - 30.2	mph
95th Percentile	32.8	mph	Percent in Pace	72.2	%

Deon Fouche: (415) 757-7714
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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Saturday, November 5, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	**7**
6:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
7:00 AM	0	2	5	5	3	2	0	0	0	0	0	0	0	0	0	0	0	**17**
8:00 AM	0	2	3	10	1	4	0	0	0	0	0	0	0	0	0	0	0	**20**
9:00 AM	1	0	8	11	7	1	0	0	0	0	0	0	0	0	0	0	0	**28**
10:00 AM	0	2	3	9	12	4	0	0	0	0	0	0	0	0	0	0	0	**30**
11:00 AM	1	1	4	10	19	5	2	0	0	0	0	0	0	0	0	0	0	**42**
12:00 PM	0	1	5	8	13	4	0	0	0	0	0	0	0	0	0	0	0	**31**
1:00 PM	0	4	2	15	8	5	1	0	0	0	0	0	0	0	0	0	0	**35**
2:00 PM	0	3	4	11	11	1	2	0	0	0	0	0	0	0	0	0	0	**32**
3:00 PM	0	2	8	3	9	4	1	0	0	0	0	0	0	0	0	0	0	**27**
4:00 PM	0	2	1	13	17	2	0	0	0	0	0	0	0	0	0	0	0	**35**
5:00 PM	0	1	3	7	5	1	1	0	0	0	0	0	0	0	0	0	0	**18**
6:00 PM	0	1	3	20	9	1	1	0	0	0	0	0	0	0	0	0	0	**35**
7:00 PM	0	0	1	4	7	1	0	0	0	0	0	0	0	0	0	0	0	**13**
8:00 PM	0	1	0	2	3	1	0	0	0	0	0	0	0	0	0	0	0	**7**
9:00 PM	1	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	**5**
10:00 PM	0	0	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	**7**
11:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
Total	**3**	**22**	**51**	**141**	**133**	**36**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**394**
Percent	**0.8%**	**5.6%**	**12.9%**	**35.8%**	**33.8%**	**9.1%**	**2.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	24.3	mph	Mean (Average) Speed	24.0	mph
85th Percentile	28.8	mph	10 mph Pace	20.0 - 30.0	mph
95th Percentile	32.5	mph	Percent in Pace	69.3	%

Deon Fouche: (415) 757-7714
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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Saturday, November 5, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	2	2	0	0	0	0	0	0	0	0	0	0	0	**5**
1:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	**4**
7:00 AM	0	1	2	2	4	2	1	0	0	0	0	0	0	0	0	0	0	**12**
8:00 AM	0	2	1	8	4	1	0	0	0	0	0	0	0	0	0	0	0	**16**
9:00 AM	0	1	2	6	8	4	0	0	0	0	0	0	0	0	0	0	0	**21**
10:00 AM	0	0	4	14	8	1	0	0	0	0	0	0	0	0	0	0	0	**27**
11:00 AM	0	1	1	6	17	5	0	0	0	0	0	0	0	0	0	0	0	**30**
12:00 PM	0	0	4	12	19	4	1	0	0	0	0	0	0	0	0	0	0	**40**
1:00 PM	0	0	5	7	12	7	1	0	0	0	0	0	0	0	0	0	0	**32**
2:00 PM	0	2	5	12	10	1	1	0	0	0	0	0	0	0	0	0	0	**31**
3:00 PM	0	1	6	11	5	4	0	0	0	0	0	0	0	0	0	0	0	**27**
4:00 PM	3	2	3	11	10	5	1	0	0	0	0	0	0	0	0	0	0	**35**
5:00 PM	1	4	4	8	6	2	0	0	0	0	0	0	0	0	0	0	0	**25**
6:00 PM	0	0	6	12	7	2	0	0	0	0	0	0	0	0	0	0	0	**27**
7:00 PM	0	4	2	8	5	1	0	0	0	0	0	0	0	0	0	0	0	**20**
8:00 PM	0	0	2	3	1	2	1	0	0	0	0	0	0	0	0	0	0	**9**
9:00 PM	0	0	6	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
10:00 PM	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
11:00 PM	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
Total	**5**	**19**	**56**	**129**	**123**	**44**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**382**
Percent	**1.3%**	**5.0%**	**14.7%**	**33.8%**	**32.2%**	**11.5%**	**1.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	24.2	mph	Mean (Average) Speed	24	mph
85th Percentile	29.5	mph	10 mph Pace	19.9 - 29.9	mph
95th Percentile	32.5	mph	Percent in Pace	66.2	%

Deon Fouche: (415) 757-7714
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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Sunday, November 6, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	1	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**6**
7:00 AM	0	0	0	2	1	0	1	0	0	0	0	0	0	0	0	0	0	**4**
8:00 AM	0	0	0	4	6	1	0	0	0	0	0	0	0	0	0	0	0	**11**
9:00 AM	0	0	1	4	8	5	1	0	0	0	0	0	0	0	0	0	0	**19**
10:00 AM	0	1	2	6	10	5	1	0	0	0	0	0	0	0	0	0	0	**25**
11:00 AM	0	1	10	5	19	3	0	0	0	0	0	0	0	0	0	0	0	**38**
12:00 PM	1	4	4	11	9	4	0	0	0	0	0	0	0	0	0	0	0	**33**
1:00 PM	0	1	4	4	4	5	0	0	0	0	0	0	0	0	0	0	0	**18**
2:00 PM	0	0	9	10	12	5	1	0	0	0	0	0	0	0	0	0	0	**37**
3:00 PM	0	1	2	9	12	5	0	0	0	0	0	0	0	0	0	0	0	**29**
4:00 PM	2	1	2	10	9	4	1	0	0	0	0	0	0	0	0	0	0	**29**
5:00 PM	0	2	5	5	7	0	0	0	0	0	0	0	0	0	0	0	0	**19**
6:00 PM	0	4	3	4	7	1	0	0	0	0	0	0	0	0	0	0	0	**19**
7:00 PM	0	0	3	9	3	1	0	0	0	0	0	0	0	0	0	0	0	**16**
8:00 PM	0	1	1	1	2	2	0	0	0	0	0	0	0	0	0	0	0	**7**
9:00 PM	0	0	1	2	3	0	1	0	0	0	0	0	0	0	0	0	0	**7**
10:00 PM	0	1	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	**7**
11:00 PM	0	1	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**5**
Total	**3**	**19**	**59**	**89**	**117**	**42**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**335**
Percent	**0.9%**	**5.7%**	**17.6%**	**26.6%**	**34.9%**	**12.5%**	**1.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	24.7	mph	Mean (Average) Speed	24.1	mph
85th Percentile	29.7	mph	10 mph Pace	20.9 - 30.9	mph
95th Percentile	32.0	mph	Percent in Pace	63.6	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Sunday, November 6, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	3
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	1	1	3	1	0	0	0	0	0	0	0	0	0	0	0	6
9:00 AM	0	2	2	5	6	1	0	0	0	0	0	0	0	0	0	0	0	16
10:00 AM	0	1	2	7	5	3	0	0	0	0	0	0	0	0	0	0	0	18
11:00 AM	0	1	5	5	10	3	0	1	0	0	0	0	0	0	0	0	0	25
12:00 PM	0	3	8	8	7	2	0	0	0	0	0	0	0	0	0	0	0	28
1:00 PM	0	2	6	4	9	2	0	0	0	0	0	0	0	0	0	0	0	23
2:00 PM	0	1	8	8	16	2	0	0	0	0	0	0	0	0	0	0	0	35
3:00 PM	0	1	8	8	4	0	0	0	0	0	0	0	0	0	0	0	0	21
4:00 PM	1	0	5	9	10	3	0	0	0	0	0	0	0	0	0	0	0	28
5:00 PM	0	0	1	7	7	0	0	0	0	0	0	0	0	0	0	0	0	15
6:00 PM	1	0	5	11	6	0	0	0	0	0	0	0	0	0	0	0	0	23
7:00 PM	0	0	1	6	4	2	0	0	0	0	0	0	0	0	0	0	0	13
8:00 PM	0	1	3	5	2	3	0	0	0	0	0	0	0	0	0	0	0	14
9:00 PM	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	4
10:00 PM	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	5
11:00 PM	0	2	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0	6
Total	**2**	**15**	**58**	**92**	**93**	**27**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**288**
Percent	**0.7%**	**5.2%**	**20.1%**	**31.9%**	**32.3%**	**9.4%**	**0.0%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	24.1	mph	Mean (Average) Speed	23.4	mph
85th Percentile	28.9	mph	10 mph Pace	20.5 - 30.5	mph
95th Percentile	31.7	mph	Percent in Pace	65.6	%

Deon Fouche: (415) 757-7714
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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Monday, November 7, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
1:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
6:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
7:00 AM	0	2	3	5	6	3	0	0	0	0	0	0	0	0	0	0	0	19
8:00 AM	1	6	6	5	20	14	4	0	0	0	0	0	0	0	0	0	0	56
9:00 AM	0	3	5	8	10	5	1	0	0	0	0	0	0	0	0	0	0	32
10:00 AM	1	0	2	8	8	3	3	0	0	0	0	0	0	0	0	0	0	25
11:00 AM	0	2	5	8	14	8	4	0	0	0	0	0	0	0	0	0	0	41
12:00 PM	0	0	3	7	15	5	0	1	0	0	0	0	0	0	0	0	0	31
1:00 PM	0	4	6	8	10	4	0	0	0	0	0	0	0	0	0	0	0	32
2:00 PM	0	0	3	19	7	8	2	0	0	0	0	0	0	0	0	0	0	39
3:00 PM	0	2	1	4	14	6	2	1	0	0	0	0	0	0	0	0	0	30
4:00 PM	0	3	0	10	22	6	0	0	0	0	0	0	0	0	0	0	0	41
5:00 PM	0	2	2	24	19	6	0	0	0	0	0	0	0	0	0	0	0	53
6:00 PM	0	1	1	12	17	2	1	0	0	0	0	0	0	0	0	0	0	34
7:00 PM	0	2	1	3	9	2	0	0	0	0	0	0	0	0	0	0	0	17
8:00 PM	0	0	1	3	7	2	0	0	0	0	0	0	0	0	0	0	0	13
9:00 PM	0	1	0	9	1	0	0	0	0	0	0	0	0	0	0	0	0	11
10:00 PM	0	1	1	4	5	1	0	0	0	0	0	0	0	0	0	0	0	12
11:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	**2**	**30**	**40**	**141**	**188**	**75**	**17**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**495**
Percent	**0.4%**	**6.1%**	**8.1%**	**28.5%**	**38.0%**	**15.2%**	**3.4%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.5	mph	Mean (Average) Speed	25.3	mph
85th Percentile	30.6	mph	10 mph Pace	20.9 - 30.9	mph
95th Percentile	33.9	mph	Percent in Pace	68.5	%

Deon Fouche: (415) 757-7714
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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Monday, November 7, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
7:00 AM	0	0	1	6	7	2	1	0	0	0	0	0	0	0	0	0	0	**17**
8:00 AM	0	0	1	11	19	4	1	0	0	0	0	0	0	0	0	0	0	**36**
9:00 AM	0	1	0	7	8	2	0	0	0	0	0	0	0	0	0	0	0	**18**
10:00 AM	0	0	2	11	19	4	0	0	0	0	0	0	0	0	0	0	0	**36**
11:00 AM	0	3	5	6	18	10	3	0	0	0	0	0	0	0	0	0	0	**45**
12:00 PM	0	0	4	17	39	25	2	1	0	0	0	0	0	0	0	0	0	**88**
1:00 PM	0	3	10	36	42	18	2	1	0	0	0	0	0	0	0	0	0	**112**
2:00 PM	0	1	4	13	13	6	0	0	0	0	0	0	0	0	0	0	0	**37**
3:00 PM	0	1	9	14	13	4	0	0	0	0	0	0	0	0	0	0	0	**41**
4:00 PM	2	2	9	21	11	7	0	0	0	0	0	0	0	0	0	0	0	**52**
5:00 PM	0	0	16	21	26	8	0	0	0	0	0	0	0	0	0	0	0	**71**
6:00 PM	0	4	14	25	12	4	2	0	0	0	0	0	0	0	0	0	0	**61**
7:00 PM	0	1	7	12	6	1	0	0	0	0	0	0	0	0	0	0	0	**27**
8:00 PM	0	2	0	5	7	2	1	0	0	0	0	0	0	0	0	0	0	**17**
9:00 PM	0	0	1	2	3	1	1	0	0	0	0	0	0	0	0	0	0	**8**
10:00 PM	0	0	0	2	6	0	0	0	0	0	0	0	0	0	0	0	0	**8**
11:00 PM	0	0	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0	**7**
Total	**2**	**18**	**83**	**212**	**256**	**99**	**13**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**685**
Percent	**0.3%**	**2.6%**	**12.1%**	**30.9%**	**37.4%**	**14.5%**	**1.9%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.2	mph	Mean (Average) Speed	25.2	mph
85th Percentile	30.2	mph	10 mph Pace	21.6 - 31.6	mph
95th Percentile	32.8	mph	Percent in Pace	70.7	%

Deon Fouche: (415) 757-7714
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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Tuesday, November 8, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	0	1	0	0	2	1	0	0	0	0	0	0	0	0	0	0	**4**
7:00 AM	0	1	3	2	2	3	1	0	0	0	0	0	0	0	0	0	0	**12**
8:00 AM	0	4	8	16	15	7	1	0	0	0	0	0	0	0	0	0	0	**51**
9:00 AM	0	1	4	2	12	10	0	0	0	0	0	0	0	0	0	0	0	**29**
10:00 AM	1	3	5	10	11	5	1	0	0	0	0	0	0	0	0	0	0	**36**
11:00 AM	0	2	2	9	12	5	3	0	0	0	0	0	0	0	0	0	0	**33**
12:00 PM	0	4	1	4	18	6	1	1	0	0	0	0	0	0	0	0	0	**35**
1:00 PM	0	0	5	7	14	3	1	0	0	0	0	0	0	0	0	0	0	**30**
2:00 PM	0	1	4	20	20	4	0	0	0	0	0	0	0	0	0	0	0	**49**
3:00 PM	0	3	4	8	17	7	1	0	0	0	0	0	0	0	0	0	0	**40**
4:00 PM	0	1	1	3	15	8	0	0	0	0	0	0	0	0	0	0	0	**28**
5:00 PM	0	2	1	10	28	7	2	0	0	0	0	0	0	0	0	0	0	**50**
6:00 PM	0	2	6	16	12	6	0	1	0	0	0	0	0	0	0	0	0	**43**
7:00 PM	0	0	4	12	6	0	2	0	0	0	0	0	0	0	0	0	0	**24**
8:00 PM	0	1	0	1	4	1	0	0	0	0	0	0	0	0	0	0	0	**7**
9:00 PM	0	0	0	2	4	0	1	0	0	0	0	0	0	0	0	0	0	**7**
10:00 PM	0	1	0	6	3	0	0	0	0	0	0	0	0	0	0	0	0	**10**
11:00 PM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
Total	**1**	**29**	**51**	**128**	**196**	**74**	**15**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**496**
Percent	**0.2%**	**5.8%**	**10.3%**	**25.8%**	**39.5%**	**14.9%**	**3.0%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	26.0	mph	Mean (Average) Speed	25.4	mph
85th Percentile	30.5	mph	10 mph Pace	21.9 - 31.9	mph
95th Percentile	33.8	mph	Percent in Pace	69.4	%

Deon Fouche: (415) 757-7714
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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Tuesday, November 8, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
7:00 AM	0	0	1	6	5	2	1	0	0	0	0	0	0	0	0	0	0	**15**
8:00 AM	0	1	0	8	18	8	0	0	0	0	0	0	0	0	0	0	0	**35**
9:00 AM	0	2	3	8	18	1	1	0	0	0	0	0	0	0	0	0	0	**33**
10:00 AM	0	0	1	4	10	6	0	0	0	0	0	0	0	0	0	0	0	**21**
11:00 AM	0	1	4	6	7	5	1	0	0	0	0	0	0	0	0	0	0	**24**
12:00 PM	0	2	1	10	14	7	0	1	0	0	0	0	0	0	0	0	0	**35**
1:00 PM	0	0	1	13	20	5	0	0	0	0	0	0	0	0	0	0	0	**39**
2:00 PM	0	2	4	15	20	3	0	0	0	0	0	0	0	0	0	0	0	**44**
3:00 PM	0	2	4	15	12	4	0	0	0	0	0	0	0	0	0	0	0	**37**
4:00 PM	0	4	5	9	13	2	0	0	0	0	0	0	0	0	0	0	0	**33**
5:00 PM	1	0	7	13	12	0	0	0	0	0	0	0	0	0	0	0	0	**33**
6:00 PM	2	1	11	14	29	6	0	0	0	0	0	0	0	0	0	0	0	**63**
7:00 PM	1	3	10	6	13	1	1	0	0	0	0	0	0	0	0	0	0	**35**
8:00 PM	0	1	2	0	7	2	0	0	0	0	0	0	0	0	0	0	0	**12**
9:00 PM	0	0	2	8	4	1	0	0	0	0	0	0	0	0	0	0	0	**15**
10:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
11:00 PM	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
Total	**4**	**20**	**56**	**139**	**205**	**55**	**4**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**484**
Percent	**0.8%**	**4.1%**	**11.6%**	**28.7%**	**42.4%**	**11.4%**	**0.8%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.2	mph	Mean (Average) Speed	24.7	mph
85th Percentile	29.4	mph	10 mph Pace	21.7 - 31.7	mph
95th Percentile	31.5	mph	Percent in Pace	74.2	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Wednesday, November 9, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 AM	0	0	2	6	8	1	1	0	0	0	0	0	0	0	0	0	0	**18**
8:00 AM	2	5	4	8	22	7	1	0	0	0	0	0	0	0	0	0	0	**49**
9:00 AM	0	2	3	8	15	6	0	1	0	0	0	0	0	0	0	0	0	**35**
10:00 AM	0	3	3	7	12	9	4	0	0	0	0	0	0	0	0	0	0	**38**
11:00 AM	0	0	4	11	15	4	1	0	0	0	0	0	0	0	0	0	0	**35**
12:00 PM	0	2	2	3	10	4	2	0	0	0	0	0	0	0	0	0	0	**23**
1:00 PM	0	3	3	6	11	5	3	0	0	0	0	0	0	0	0	0	0	**31**
2:00 PM	0	1	5	10	19	6	4	0	1	0	0	0	0	0	0	0	0	**46**
3:00 PM	1	0	2	11	18	10	0	0	0	0	0	0	0	0	0	0	0	**42**
4:00 PM	0	0	6	8	17	7	3	0	0	0	0	0	0	0	0	0	0	**41**
5:00 PM	0	2	3	16	24	6	1	0	0	0	0	0	0	0	0	0	0	**52**
6:00 PM	0	2	4	15	22	2	0	0	0	0	0	0	0	0	0	0	0	**45**
7:00 PM	0	0	2	11	8	1	0	0	0	0	0	0	0	0	0	0	0	**22**
8:00 PM	0	0	0	5	4	0	0	0	0	0	0	0	0	0	0	0	0	**9**
9:00 PM	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	**6**
10:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
11:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**3**	**21**	**45**	**131**	**210**	**69**	**20**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**501**
Percent	**0.6%**	**4.2%**	**9.0%**	**26.1%**	**41.9%**	**13.8%**	**4.0%**	**0.2%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.9	mph	Mean (Average) Speed	25.7	mph
85th Percentile	30.7	mph	10 mph Pace	22.0 - 32.0	mph
95th Percentile	34.2	mph	Percent in Pace	69.5	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Wednesday, November 9, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
7:00 AM	0	0	0	3	10	3	1	0	0	0	0	0	0	0	0	0	0	**17**
8:00 AM	1	0	2	6	21	5	0	0	0	0	0	0	0	0	0	0	0	**35**
9:00 AM	0	1	5	10	14	3	0	0	0	0	0	0	0	0	0	0	0	**33**
10:00 AM	0	1	3	8	12	1	0	0	0	0	0	0	0	0	0	0	0	**25**
11:00 AM	0	3	6	6	10	2	2	0	0	0	0	0	0	0	0	0	0	**29**
12:00 PM	0	0	2	5	8	6	2	0	0	0	0	0	0	0	0	0	0	**23**
1:00 PM	0	0	4	9	17	6	0	0	0	0	0	0	0	0	0	0	0	**36**
2:00 PM	0	1	1	13	14	3	1	0	0	0	0	0	0	0	0	0	0	**33**
3:00 PM	0	1	2	17	15	3	1	0	0	0	0	0	0	0	0	0	0	**39**
4:00 PM	1	4	5	15	18	2	1	0	0	0	0	0	0	0	0	0	0	**46**
5:00 PM	0	2	15	18	19	6	0	1	0	0	0	0	0	0	0	0	0	**61**
6:00 PM	0	4	9	25	11	3	3	0	0	0	0	0	0	0	0	0	0	**55**
7:00 PM	1	1	6	8	7	0	0	0	0	0	0	0	0	0	0	0	0	**23**
8:00 PM	1	1	1	7	3	0	0	0	0	0	0	0	0	0	0	0	0	**13**
9:00 PM	0	0	3	5	3	0	0	0	0	0	0	0	0	0	0	0	0	**11**
10:00 PM	0	0	2	3	4	0	0	0	0	0	0	0	0	0	0	0	0	**9**
11:00 PM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
Total	**4**	**20**	**68**	**158**	**188**	**43**	**11**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**493**
Percent	**0.8%**	**4.1%**	**13.8%**	**32.0%**	**38.1%**	**8.7%**	**2.2%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	24.8	mph	Mean (Average) Speed	24.5	mph
85th Percentile	29.1	mph	10 mph Pace	20.8 - 30.8	mph
95th Percentile	32.4	mph	Percent in Pace	72	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Total Study Average
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	**4**
6:00 AM	0	0	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	**5**
7:00 AM	0	2	3	4	8	4	1	0	0	0	0	0	0	0	0	0	0	**22**
8:00 AM	0	3	5	9	12	5	1	0	0	0	0	0	0	0	0	0	0	**35**
9:00 AM	1	1	4	8	9	5	1	0	0	0	0	0	0	0	0	0	0	**29**
10:00 AM	1	2	3	8	11	5	1	0	0	0	0	0	0	0	0	0	0	**31**
11:00 AM	0	1	5	8	15	5	2	0	0	0	0	0	0	0	0	0	0	**36**
12:00 PM	1	2	4	7	13	4	0	0	0	0	0	0	0	0	0	0	0	**31**
1:00 PM	0	2	4	9	10	4	1	0	0	0	0	0	0	0	0	0	0	**30**
2:00 PM	0	1	5	13	13	5	2	0	0	0	0	0	0	0	0	0	0	**39**
3:00 PM	0	1	3	7	15	6	1	0	0	0	0	0	0	0	0	0	0	**33**
4:00 PM	1	1	2	11	19	6	1	0	0	0	0	0	0	0	0	0	0	**41**
5:00 PM	0	2	3	12	17	4	1	0	0	0	0	0	0	0	0	0	0	**39**
6:00 PM	0	2	3	13	12	2	0	0	0	0	0	0	0	0	0	0	0	**32**
7:00 PM	0	0	2	6	7	1	0	0	0	0	0	0	0	0	0	0	0	**16**
8:00 PM	0	1	0	3	4	1	0	0	0	0	0	0	0	0	0	0	0	**9**
9:00 PM	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	**6**
10:00 PM	0	1	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	**7**
11:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**4**	**23**	**49**	**127**	**173**	**59**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**447**
Percent	**0.9%**	**5.1%**	**11.0%**	**28.4%**	**38.7%**	**13.2%**	**2.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	25.4	mph	Mean (Average) Speed	24.9	mph
85th Percentile	30.2	mph	10 mph Pace	20.9 - 30.9	mph
95th Percentile	33.2	mph	Percent in Pace	66.9	%

Deon Fouche: (415) 757-7714
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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 to 11/9/2016
Site Code: 06

Total Study Average
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	0	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	**5**
7:00 AM	0	0	1	4	8	3	1	0	0	0	0	0	0	0	0	0	0	**17**
8:00 AM	0	1	1	8	13	4	0	0	0	0	0	0	0	0	0	0	0	**27**
9:00 AM	0	1	3	7	11	2	0	0	0	0	0	0	0	0	0	0	0	**24**
10:00 AM	0	1	2	9	12	3	0	0	0	0	0	0	0	0	0	0	0	**27**
11:00 AM	0	1	4	6	12	5	1	0	0	0	0	0	0	0	0	0	0	**29**
12:00 PM	0	1	4	13	19	8	1	0	0	0	0	0	0	0	0	0	0	**46**
1:00 PM	0	1	4	14	18	7	1	0	0	0	0	0	0	0	0	0	0	**45**
2:00 PM	0	1	4	12	16	4	1	0	0	0	0	0	0	0	0	0	0	**38**
3:00 PM	0	1	6	12	12	4	0	0	0	0	0	0	0	0	0	0	0	**35**
4:00 PM	1	2	6	16	16	6	1	0	0	0	0	0	0	0	0	0	0	**48**
5:00 PM	0	2	8	14	18	5	0	0	0	0	0	0	0	0	0	0	0	**47**
6:00 PM	1	2	8	15	11	3	1	0	0	0	0	0	0	0	0	0	0	**41**
7:00 PM	0	1	4	8	7	1	0	0	0	0	0	0	0	0	0	0	0	**21**
8:00 PM	0	1	2	4	4	1	0	0	0	0	0	0	0	0	0	0	0	**12**
9:00 PM	0	0	2	3	2	1	0	0	0	0	0	0	0	0	0	0	0	**8**
10:00 PM	0	0	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	**6**
11:00 PM	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
Total	**2**	**16**	**61**	**151**	**186**	**60**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**483**
Percent	**0.4%**	**3.3%**	**12.6%**	**31.3%**	**38.5%**	**12.4%**	**1.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	24.9	mph	Mean (Average) Speed	24.7	mph
85th Percentile	29.4	mph	10 mph Pace	20.9 - 30.9	mph
95th Percentile	32.2	mph	Percent in Pace	70.3	%

Deon Fouche: (415) 757-7714
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Location: Ramona Ave S/O Littleness Ave
Date Range: 11/3/2016 - 11/9/2016
Site Code: 06

Time	Thursday 11/3/2016			Friday 11/4/2016			Saturday 11/5/2016			Sunday 11/6/2016			Monday 11/7/2016			Tuesday 11/8/2016			Wednesday 11/9/2016			Mid-Week Average		
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	0	2	2	0	2	2	1	5	6	2	3	5	2	0	2	1	3	4	1	1	2	1	2	3
1:00 AM	0	0	0	1	2	3	0	1	1	0	0	0	1	1	2	0	0	0	2	0	2	1	0	1
2:00 AM	0	0	0	0	0	0	1	1	2	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	1	0	1	0	0	0	0	0	0
4:00 AM	1	0	1	4	0	4	0	1	1	1	0	1	0	0	0	1	1	2	0	0	0	1	0	1
5:00 AM	6	3	9	2	0	2	7	2	9	1	1	2	3	1	4	2	0	2	3	0	3	4	1	5
6:00 AM	14	16	30	16	10	26	1	4	5	6	1	7	2	1	3	4	1	5	0	1	1	6	6	12
7:00 AM	39	30	69	48	29	77	17	12	29	4	1	5	19	17	36	12	15	27	18	17	35	23	21	44
8:00 AM	30	34	64	21	34	55	20	16	36	11	6	17	56	36	92	51	35	86	49	35	84	43	35	78
9:00 AM	27	27	54	31	24	55	28	21	49	19	16	35	32	18	50	29	33	62	35	33	68	30	31	61
10:00 AM	34	25	59	28	40	68	30	27	57	25	18	43	25	36	61	36	21	57	38	25	63	36	24	60
11:00 AM	27	11	38	34	31	65	42	30	72	38	25	63	41	45	86	33	24	57	35	29	64	32	21	53
12:00 PM	31	38	69	34	70	104	31	40	71	33	28	61	31	88	119	35	35	70	23	23	46	30	32	62
1:00 PM	30	34	64	38	40	78	35	32	67	18	23	41	32	112	144	30	39	69	31	36	67	30	36	67
2:00 PM	37	30	67	39	49	88	32	31	63	37	35	72	39	37	76	49	44	93	46	33	79	44	36	80
3:00 PM	42	45	87	36	38	74	27	27	54	29	21	50	30	41	71	40	37	77	42	39	81	41	40	82
4:00 PM	52	73	125	55	66	121	35	35	70	29	28	57	41	52	93	28	33	61	41	46	87	40	51	91
5:00 PM	38	63	101	50	56	106	18	25	43	19	15	34	53	71	124	50	33	83	52	61	113	47	52	99
6:00 PM	29	27	56	25	27	52	35	27	62	19	23	42	34	61	95	43	63	106	45	55	100	39	48	87
7:00 PM	14	17	31	11	19	30	13	20	33	16	13	29	17	27	44	24	35	59	22	23	45	20	25	45
8:00 PM	14	17	31	4	6	10	7	9	16	7	14	21	13	17	30	7	12	19	9	13	22	10	14	24
9:00 PM	8	11	19	7	5	12	5	10	15	7	4	11	11	8	19	7	15	22	6	11	17	7	12	19
10:00 PM	1	2	3	6	8	14	7	3	10	7	5	12	12	8	20	10	2	12	2	9	11	4	4	9
11:00 PM	0	2	2	1	2	3	2	3	5	5	6	11	1	7	8	3	3	6	1	3	4	1	3	4
Total	**474**	**507**	**981**	**491**	**558**	**1,049**	**394**	**382**	**776**	**335**	**288**	**623**	**495**	**685**	**1,180**	**496**	**484**	**980**	**501**	**493**	**994**	**490**	**495**	**985**
Percent	**48%**	**52%**	-	**47%**	**53%**	-	**51%**	**49%**	-	**54%**	**46%**	-	**42%**	**58%**	-	**51%**	**49%**	-	**50%**	**50%**	-	**50%**	**50%**	-

1. Mid-week average includes data between Tuesday and Thursday.

Deon Fouche: (415) 757-7714
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Vehicle Classification Report Summary

Location: Casanova Ave N/O Melway Cir
Count Direction: Northbound / Southbound
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

	FHWA Vehicle Classification													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total														
Northbound	95	21,472	632	2	758	20	0	2	0	0	0	0	0	22,981
Percent	0.4%	93.4%	2.8%	0.0%	3.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	138	12,328	1,679	0	92	741	0	9	19	20	0	0	14	15,040
Percent	0.9%	82.0%	11.2%	0.0%	0.6%	4.9%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	100%
Total	233	33,800	2,311	2	850	761	0	11	19	20	0	0	14	38,021
Percent	0.6%	88.9%	6.1%	0.0%	2.2%	2.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

Deon Fouche: (415) 757-7714
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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Thursday, November 3, 2016
Southbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	9	3	0	0	1	0	0	0	0	0	0	0	**13**
1:00 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	**9**
2:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	7	2	0	0	2	0	0	0	0	0	0	0	**11**
6:00 AM	0	21	4	0	0	5	0	0	0	0	0	0	0	**30**
7:00 AM	7	56	25	0	2	10	0	0	2	0	0	0	0	**102**
8:00 AM	0	67	16	0	0	14	0	0	1	0	0	0	0	**98**
9:00 AM	2	50	19	0	0	6	0	0	0	0	0	0	0	**77**
10:00 AM	0	43	17	0	1	5	0	0	0	0	0	0	0	**66**
11:00 AM	0	79	11	0	0	10	0	0	0	0	0	0	0	**100**
12:00 PM	1	97	10	0	6	14	0	0	0	0	0	0	0	**128**
1:00 PM	0	125	13	0	1	7	0	0	0	1	0	0	0	**147**
2:00 PM	1	125	17	0	2	5	0	0	0	0	0	0	0	**150**
3:00 PM	0	152	12	0	2	4	0	0	0	0	0	0	1	**171**
4:00 PM	2	119	22	0	0	8	0	0	0	0	0	0	1	**152**
5:00 PM	3	113	26	0	1	13	0	0	0	0	0	0	0	**156**
6:00 PM	4	173	20	0	1	13	0	1	1	0	0	0	1	**214**
7:00 PM	0	139	16	0	0	2	0	0	0	1	0	0	0	**158**
8:00 PM	0	116	8	0	0	4	0	0	0	0	0	0	0	**128**
9:00 PM	1	95	6	0	0	4	0	0	1	0	0	0	0	**107**
10:00 PM	0	58	6	0	0	3	0	0	0	0	0	0	0	**67**
11:00 PM	0	42	6	0	0	0	0	0	0	0	0	0	0	**48**
Total	**21**	**1,698**	**260**	**0**	**16**	**130**	**0**	**1**	**5**	**2**	**0**	**0**	**3**	**2,136**
Percent	**1.0%**	**79.5%**	**12.2%**	**0.0%**	**0.7%**	**6.1%**	**0.0%**	**0.0%**	**0.2%**	**0.1%**	**0.0%**	**0.0%**	**0.1%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Friday, November 4, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	19	0	0	0	0	0	0	0	0	0	0	0	**19**
1:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	0	**8**
2:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
3:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	**5**
4:00 AM	0	12	1	0	3	0	0	0	0	0	0	0	0	**16**
5:00 AM	0	54	0	0	1	0	0	0	0	0	0	0	0	**55**
6:00 AM	0	104	3	0	2	0	0	0	0	0	0	0	0	**109**
7:00 AM	1	265	9	0	7	0	0	0	0	0	0	0	0	**282**
8:00 AM	0	247	10	0	5	0	0	0	0	0	0	0	0	**262**
9:00 AM	2	215	1	0	3	0	0	0	0	0	0	0	0	**221**
10:00 AM	0	167	3	0	5	0	0	0	0	0	0	0	0	**175**
11:00 AM	2	187	5	1	5	0	0	0	0	0	0	0	0	**200**
12:00 PM	3	267	3	0	13	0	0	0	0	0	0	0	0	**286**
1:00 PM	1	226	2	0	3	0	0	0	0	0	0	0	0	**232**
2:00 PM	0	228	5	0	8	0	0	0	0	0	0	0	0	**241**
3:00 PM	0	243	1	0	6	0	0	0	0	0	0	0	0	**250**
4:00 PM	3	322	9	0	13	0	0	0	0	0	0	0	0	**347**
5:00 PM	4	349	11	0	12	1	0	0	0	0	0	0	0	**377**
6:00 PM	0	198	1	0	4	0	0	0	0	0	0	0	0	**203**
7:00 PM	0	159	3	0	2	0	0	0	0	0	0	0	0	**164**
8:00 PM	0	92	1	0	2	0	0	0	0	0	0	0	0	**95**
9:00 PM	0	111	0	0	2	0	0	0	0	0	0	0	0	**113**
10:00 PM	0	118	2	0	1	0	0	0	0	0	0	0	0	**121**
11:00 PM	0	36	1	0	1	0	0	0	0	0	0	0	0	**38**
Total	**16**	**3,636**	**72**	**1**	**98**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3,824**
Percent	**0.4%**	**95.1%**	**1.9%**	**0.0%**	**2.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Friday, November 4, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	14	0	0	0	2	0	0	0	0	0	0	0	**16**
1:00 AM	1	11	1	0	0	0	0	0	0	0	0	0	0	**13**
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	9	1	0	0	0	0	0	0	0	0	0	0	**10**
6:00 AM	0	31	4	0	0	1	0	0	0	0	0	0	0	**36**
7:00 AM	2	99	19	0	3	2	0	0	0	1	0	0	0	**126**
8:00 AM	0	64	33	0	0	11	0	1	0	0	0	0	0	**109**
9:00 AM	0	86	13	0	1	5	0	0	1	0	0	0	0	**106**
10:00 AM	3	55	14	0	2	6	0	0	0	0	0	0	0	**80**
11:00 AM	1	68	15	0	2	9	0	0	0	0	0	0	0	**95**
12:00 PM	1	111	18	0	1	9	0	0	0	0	0	0	0	**140**
1:00 PM	3	130	15	0	1	9	0	0	0	0	0	0	0	**158**
2:00 PM	3	90	11	0	0	3	0	0	0	0	0	0	0	**107**
3:00 PM	2	147	14	0	2	13	0	0	0	0	0	0	0	**178**
4:00 PM	0	120	16	0	1	9	0	0	0	0	0	0	0	**146**
5:00 PM	5	166	34	0	0	19	0	0	0	0	0	0	0	**224**
6:00 PM	0	189	19	0	0	8	0	0	0	1	0	0	0	**217**
7:00 PM	2	134	11	0	2	4	0	0	0	0	0	0	0	**153**
8:00 PM	0	111	9	0	0	8	0	0	0	0	0	0	0	**128**
9:00 PM	1	111	5	0	0	2	0	0	0	0	0	0	0	**119**
10:00 PM	1	67	5	0	0	3	0	0	0	0	0	0	0	**76**
11:00 PM	0	43	4	0	0	3	0	0	0	1	0	0	0	**51**
Total	**25**	**1,861**	**261**	**0**	**15**	**126**	**0**	**1**	**1**	**3**	**0**	**0**	**0**	**2,293**
Percent	**1.1%**	**81.2%**	**11.4%**	**0.0%**	**0.7%**	**5.5%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Saturday, November 5, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	14	1	0	0	0	0	0	0	0	0	0	0	15
1:00 AM	0	21	0	0	0	0	0	0	0	0	0	0	0	21
2:00 AM	0	6	1	0	1	0	0	0	0	0	0	0	0	8
3:00 AM	0	4	0	0	1	0	0	0	0	0	0	0	0	5
4:00 AM	0	8	1	0	0	0	0	0	0	0	0	0	0	9
5:00 AM	0	40	2	0	1	0	0	0	0	0	0	0	0	43
6:00 AM	1	58	4	0	1	0	0	0	0	0	0	0	0	64
7:00 AM	0	119	7	0	2	0	0	0	0	0	0	0	0	128
8:00 AM	0	162	8	0	3	0	0	0	0	0	0	0	0	173
9:00 AM	2	192	5	0	4	0	0	0	0	0	0	0	0	203
10:00 AM	3	190	5	0	11	0	0	0	0	0	0	0	0	209
11:00 AM	1	232	0	0	7	0	0	0	0	0	0	0	0	240
12:00 PM	2	222	1	0	9	0	0	0	0	0	0	0	0	234
1:00 PM	3	244	2	0	7	0	0	0	0	0	0	0	0	256
2:00 PM	0	179	5	0	4	0	0	0	0	0	0	0	0	188
3:00 PM	0	192	4	0	12	0	0	0	0	0	0	0	0	208
4:00 PM	1	197	2	0	8	0	0	0	0	0	0	0	0	208
5:00 PM	1	172	1	0	5	0	0	0	0	0	0	0	0	179
6:00 PM	0	162	1	0	1	0	0	0	0	0	0	0	0	164
7:00 PM	0	134	3	0	2	0	0	0	0	0	0	0	0	139
8:00 PM	0	106	1	0	1	0	0	0	0	0	0	0	0	108
9:00 PM	0	95	3	0	3	0	0	0	0	0	0	0	0	101
10:00 PM	0	151	3	0	3	0	0	0	0	0	0	0	0	157
11:00 PM	0	142	2	0	3	0	0	0	0	0	0	0	0	147
Total	**14**	**3,042**	**62**	**0**	**89**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3,207**
Percent	**0.4%**	**94.9%**	**1.9%**	**0.0%**	**2.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Saturday, November 5, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	33	2	0	1	1	0	0	0	0	0	0	0	37
1:00 AM	0	25	4	0	0	0	0	0	0	0	0	0	0	29
2:00 AM	0	12	0	0	0	0	0	0	0	0	0	0	0	12
3:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	7	2	0	0	0	0	0	0	0	0	0	0	9
5:00 AM	0	19	1	0	0	0	0	0	0	0	0	0	0	20
6:00 AM	0	17	0	0	0	0	0	0	0	0	0	0	0	17
7:00 AM	1	64	5	0	0	2	0	0	0	0	0	0	0	72
8:00 AM	0	81	8	0	1	3	0	0	0	0	0	0	0	93
9:00 AM	0	76	13	0	0	2	0	0	0	0	0	0	0	91
10:00 AM	1	61	21	0	1	6	0	0	0	0	0	0	0	90
11:00 AM	1	117	13	0	2	11	0	0	2	0	0	0	0	146
12:00 PM	2	130	13	0	1	3	0	0	0	1	0	0	0	150
1:00 PM	3	124	18	0	1	5	0	0	0	0	0	0	0	151
2:00 PM	2	125	16	0	1	9	0	0	0	1	0	0	0	154
3:00 PM	1	135	21	0	2	8	0	1	1	0	0	0	0	169
4:00 PM	1	185	22	0	0	7	0	0	2	0	0	0	0	217
5:00 PM	0	175	13	0	0	5	0	0	0	0	0	0	0	193
6:00 PM	1	113	22	0	0	10	0	0	0	0	0	0	0	146
7:00 PM	0	101	13	0	1	15	0	0	1	0	0	0	0	131
8:00 PM	0	86	9	0	2	3	0	0	0	0	0	0	1	101
9:00 PM	0	114	9	0	0	3	0	0	0	0	0	0	0	126
10:00 PM	0	92	6	0	0	1	0	1	0	0	0	0	0	100
11:00 PM	0	82	8	0	0	4	0	0	0	0	0	0	0	94
Total	**13**	**1,980**	**239**	**0**	**13**	**98**	**0**	**2**	**6**	**2**	**0**	**0**	**1**	**2,354**
Percent	**0.6%**	**84.1%**	**10.2%**	**0.0%**	**0.6%**	**4.2%**	**0.0%**	**0.1%**	**0.3%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Sunday, November 6, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	28	1	0	0	0	0	0	0	0	0	0	0	29
1:00 AM	0	12	1	0	1	0	0	0	0	0	0	0	0	14
2:00 AM	0	10	0	0	0	0	0	0	0	0	0	0	0	10
3:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	0	8
4:00 AM	0	8	0	0	1	0	0	0	0	0	0	0	0	9
5:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	4
6:00 AM	0	38	1	0	2	0	0	0	0	0	0	0	0	41
7:00 AM	0	43	0	0	1	0	0	0	0	0	0	0	0	44
8:00 AM	1	84	4	0	0	0	0	0	0	0	0	0	0	89
9:00 AM	3	173	6	0	10	1	0	0	0	0	0	0	0	193
10:00 AM	1	199	7	0	6	0	0	0	0	0	0	0	0	213
11:00 AM	0	241	6	0	4	0	0	0	0	0	0	0	0	251
12:00 PM	2	205	3	0	6	1	0	0	0	0	0	0	0	217
1:00 PM	1	188	1	0	8	0	0	0	0	0	0	0	0	198
2:00 PM	1	156	1	0	4	0	0	0	0	0	0	0	0	162
3:00 PM	0	129	0	0	6	0	0	0	0	0	0	0	0	135
4:00 PM	0	175	2	0	3	0	0	0	0	0	0	0	0	180
5:00 PM	1	190	0	0	0	1	0	0	0	0	0	0	0	192
6:00 PM	0	154	1	0	5	0	0	0	0	0	0	0	0	160
7:00 PM	0	118	1	0	4	0	0	0	0	0	0	0	0	123
8:00 PM	0	51	2	0	0	0	0	0	0	0	0	0	0	53
9:00 PM	0	61	0	0	1	0	0	0	0	0	0	0	0	62
10:00 PM	0	66	0	0	1	0	0	0	0	0	0	0	0	67
11:00 PM	0	38	1	0	1	0	0	0	0	0	0	0	0	40
Total	**10**	**2,377**	**40**	**0**	**64**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,494**
Percent	**0.4%**	**95.3%**	**1.6%**	**0.0%**	**2.6%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Sunday, November 6, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	15	0	0	0	2	0	0	0	0	0	0	0	17
1:00 AM	0	16	0	0	0	0	0	0	0	0	0	0	0	16
2:00 AM	0	15	0	0	0	0	0	0	0	0	0	0	0	15
3:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	10	0	0	0	1	0	0	0	0	0	0	0	11
5:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
6:00 AM	0	9	1	0	0	0	0	0	0	0	0	0	0	10
7:00 AM	0	21	0	0	0	2	0	0	0	0	0	0	0	23
8:00 AM	1	32	3	0	0	1	0	0	0	0	0	0	0	37
9:00 AM	1	60	5	0	0	7	0	0	0	0	0	0	0	73
10:00 AM	0	54	14	0	0	5	0	0	0	0	0	0	0	73
11:00 AM	2	76	15	0	2	18	0	0	0	0	0	0	0	113
12:00 PM	0	89	23	0	1	9	0	1	0	0	0	0	0	123
1:00 PM	1	100	18	0	1	6	0	1	0	0	0	0	0	127
2:00 PM	1	105	6	0	2	5	0	0	0	0	0	0	0	119
3:00 PM	1	121	12	0	0	7	0	0	0	0	0	0	0	141
4:00 PM	0	113	8	0	1	8	0	0	0	0	0	0	2	132
5:00 PM	1	128	15	0	3	5	0	0	0	0	0	0	0	152
6:00 PM	1	160	9	0	0	5	0	1	0	0	0	0	1	177
7:00 PM	0	99	7	0	0	2	0	0	0	1	0	0	1	110
8:00 PM	0	74	3	0	0	1	0	0	0	0	0	0	0	78
9:00 PM	0	77	11	0	0	3	0	0	0	0	0	0	0	91
10:00 PM	0	73	8	0	0	2	0	0	0	0	0	0	0	83
11:00 PM	0	51	7	0	0	0	0	0	0	0	0	0	0	58
Total	**9**	**1,505**	**166**	**0**	**10**	**89**	**0**	**3**	**0**	**1**	**0**	**0**	**4**	**1,787**
Percent	**0.5%**	**84.2%**	**9.3%**	**0.0%**	**0.6%**	**5.0%**	**0.0%**	**0.2%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.2%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Monday, November 7, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	14	1	0	0	0	0	0	0	0	0	0	0	15
1:00 AM	0	8	1	0	1	0	0	0	0	0	0	0	0	10
2:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
3:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	14	1	0	0	0	0	0	0	0	0	0	0	15
5:00 AM	0	19	1	0	2	0	0	0	0	0	0	0	0	22
6:00 AM	0	43	0	0	2	0	0	0	0	0	0	0	0	45
7:00 AM	0	138	2	0	1	0	0	0	0	0	0	0	0	141
8:00 AM	1	303	14	0	8	0	0	0	0	0	0	0	0	326
9:00 AM	1	230	18	0	8	0	0	0	0	0	0	0	0	257
10:00 AM	0	150	16	0	20	0	0	0	0	0	0	0	0	186
11:00 AM	0	156	5	0	21	1	0	1	0	0	0	0	0	184
12:00 PM	2	226	18	0	24	0	0	0	0	0	0	0	0	270
1:00 PM	2	204	26	0	46	1	0	0	0	0	0	0	0	279
2:00 PM	1	128	17	0	22	0	0	0	0	0	0	0	0	168
3:00 PM	0	130	13	0	13	0	0	0	0	0	0	0	0	156
4:00 PM	4	244	10	0	12	0	0	0	0	0	0	0	0	270
5:00 PM	1	353	8	0	17	1	0	0	0	0	0	0	0	380
6:00 PM	3	379	6	0	7	0	0	0	0	0	0	0	0	395
7:00 PM	0	184	3	0	4	0	0	0	0	0	0	0	0	191
8:00 PM	0	97	1	0	1	0	0	0	0	0	0	0	0	99
9:00 PM	0	59	3	0	2	0	0	0	0	0	0	0	0	64
10:00 PM	0	54	1	0	1	0	0	0	0	0	0	0	0	56
11:00 PM	0	34	0	0	0	0	0	0	0	0	0	0	0	34
Total	**15**	**3,179**	**165**	**0**	**212**	**3**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**3,575**
Percent	**0.4%**	**88.9%**	**4.6%**	**0.0%**	**5.9%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Monday, November 7, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	1	25	2	0	0	1	0	0	0	0	0	0	0	29
1:00 AM	0	9	0	0	0	2	0	0	0	0	0	0	0	11
2:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
6:00 AM	0	10	1	0	0	1	0	0	0	0	0	0	0	12
7:00 AM	0	39	4	0	0	3	0	0	0	0	0	0	0	46
8:00 AM	2	79	24	0	0	9	0	0	1	2	0	0	0	117
9:00 AM	0	88	18	0	1	10	0	0	1	1	0	0	0	119
10:00 AM	0	67	24	0	0	8	0	0	0	0	0	0	0	99
11:00 AM	0	70	13	0	1	7	0	0	0	0	0	0	0	91
12:00 PM	0	77	18	0	0	6	0	0	0	0	0	0	1	102
1:00 PM	2	102	19	0	1	13	0	0	0	0	0	0	1	138
2:00 PM	1	123	19	0	1	4	0	0	0	0	0	0	0	148
3:00 PM	1	155	14	0	1	2	0	0	0	0	0	0	0	173
4:00 PM	1	87	13	0	1	5	0	0	0	1	0	0	0	108
5:00 PM	2	144	22	0	3	7	0	1	0	0	0	0	0	179
6:00 PM	1	117	34	0	0	10	0	0	0	0	0	0	1	163
7:00 PM	1	131	21	0	1	6	0	0	0	0	0	0	0	160
8:00 PM	1	115	11	0	0	2	0	0	0	0	0	0	1	130
9:00 PM	0	99	7	0	0	4	0	0	1	0	0	0	0	111
10:00 PM	0	68	9	0	0	7	0	0	0	0	0	0	1	85
11:00 PM	0	35	2	0	0	1	0	0	0	0	0	0	0	38
Total	**13**	**1,649**	**276**	**0**	**10**	**108**	**0**	**1**	**3**	**4**	**0**	**0**	**5**	**2,069**
Percent	**0.6%**	**79.7%**	**13.3%**	**0.0%**	**0.5%**	**5.2%**	**0.0%**	**0.0%**	**0.1%**	**0.2%**	**0.0%**	**0.0%**	**0.2%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Tuesday, November 8, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	30	0	0	0	0	0	0	0	0	0	0	0	30
1:00 AM	0	14	0	0	0	0	0	0	0	0	0	0	0	14
2:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	5
3:00 AM	0	10	0	0	0	0	0	0	0	0	0	0	0	10
4:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	0	8
5:00 AM	0	29	0	0	1	0	0	0	0	0	0	0	0	30
6:00 AM	0	47	2	0	1	0	0	0	0	0	0	0	0	50
7:00 AM	2	128	3	0	5	0	0	0	0	0	0	0	0	138
8:00 AM	1	273	13	0	6	0	0	0	0	0	0	0	0	293
9:00 AM	1	235	6	0	6	0	0	0	0	0	0	0	0	248
10:00 AM	1	181	6	0	5	0	0	0	0	0	0	0	0	193
11:00 AM	1	180	5	0	8	1	0	0	0	0	0	0	0	195
12:00 PM	0	170	3	0	10	0	0	0	0	0	0	0	0	183
1:00 PM	1	210	1	0	5	0	0	0	0	0	0	0	0	217
2:00 PM	0	140	1	0	8	0	0	0	0	0	0	0	0	149
3:00 PM	2	163	1	0	2	0	0	0	0	0	0	0	0	168
4:00 PM	0	247	2	0	9	0	0	0	0	0	0	0	0	258
5:00 PM	1	307	4	0	9	0	0	0	0	0	0	0	0	321
6:00 PM	0	316	11	0	10	0	0	0	0	0	0	0	0	337
7:00 PM	0	170	4	0	2	0	0	0	0	0	0	0	0	176
8:00 PM	0	108	4	0	1	0	0	0	0	0	0	0	0	113
9:00 PM	0	77	3	0	1	0	0	0	0	0	0	0	0	81
10:00 PM	1	58	2	0	0	0	0	0	0	0	0	0	0	61
11:00 PM	0	44	7	0	0	0	0	0	0	0	0	0	0	51
Total	**11**	**3,149**	**79**	**0**	**89**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3,329**
Percent	**0.3%**	**94.6%**	**2.4%**	**0.0%**	**2.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Tuesday, November 8, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	27	2	0	0	0	0	0	0	0	0	0	0	29
1:00 AM	0	11	0	0	0	0	0	0	0	0	0	0	0	11
2:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
3:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
6:00 AM	0	16	1	0	0	0	0	0	0	0	0	0	0	17
7:00 AM	0	26	10	0	0	3	0	0	0	0	0	0	0	39
8:00 AM	2	77	31	0	1	15	0	0	1	2	0	0	0	129
9:00 AM	2	76	28	0	0	7	0	0	0	0	0	0	0	113
10:00 AM	0	59	19	0	2	9	0	0	0	1	0	0	0	90
11:00 AM	1	72	14	0	0	10	0	0	0	0	0	0	0	97
12:00 PM	6	115	15	0	2	5	0	0	0	0	0	0	0	143
1:00 PM	3	143	15	0	0	5	0	0	0	0	0	0	0	166
2:00 PM	2	128	11	0	2	0	0	0	0	2	0	0	0	145
3:00 PM	3	113	16	0	5	2	0	0	0	0	0	0	0	139
4:00 PM	0	126	16	0	0	3	0	0	0	0	0	0	0	145
5:00 PM	2	169	18	0	2	8	0	0	0	0	0	0	0	199
6:00 PM	6	187	21	0	1	5	0	0	1	0	0	0	0	221
7:00 PM	3	180	11	0	1	10	0	0	0	0	0	0	0	205
8:00 PM	0	121	4	0	0	5	0	0	0	0	0	0	0	130
9:00 PM	0	83	6	0	1	2	0	0	0	0	0	0	0	92
10:00 PM	2	79	7	0	0	1	0	0	0	0	0	0	0	89
11:00 PM	0	56	4	0	0	3	0	0	0	0	0	0	0	63
Total	**32**	**1,877**	**250**	**0**	**17**	**93**	**0**	**0**	**2**	**5**	**0**	**0**	**0**	**2,276**
Percent	**1.4%**	**82.5%**	**11.0%**	**0.0%**	**0.7%**	**4.1%**	**0.0%**	**0.0%**	**0.1%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Wednesday, November 9, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	24	0	0	0	0	0	0	0	0	0	0	0	24
1:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
2:00 AM	0	8	0	0	1	0	0	0	0	0	0	0	0	9
3:00 AM	0	4	0	0	1	0	0	0	0	0	0	0	0	5
4:00 AM	0	6	0	0	0	1	0	0	0	0	0	0	0	7
5:00 AM	0	18	0	0	0	0	0	0	0	0	0	0	0	18
6:00 AM	0	45	0	0	0	0	0	0	0	0	0	0	0	45
7:00 AM	0	145	2	0	2	0	0	0	0	0	0	0	0	149
8:00 AM	1	302	10	1	12	1	0	0	0	0	0	0	0	327
9:00 AM	0	224	9	0	3	1	0	0	0	0	0	0	0	237
10:00 AM	3	174	7	0	12	0	0	0	0	0	0	0	0	196
11:00 AM	0	165	5	0	9	0	0	0	0	0	0	0	0	179
12:00 PM	3	184	14	0	2	0	0	0	0	0	0	0	0	203
1:00 PM	3	218	5	0	4	0	0	0	0	0	0	0	0	230
2:00 PM	1	182	2	0	6	2	0	0	0	0	0	0	0	193
3:00 PM	0	154	8	0	5	0	0	0	0	0	0	0	0	167
4:00 PM	0	228	4	0	5	0	0	0	0	0	0	0	0	237
5:00 PM	0	288	10	0	6	1	0	0	0	0	0	0	0	305
6:00 PM	1	367	9	0	17	1	0	0	0	0	0	0	0	395
7:00 PM	0	188	3	0	3	0	0	0	0	0	0	0	0	194
8:00 PM	0	111	1	0	0	0	0	0	0	0	0	0	0	112
9:00 PM	0	68	0	0	1	0	0	0	0	0	0	0	0	69
10:00 PM	0	53	2	0	3	0	0	0	0	0	0	0	0	58
11:00 PM	0	44	2	0	1	1	0	0	0	0	0	0	0	48
Total	**12**	**3,202**	**94**	**1**	**93**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3,410**
Percent	**0.4%**	**93.9%**	**2.8%**	**0.0%**	**2.7%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Wednesday, November 9, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	27	4	0	0	0	0	0	0	0	0	0	0	31
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	5	3	0	0	0	0	0	0	0	0	0	0	8
3:00 AM	0	7	1	0	0	0	0	0	0	0	0	0	0	8
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
6:00 AM	0	9	1	0	0	0	0	0	0	0	0	0	0	10
7:00 AM	0	33	5	0	0	2	0	0	0	0	0	0	0	40
8:00 AM	3	62	31	0	1	9	0	0	0	0	0	0	0	106
9:00 AM	0	80	13	0	1	13	0	0	1	0	0	0	0	108
10:00 AM	0	72	14	0	1	9	0	0	0	0	0	0	0	96
11:00 AM	0	77	15	0	0	7	0	0	0	0	0	0	0	99
12:00 PM	4	78	15	0	2	7	0	0	0	0	0	0	0	106
1:00 PM	3	184	14	0	0	5	0	0	0	1	0	0	0	207
2:00 PM	5	114	21	0	2	4	0	0	0	0	0	0	0	146
3:00 PM	1	108	10	0	0	5	0	0	0	0	0	0	0	124
4:00 PM	1	135	8	0	2	1	0	0	0	0	0	0	0	147
5:00 PM	1	152	7	0	1	4	0	0	1	0	0	0	0	166
6:00 PM	4	143	20	0	0	10	0	0	0	1	0	0	0	178
7:00 PM	3	144	11	0	0	8	0	1	0	0	0	0	1	168
8:00 PM	0	110	10	0	0	5	0	0	0	0	0	0	0	125
9:00 PM	0	84	11	0	1	2	0	0	0	0	0	0	0	98
10:00 PM	0	79	12	0	0	3	0	0	0	0	0	0	0	94
11:00 PM	0	51	1	0	0	3	0	0	0	1	0	0	0	56
Total	**25**	**1,758**	**227**	**0**	**11**	**97**	**0**	**1**	**2**	**3**	**0**	**0**	**1**	**2,125**
Percent	**1.2%**	**82.7%**	**10.7%**	**0.0%**	**0.5%**	**4.6%**	**0.0%**	**0.0%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Total Study Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	19	1	0	0	0	0	0	0	0	0	0	0	**20**
1:00 AM	0	10	0	0	0	0	0	0	0	0	0	0	0	**10**
2:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	**6**
3:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	**6**
4:00 AM	0	9	1	0	1	0	0	0	0	0	0	0	0	**11**
5:00 AM	0	26	1	0	1	0	0	0	0	0	0	0	0	**28**
6:00 AM	0	57	3	0	1	0	0	0	0	0	0	0	0	**61**
7:00 AM	1	138	6	0	3	0	0	0	0	0	0	0	0	**148**
8:00 AM	1	214	13	0	6	0	0	0	0	0	0	0	0	**234**
9:00 AM	1	202	8	0	6	0	0	0	0	0	0	0	0	**217**
10:00 AM	1	172	7	0	10	0	0	0	0	0	0	0	0	**190**
11:00 AM	1	192	4	0	9	0	0	0	0	0	0	0	0	**206**
12:00 PM	2	205	6	0	10	0	0	0	0	0	0	0	0	**223**
1:00 PM	2	212	6	0	11	0	0	0	0	0	0	0	0	**231**
2:00 PM	1	165	5	0	8	0	0	0	0	0	0	0	0	**179**
3:00 PM	0	179	4	0	7	0	0	0	0	0	0	0	0	**190**
4:00 PM	1	250	4	0	9	0	0	0	0	0	0	0	0	**264**
5:00 PM	1	287	7	0	9	1	0	0	0	0	0	0	0	**305**
6:00 PM	1	255	5	0	7	0	0	0	0	0	0	0	0	**268**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	94	2	0	1	0	0	0	0	0	0	0	0	**97**
9:00 PM	0	82	2	0	2	0	0	0	0	0	0	0	0	**86**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	51	2	0	1	0	0	0	0	0	0	0	0	**54**
Total	**13**	**2,831**	**87**	**0**	**102**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3,034**
Percent	**0.4%**	**93.3%**	**2.9%**	**0.0%**	**3.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Total Study Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	21	2	0	0	1	0	0	0	0	0	0	0	**24**
1:00 AM	0	12	1	0	0	0	0	0	0	0	0	0	0	**13**
2:00 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	**7**
3:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	7	1	0	0	0	0	0	0	0	0	0	0	**8**
6:00 AM	0	16	2	0	0	1	0	0	0	0	0	0	0	**19**
7:00 AM	1	48	10	0	1	3	0	0	0	0	0	0	0	**63**
8:00 AM	1	66	21	0	0	9	0	0	0	1	0	0	0	**98**
9:00 AM	1	74	16	0	0	7	0	0	0	0	0	0	0	**98**
10:00 AM	1	59	18	0	1	7	0	0	0	0	0	0	0	**86**
11:00 AM	1	80	14	0	1	10	0	0	0	0	0	0	0	**106**
12:00 PM	2	100	16	0	2	8	0	0	0	0	0	0	0	**128**
1:00 PM	2	130	16	0	1	7	0	0	0	0	0	0	0	**156**
2:00 PM	2	116	14	0	1	4	0	0	0	0	0	0	0	**137**
3:00 PM	1	133	14	0	2	6	0	0	0	0	0	0	0	**156**
4:00 PM	1	126	15	0	1	6	0	0	0	0	0	0	0	**149**
5:00 PM	2	150	19	0	1	9	0	0	0	0	0	0	0	**181**
6:00 PM	2	155	21	0	0	9	0	0	0	0	0	0	0	**187**
7:00 PM	1	133	13	0	1	7	0	0	0	0	0	0	0	**155**
8:00 PM	0	105	8	0	0	4	0	0	0	0	0	0	0	**117**
9:00 PM	0	95	8	0	0	3	0	0	0	0	0	0	0	**106**
10:00 PM	0	74	8	0	0	3	0	0	0	0	0	0	0	**85**
11:00 PM	0	51	5	0	0	2	0	0	0	0	0	0	0	**58**
Total	**18**	**1,763**	**243**	**0**	**12**	**106**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2,143**
Percent	**0.8%**	**82.3%**	**11.3%**	**0.0%**	**0.6%**	**4.9%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Deon Fouche: (415) 757-7714
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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

3-Day (Tuesday - Thursday) Average
Northbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	30	0	0	0	0	0	0	0	0	0	0	0	30
1:00 AM	0	14	0	0	0	0	0	0	0	0	0	0	0	14
2:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	5
3:00 AM	0	10	0	0	0	0	0	0	0	0	0	0	0	10
4:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	0	8
5:00 AM	0	29	0	0	1	0	0	0	0	0	0	0	0	30
6:00 AM	0	47	2	0	1	0	0	0	0	0	0	0	0	50
7:00 AM	2	128	3	0	5	0	0	0	0	0	0	0	0	138
8:00 AM	1	273	13	0	6	0	0	0	0	0	0	0	0	293
9:00 AM	1	235	6	0	6	0	0	0	0	0	0	0	0	248
10:00 AM	1	181	6	0	5	0	0	0	0	0	0	0	0	193
11:00 AM	1	180	5	0	8	1	0	0	0	0	0	0	0	195
12:00 PM	0	170	3	0	10	0	0	0	0	0	0	0	0	183
1:00 PM	1	210	1	0	5	0	0	0	0	0	0	0	0	217
2:00 PM	0	140	1	0	8	0	0	0	0	0	0	0	0	149
3:00 PM	2	163	1	0	2	0	0	0	0	0	0	0	0	168
4:00 PM	0	247	2	0	9	0	0	0	0	0	0	0	0	258
5:00 PM	1	307	4	0	9	0	0	0	0	0	0	0	0	321
6:00 PM	0	316	11	0	10	0	0	0	0	0	0	0	0	337
7:00 PM	0	170	4	0	2	0	0	0	0	0	0	0	0	176
8:00 PM	0	108	4	0	1	0	0	0	0	0	0	0	0	113
9:00 PM	0	77	3	0	1	0	0	0	0	0	0	0	0	81
10:00 PM	1	58	2	0	0	0	0	0	0	0	0	0	0	61
11:00 PM	0	44	7	0	0	0	0	0	0	0	0	0	0	51
Total	**11**	**3,149**	**79**	**0**	**89**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3,329**
Percent	**0.3%**	**94.6%**	**2.4%**	**0.0%**	**2.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

3-Day (Tuesday - Thursday) Average
Southbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	27	2	0	0	0	0	0	0	0	0	0	0	29
1:00 AM	0	11	0	0	0	0	0	0	0	0	0	0	0	11
2:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
3:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
6:00 AM	0	16	1	0	0	0	0	0	0	0	0	0	0	17
7:00 AM	0	26	10	0	0	3	0	0	0	0	0	0	0	39
8:00 AM	2	77	31	0	1	15	0	0	1	2	0	0	0	129
9:00 AM	2	76	28	0	0	7	0	0	0	0	0	0	0	113
10:00 AM	0	59	19	0	2	9	0	0	0	1	0	0	0	90
11:00 AM	1	72	14	0	0	10	0	0	0	0	0	0	0	97
12:00 PM	6	115	15	0	2	5	0	0	0	0	0	0	0	143
1:00 PM	3	143	15	0	0	5	0	0	0	0	0	0	0	166
2:00 PM	2	128	11	0	2	0	0	0	0	2	0	0	0	145
3:00 PM	3	113	16	0	5	2	0	0	0	0	0	0	0	139
4:00 PM	0	126	16	0	0	3	0	0	0	0	0	0	0	145
5:00 PM	2	169	18	0	2	8	0	0	0	0	0	0	0	199
6:00 PM	6	187	21	0	1	5	0	0	1	0	0	0	0	221
7:00 PM	3	180	11	0	1	10	0	0	0	0	0	0	0	205
8:00 PM	0	121	4	0	0	5	0	0	0	0	0	0	0	130
9:00 PM	0	83	6	0	1	2	0	0	0	0	0	0	0	92
10:00 PM	2	79	7	0	0	1	0	0	0	0	0	0	0	89
11:00 PM	0	56	4	0	0	3	0	0	0	0	0	0	0	63
Total	**32**	**1,877**	**250**	**0**	**17**	**93**	**0**	**0**	**2**	**5**	**0**	**0**	**0**	**2,276**
Percent	**1.4%**	**82.5%**	**11.0%**	**0.0%**	**0.7%**	**4.1%**	**0.0%**	**0.0%**	**0.1%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	

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Vehicle Speed Report Summary

Location: Casanova Ave N/O Melway Cir
Count Direction: Northbound / Southbound
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

	Speed Range (mph)																	Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
Study Total																		
Northbound	24	187	1,199	5,568	11,085	4,190	643	70	11	3	1	0	0	0	0	0	0	22,981
Percent	0.1%	0.8%	5.2%	24.2%	48.2%	18.2%	2.8%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	178	1,336	7,845	5,217	408	39	9	1	0	1	6	0	0	0	0	0	0	15,040
Percent	1.2%	8.9%	52.2%	34.7%	2.7%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	202	1,523	9,044	10,785	11,493	4,229	652	71	11	4	7	0	0	0	0	0	0	38,021
Percent	0.5%	4.0%	23.8%	28.4%	30.2%	11.1%	1.7%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Northbound			**Northbound**		
50th Percentile (Median)	27.0	mph	Mean (Average) Speed	26.9	mph
85th Percentile	30.9	mph	10 mph Pace	22.1 - 32.1	mph
95th Percentile	33.8	mph	Percent in Pace	78.1	%
Southbound			**Southbound**		
50th Percentile (Median)	19.1	mph	Mean (Average) Speed	19.0	mph
85th Percentile	21.9	mph	10 mph Pace	14.3 - 24.3	mph
95th Percentile	24.0	mph	Percent in Pace	87.9	%

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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Thursday, November 3, 2016
Northbound

	Speed Range (mph)																	Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	0	6	1	1	0	0	0	0	0	0	0	0	0	0	0	**8**
1:00 AM	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	1	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	**5**
4:00 AM	0	0	1	5	3	1	0	0	0	0	0	0	0	0	0	0	0	**10**
5:00 AM	0	0	4	11	8	0	0	0	0	0	0	0	0	0	0	0	0	**23**
6:00 AM	0	0	7	31	33	5	1	0	0	0	0	0	0	0	0	0	0	**77**
7:00 AM	2	6	23	89	39	2	0	0	0	0	0	0	0	0	0	0	0	**161**
8:00 AM	1	1	23	72	60	4	0	0	0	0	0	0	0	0	0	0	0	**161**
9:00 AM	0	0	0	28	93	44	2	0	0	0	0	0	0	0	0	0	0	**167**
10:00 AM	0	1	2	27	122	4	1	0	0	0	0	0	0	0	0	0	0	**157**
11:00 AM	0	1	9	125	46	22	0	1	1	0	0	0	0	0	0	0	0	**205**
12:00 PM	0	0	2	32	96	43	1	0	0	0	0	0	0	0	0	0	0	**174**
1:00 PM	1	4	25	68	40	64	0	0	0	0	0	0	0	0	0	0	0	**202**
2:00 PM	0	0	2	12	119	13	0	0	0	0	0	0	0	0	0	0	0	**146**
3:00 PM	0	0	1	152	11	80	0	1	0	0	0	0	0	0	0	0	0	**245**
4:00 PM	2	0	68	71	195	20	1	1	0	0	0	0	0	0	0	0	0	**358**
5:00 PM	1	1	4	109	171	78	20	1	0	0	0	0	0	0	0	0	0	**385**
6:00 PM	0	0	0	120	39	31	26	1	0	0	0	0	0	0	0	0	0	**217**
7:00 PM	0	0	1	68	55	24	0	0	0	0	0	0	0	0	0	0	0	**148**
8:00 PM	0	0	0	17	76	1	0	0	0	0	0	0	0	0	0	0	0	**94**
9:00 PM	0	1	15	45	7	38	1	0	0	0	0	0	0	0	0	0	0	**107**
10:00 PM	0	0	0	0	0	64	0	0	0	0	0	0	0	0	0	0	0	**64**
11:00 PM	0	0	0	0	0	22	0	0	0	0	0	0	0	0	0	0	0	**22**
Total	**8**	**15**	**187**	**1,095**	**1,216**	**562**	**53**	**5**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3,142**
Percent	**0.3%**	**0.5%**	**6.0%**	**34.9%**	**38.7%**	**17.9%**	**1.7%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.9	mph	Mean (Average) Speed	26.1	mph
85th Percentile	30.4	mph	10 mph Pace	21.7 - 31.7	mph
95th Percentile	31.4	mph	Percent in Pace	83.4	%

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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Thursday, November 3, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	2	3	8	0	0	0	0	0	0	0	0	0	0	0	0	0	**13**
1:00 AM	0	0	0	7	1	1	0	0	0	0	0	0	0	0	0	0	0	**9**
2:00 AM	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	2	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
6:00 AM	0	2	24	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**30**
7:00 AM	2	25	53	21	1	0	0	0	0	0	0	0	0	0	0	0	0	**102**
8:00 AM	1	16	56	22	3	0	0	0	0	0	0	0	0	0	0	0	0	**98**
9:00 AM	1	2	50	22	2	0	0	0	0	0	0	0	0	0	0	0	0	**77**
10:00 AM	1	4	27	29	5	0	0	0	0	0	0	0	0	0	0	0	0	**66**
11:00 AM	1	9	52	34	4	0	0	0	0	0	0	0	0	0	0	0	0	**100**
12:00 PM	0	4	54	62	7	1	0	0	0	0	0	0	0	0	0	0	0	**128**
1:00 PM	0	6	53	75	12	1	0	0	0	0	0	0	0	0	0	0	0	**147**
2:00 PM	1	5	67	72	5	0	0	0	0	0	0	0	0	0	0	0	0	**150**
3:00 PM	0	5	89	65	12	0	0	0	0	0	0	0	0	0	0	0	0	**171**
4:00 PM	0	4	91	52	5	0	0	0	0	0	0	0	0	0	0	0	0	**152**
5:00 PM	1	18	96	40	1	0	0	0	0	0	0	0	0	0	0	0	0	**156**
6:00 PM	6	35	110	59	4	0	0	0	0	0	0	0	0	0	0	0	0	**214**
7:00 PM	0	11	90	56	1	0	0	0	0	0	0	0	0	0	0	0	0	**158**
8:00 PM	0	5	40	76	5	2	0	0	0	0	0	0	0	0	0	0	0	**128**
9:00 PM	1	9	33	61	3	0	0	0	0	0	0	0	0	0	0	0	0	**107**
10:00 PM	1	9	38	19	0	0	0	0	0	0	0	0	0	0	0	0	0	**67**
11:00 PM	0	2	15	31	0	0	0	0	0	0	0	0	0	0	0	0	0	**48**
Total	**16**	**176**	**1,047**	**821**	**71**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,136**
Percent	**0.7%**	**8.2%**	**49.0%**	**38.4%**	**3.3%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.4	mph	Mean (Average) Speed	19.3	mph
85th Percentile	22.2	mph	10 mph Pace	14.0 - 24.0	mph
95th Percentile	24.3	mph	Percent in Pace	88.8	%

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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Friday, November 4, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	16	2	0	1	0	0	0	0	0	0	0	0	**19**
1:00 AM	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	**8**
2:00 AM	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	**5**
3:00 AM	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	**5**
4:00 AM	0	0	0	1	0	14	1	0	0	0	0	0	0	0	0	0	0	**16**
5:00 AM	0	0	0	1	40	14	0	0	0	0	0	0	0	0	0	0	0	**55**
6:00 AM	0	0	0	1	20	56	30	0	2	0	0	0	0	0	0	0	0	**109**
7:00 AM	0	0	4	17	181	68	11	1	0	0	0	0	0	0	0	0	0	**282**
8:00 AM	0	0	2	29	139	68	23	1	0	0	0	0	0	0	0	0	0	**262**
9:00 AM	0	0	1	22	183	12	3	0	0	0	0	0	0	0	0	0	0	**221**
10:00 AM	0	0	1	36	126	11	1	0	0	0	0	0	0	0	0	0	0	**175**
11:00 AM	0	0	1	45	33	120	1	0	0	0	0	0	0	0	0	0	0	**200**
12:00 PM	0	1	25	22	162	64	10	2	0	0	0	0	0	0	0	0	0	**286**
1:00 PM	0	0	1	19	193	19	0	0	0	0	0	0	0	0	0	0	0	**232**
2:00 PM	0	0	1	22	175	31	10	1	0	1	0	0	0	0	0	0	0	**241**
3:00 PM	0	1	0	146	100	2	1	0	0	0	0	0	0	0	0	0	0	**250**
4:00 PM	0	3	18	110	176	24	15	1	0	0	0	0	0	0	0	0	0	**347**
5:00 PM	0	3	109	173	66	21	4	1	0	0	0	0	0	0	0	0	0	**377**
6:00 PM	0	0	27	65	87	23	1	0	0	0	0	0	0	0	0	0	0	**203**
7:00 PM	0	0	0	75	89	0	0	0	0	0	0	0	0	0	0	0	0	**164**
8:00 PM	0	0	0	1	94	0	0	0	0	0	0	0	0	0	0	0	0	**95**
9:00 PM	0	0	0	1	111	1	0	0	0	0	0	0	0	0	0	0	0	**113**
10:00 PM	0	0	0	27	37	54	3	0	0	0	0	0	0	0	0	0	0	**121**
11:00 PM	0	0	0	1	6	30	1	0	0	0	0	0	0	0	0	0	0	**38**
Total	**0**	**8**	**190**	**814**	**2,018**	**648**	**135**	**7**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3,824**
Percent	**0.0%**	**0.2%**	**5.0%**	**21.3%**	**52.8%**	**16.9%**	**3.5%**	**0.2%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	26.8	mph	Mean (Average) Speed	27.2	mph
85th Percentile	31.2	mph	10 mph Pace	22.3 - 32.3	mph
95th Percentile	34.3	mph	Percent in Pace	81.5	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Friday, November 4, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	7	9	0	0	0	0	0	0	0	0	0	0	0	0	0	**16**
1:00 AM	0	2	6	3	0	1	0	1	0	0	0	0	0	0	0	0	0	**13**
2:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	0	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
6:00 AM	0	2	29	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**36**
7:00 AM	3	41	67	15	0	0	0	0	0	0	0	0	0	0	0	0	0	**126**
8:00 AM	1	5	61	41	1	0	0	0	0	0	0	0	0	0	0	0	0	**109**
9:00 AM	1	3	48	52	2	0	0	0	0	0	0	0	0	0	0	0	0	**106**
10:00 AM	4	5	35	33	3	0	0	0	0	0	0	0	0	0	0	0	0	**80**
11:00 AM	2	3	40	44	6	0	0	0	0	0	0	0	0	0	0	0	0	**95**
12:00 PM	6	7	57	66	3	1	0	0	0	0	0	0	0	0	0	0	0	**140**
1:00 PM	1	6	85	60	5	1	0	0	0	0	0	0	0	0	0	0	0	**158**
2:00 PM	0	24	49	28	5	1	0	0	0	0	0	0	0	0	0	0	0	**107**
3:00 PM	1	7	103	54	12	1	0	0	0	0	0	0	0	0	0	0	0	**178**
4:00 PM	1	4	64	67	10	0	0	0	0	0	0	0	0	0	0	0	0	**146**
5:00 PM	0	12	124	84	4	0	0	0	0	0	0	0	0	0	0	0	0	**224**
6:00 PM	0	32	128	55	2	0	0	0	0	0	0	0	0	0	0	0	0	**217**
7:00 PM	0	4	93	54	2	0	0	0	0	0	0	0	0	0	0	0	0	**153**
8:00 PM	2	15	64	46	1	0	0	0	0	0	0	0	0	0	0	0	0	**128**
9:00 PM	0	1	61	44	9	3	1	0	0	0	0	0	0	0	0	0	0	**119**
10:00 PM	1	10	45	19	0	0	0	0	0	1	0	0	0	0	0	0	0	**76**
11:00 PM	0	6	31	14	0	0	0	0	0	0	0	0	0	0	0	0	0	**51**
Total	**23**	**189**	**1,204**	**801**	**65**	**8**	**1**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,293**
Percent	**1.0%**	**8.2%**	**52.5%**	**34.9%**	**2.8%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.0	mph	Mean (Average) Speed	19.1	mph
85th Percentile	22.1	mph	10 mph Pace	14.4 - 24.4	mph
95th Percentile	24.1	mph	Percent in Pace	88.4	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Saturday, November 5, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	8	6	0	0	0	0	0	0	0	0	0	0	0	**15**
1:00 AM	0	0	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	**21**
2:00 AM	0	0	0	0	7	1	0	0	0	0	0	0	0	0	0	0	0	**8**
3:00 AM	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	**5**
4:00 AM	0	1	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	**9**
5:00 AM	0	0	6	2	11	24	0	0	0	0	0	0	0	0	0	0	0	**43**
6:00 AM	0	0	0	0	1	53	10	0	0	0	0	0	0	0	0	0	0	**64**
7:00 AM	0	0	1	29	42	23	32	1	0	0	0	0	0	0	0	0	0	**128**
8:00 AM	0	0	14	43	74	26	16	0	0	0	0	0	0	0	0	0	0	**173**
9:00 AM	0	2	0	37	120	43	1	0	0	0	0	0	0	0	0	0	0	**203**
10:00 AM	1	1	15	56	40	63	31	2	0	0	0	0	0	0	0	0	0	**209**
11:00 AM	0	0	23	1	113	82	20	1	0	0	0	0	0	0	0	0	0	**240**
12:00 PM	0	0	2	138	89	4	1	0	0	0	0	0	0	0	0	0	0	**234**
1:00 PM	1	0	8	36	135	74	1	1	0	0	0	0	0	0	0	0	0	**256**
2:00 PM	0	3	65	62	17	41	0	0	0	0	0	0	0	0	0	0	0	**188**
3:00 PM	0	0	5	49	133	12	5	4	0	0	0	0	0	0	0	0	0	**208**
4:00 PM	0	0	0	38	12	129	29	0	0	0	0	0	0	0	0	0	0	**208**
5:00 PM	0	0	2	85	46	2	42	0	0	2	0	0	0	0	0	0	0	**179**
6:00 PM	0	0	0	0	62	102	0	0	0	0	0	0	0	0	0	0	0	**164**
7:00 PM	0	0	0	14	124	1	0	0	0	0	0	0	0	0	0	0	0	**139**
8:00 PM	0	0	0	1	107	0	0	0	0	0	0	0	0	0	0	0	0	**108**
9:00 PM	0	1	0	17	41	42	0	0	0	0	0	0	0	0	0	0	0	**101**
10:00 PM	0	0	0	149	7	1	0	0	0	0	0	0	0	0	0	0	0	**157**
11:00 PM	0	0	1	2	124	20	0	0	0	0	0	0	0	0	0	0	0	**147**
Total	**2**	**8**	**147**	**760**	**1,342**	**749**	**188**	**9**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3,207**
Percent	**0.1%**	**0.2%**	**4.6%**	**23.7%**	**41.8%**	**23.4%**	**5.9%**	**0.3%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	27.4	mph	Mean (Average) Speed	27.5	mph
85th Percentile	31.9	mph	10 mph Pace	22.4 - 32.4	mph
95th Percentile	35.3	mph	Percent in Pace	77.2	%

Deon Fouche: (415) 757-7714
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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Saturday, November 5, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	19	13	3	0	1	0	0	0	0	0	0	0	0	0	0	37
1:00 AM	0	2	8	17	2	0	0	0	0	0	0	0	0	0	0	0	0	29
2:00 AM	0	0	3	7	2	0	0	0	0	0	0	0	0	0	0	0	0	12
3:00 AM	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	1	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	9
5:00 AM	0	0	3	17	0	0	0	0	0	0	0	0	0	0	0	0	0	20
6:00 AM	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	17
7:00 AM	0	2	33	36	1	0	0	0	0	0	0	0	0	0	0	0	0	72
8:00 AM	1	12	36	41	3	0	0	0	0	0	0	0	0	0	0	0	0	93
9:00 AM	1	9	49	29	3	0	0	0	0	0	0	0	0	0	0	0	0	91
10:00 AM	3	20	45	22	0	0	0	0	0	0	0	0	0	0	0	0	0	90
11:00 AM	1	4	65	65	10	1	0	0	0	0	0	0	0	0	0	0	0	146
12:00 PM	3	9	85	51	0	2	0	0	0	0	0	0	0	0	0	0	0	150
1:00 PM	1	11	97	38	3	1	0	0	0	0	0	0	0	0	0	0	0	151
2:00 PM	1	7	80	61	3	1	1	0	0	0	0	0	0	0	0	0	0	154
3:00 PM	3	13	62	85	6	0	0	0	0	0	0	0	0	0	0	0	0	169
4:00 PM	2	46	137	29	3	0	0	0	0	0	0	0	0	0	0	0	0	217
5:00 PM	3	7	114	66	3	0	0	0	0	0	0	0	0	0	0	0	0	193
6:00 PM	1	20	76	47	1	1	0	0	0	0	0	0	0	0	0	0	0	146
7:00 PM	2	22	66	40	1	0	0	0	0	0	0	0	0	0	0	0	0	131
8:00 PM	4	18	50	27	2	0	0	0	0	0	0	0	0	0	0	0	0	101
9:00 PM	0	3	64	55	4	0	0	0	0	0	0	0	0	0	0	0	0	126
10:00 PM	0	1	48	46	5	0	0	0	0	0	0	0	0	0	0	0	0	100
11:00 PM	0	1	36	49	6	2	0	0	0	0	0	0	0	0	0	0	0	94
Total	**26**	**209**	**1,181**	**867**	**61**	**8**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,354**
Percent	**1.1%**	**8.9%**	**50.2%**	**36.8%**	**2.6%**	**0.3%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.2	mph	Mean (Average) Speed	19.1	mph
85th Percentile	21.9	mph	10 mph Pace	13.5 - 23.5	mph
95th Percentile	23.9	mph	Percent in Pace	88.7	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Sunday, November 6, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	29	0	0	0	0	0	0	0	0	0	0	0	29
1:00 AM	0	0	0	0	11	3	0	0	0	0	0	0	0	0	0	0	0	14
2:00 AM	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	10
3:00 AM	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	8
4:00 AM	0	0	0	0	0	4	4	0	1	0	0	0	0	0	0	0	0	9
5:00 AM	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	4
6:00 AM	0	0	0	2	18	21	0	0	0	0	0	0	0	0	0	0	0	41
7:00 AM	0	0	0	0	43	1	0	0	0	0	0	0	0	0	0	0	0	44
8:00 AM	0	0	1	24	52	12	0	0	0	0	0	0	0	0	0	0	0	89
9:00 AM	0	0	0	24	113	53	1	2	0	0	0	0	0	0	0	0	0	193
10:00 AM	0	0	2	47	130	32	2	0	0	0	0	0	0	0	0	0	0	213
11:00 AM	0	1	2	64	174	10	0	0	0	0	0	0	0	0	0	0	0	251
12:00 PM	1	30	1	79	61	43	2	0	0	0	0	0	0	0	0	0	0	217
1:00 PM	0	0	0	1	181	14	2	0	0	0	0	0	0	0	0	0	0	198
2:00 PM	1	0	8	67	84	2	0	0	0	0	0	0	0	0	0	0	0	162
3:00 PM	0	0	0	44	91	0	0	0	0	0	0	0	0	0	0	0	0	135
4:00 PM	0	0	2	148	30	0	0	0	0	0	0	0	0	0	0	0	0	180
5:00 PM	0	1	18	160	12	0	1	0	0	0	0	0	0	0	0	0	0	192
6:00 PM	0	0	46	30	53	28	2	0	1	0	0	0	0	0	0	0	0	160
7:00 PM	1	0	38	21	62	1	0	0	0	0	0	0	0	0	0	0	0	123
8:00 PM	0	0	31	21	0	1	0	0	0	0	0	0	0	0	0	0	0	53
9:00 PM	0	0	0	62	0	0	0	0	0	0	0	0	0	0	0	0	0	62
10:00 PM	0	0	0	66	1	0	0	0	0	0	0	0	0	0	0	0	0	67
11:00 PM	0	0	1	39	0	0	0	0	0	0	0	0	0	0	0	0	0	40
Total	**3**	**32**	**150**	**899**	**1,117**	**275**	**14**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,494**
Percent	**0.1%**	**1.3%**	**6.0%**	**36.0%**	**44.8%**	**11.0%**	**0.6%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	25.3	mph	Mean (Average) Speed	25.8	mph
85th Percentile	29.6	mph	10 mph Pace	21.3 - 31.3	mph
95th Percentile	31.6	mph	Percent in Pace	85.2	%

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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Sunday, November 6, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	4	12	1	0	0	0	0	0	0	0	0	0	0	0	0	**17**
1:00 AM	0	0	1	15	0	0	0	0	0	0	0	0	0	0	0	0	0	**16**
2:00 AM	0	0	14	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**15**
3:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	1	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
5:00 AM	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
6:00 AM	0	0	9	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**10**
7:00 AM	0	1	3	14	5	0	0	0	0	0	0	0	0	0	0	0	0	**23**
8:00 AM	1	2	15	17	2	0	0	0	0	0	0	0	0	0	0	0	0	**37**
9:00 AM	1	1	30	36	5	0	0	0	0	0	0	0	0	0	0	0	0	**73**
10:00 AM	2	2	38	29	1	1	0	0	0	0	0	0	0	0	0	0	0	**73**
11:00 AM	0	9	46	52	5	1	0	0	0	0	0	0	0	0	0	0	0	**113**
12:00 PM	0	6	62	51	3	1	0	0	0	0	0	0	0	0	0	0	0	**123**
1:00 PM	3	21	52	47	3	1	0	0	0	0	0	0	0	0	0	0	0	**127**
2:00 PM	0	5	51	58	4	1	0	0	0	0	0	0	0	0	0	0	0	**119**
3:00 PM	0	3	92	43	3	0	0	0	0	0	0	0	0	0	0	0	0	**141**
4:00 PM	2	15	82	31	2	0	0	0	0	0	0	0	0	0	0	0	0	**132**
5:00 PM	0	4	78	65	4	1	0	0	0	0	0	0	0	0	0	0	0	**152**
6:00 PM	3	17	91	62	3	1	0	0	0	0	0	0	0	0	0	0	0	**177**
7:00 PM	1	4	64	39	2	0	0	0	0	0	0	0	0	0	0	0	0	**110**
8:00 PM	0	2	25	46	5	0	0	0	0	0	0	0	0	0	0	0	0	**78**
9:00 PM	2	16	46	25	2	0	0	0	0	0	0	0	0	0	0	0	0	**91**
10:00 PM	0	5	48	29	1	0	0	0	0	0	0	0	0	0	0	0	0	**83**
11:00 PM	0	2	22	29	4	0	1	0	0	0	0	0	0	0	0	0	0	**58**
Total	**15**	**116**	**880**	**711**	**57**	**7**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,787**
Percent	**0.8%**	**6.5%**	**49.2%**	**39.8%**	**3.2%**	**0.4%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.5	mph	Mean (Average) Speed	19.3	mph
85th Percentile	22.2	mph	10 mph Pace	15.0 - 25.0	mph
95th Percentile	24.4	mph	Percent in Pace	89	%

Deon Fouche: (415) 757-7714
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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Monday, November 7, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	14	1	0	0	0	0	0	0	0	0	0	0	0	0	**15**
1:00 AM	0	0	1	9	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
2:00 AM	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
3:00 AM	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
4:00 AM	0	0	0	14	0	1	0	0	0	0	0	0	0	0	0	0	0	**15**
5:00 AM	0	0	0	1	20	1	0	0	0	0	0	0	0	0	0	0	0	**22**
6:00 AM	0	0	0	0	2	43	0	0	0	0	0	0	0	0	0	0	0	**45**
7:00 AM	0	0	0	0	101	39	1	0	0	0	0	0	0	0	0	0	0	**141**
8:00 AM	0	0	0	41	153	128	4	0	0	0	0	0	0	0	0	0	0	**326**
9:00 AM	0	1	2	48	177	28	1	0	0	0	0	0	0	0	0	0	0	**257**
10:00 AM	0	0	1	13	127	44	1	0	0	0	0	0	0	0	0	0	0	**186**
11:00 AM	0	0	4	27	145	8	0	0	0	0	0	0	0	0	0	0	0	**184**
12:00 PM	0	1	5	62	185	17	0	0	0	0	0	0	0	0	0	0	0	**270**
1:00 PM	0	1	4	61	189	24	0	0	0	0	0	0	0	0	0	0	0	**279**
2:00 PM	0	1	2	39	107	18	0	1	0	0	0	0	0	0	0	0	0	**168**
3:00 PM	1	0	5	53	62	34	1	0	0	0	0	0	0	0	0	0	0	**156**
4:00 PM	1	2	60	103	51	52	1	0	0	0	0	0	0	0	0	0	0	**270**
5:00 PM	0	0	86	84	179	30	1	0	0	0	0	0	0	0	0	0	0	**380**
6:00 PM	0	1	48	54	159	132	1	0	0	0	0	0	0	0	0	0	0	**395**
7:00 PM	0	0	2	1	72	110	1	5	0	0	0	0	0	0	0	0	0	**191**
8:00 PM	0	0	1	72	26	0	0	0	0	0	0	0	0	0	0	0	0	**99**
9:00 PM	0	0	1	14	48	1	0	0	0	0	0	0	0	0	0	0	0	**64**
10:00 PM	0	0	0	55	1	0	0	0	0	0	0	0	0	0	0	0	0	**56**
11:00 PM	0	0	0	34	0	0	0	0	0	0	0	0	0	0	0	0	0	**34**
Total	**2**	**7**	**222**	**811**	**1,805**	**710**	**12**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3,575**
Percent	**0.1%**	**0.2%**	**6.2%**	**22.7%**	**50.5%**	**19.9%**	**0.3%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	27.2	mph	Mean (Average) Speed	26.9	mph
85th Percentile	30.9	mph	10 mph Pace	22.7 - 32.7	mph
95th Percentile	33.7	mph	Percent in Pace	76.5	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Monday, November 7, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	1	20	7	0	0	0	0	0	0	0	0	0	0	0	0	0	**29**
1:00 AM	1	8	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
2:00 AM	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
6:00 AM	1	3	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
7:00 AM	3	12	29	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**46**
8:00 AM	1	4	69	43	0	0	0	0	0	0	0	0	0	0	0	0	0	**117**
9:00 AM	0	4	66	43	4	2	0	0	0	0	0	0	0	0	0	0	0	**119**
10:00 AM	3	16	38	38	4	0	0	0	0	0	0	0	0	0	0	0	0	**99**
11:00 AM	0	13	54	21	3	0	0	0	0	0	0	0	0	0	0	0	0	**91**
12:00 PM	2	12	55	28	5	0	0	0	0	0	0	0	0	0	0	0	0	**102**
1:00 PM	1	3	89	43	2	0	0	0	0	0	0	0	0	0	0	0	0	**138**
2:00 PM	3	6	95	37	6	1	0	0	0	0	0	0	0	0	0	0	0	**148**
3:00 PM	3	24	106	39	1	0	0	0	0	0	0	0	0	0	0	0	0	**173**
4:00 PM	0	10	63	33	2	0	0	0	0	0	0	0	0	0	0	0	0	**108**
5:00 PM	1	11	100	64	3	0	0	0	0	0	0	0	0	0	0	0	0	**179**
6:00 PM	1	20	107	34	1	0	0	0	0	0	0	0	0	0	0	0	0	**163**
7:00 PM	2	17	119	21	1	0	0	0	0	0	0	0	0	0	0	0	0	**160**
8:00 PM	0	14	96	19	1	0	0	0	0	0	0	0	0	0	0	0	0	**130**
9:00 PM	2	10	68	29	1	1	0	0	0	0	0	0	0	0	0	0	0	**111**
10:00 PM	0	7	57	19	2	0	0	0	0	0	0	0	0	0	0	0	0	**85**
11:00 PM	0	1	10	26	1	0	0	0	0	0	0	0	0	0	0	0	0	**38**
Total	**25**	**197**	**1,252**	**554**	**37**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,069**
Percent	**1.2%**	**9.5%**	**60.5%**	**26.8%**	**1.8%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.2	mph	Mean (Average) Speed	18.5	mph
85th Percentile	21.2	mph	10 mph Pace	13.6 - 23.6	mph
95th Percentile	23.3	mph	Percent in Pace	90.3	%

Deon Fouche: (415) 757-7714
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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Tuesday, November 8, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	**30**
1:00 AM	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	**14**
2:00 AM	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
3:00 AM	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
4:00 AM	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
5:00 AM	0	0	0	23	6	0	1	0	0	0	0	0	0	0	0	0	0	**30**
6:00 AM	0	0	0	0	43	7	0	0	0	0	0	0	0	0	0	0	0	**50**
7:00 AM	0	0	1	16	85	31	4	0	1	0	0	0	0	0	0	0	0	**138**
8:00 AM	1	0	4	9	114	162	3	0	0	0	0	0	0	0	0	0	0	**293**
9:00 AM	0	0	0	1	89	147	10	1	0	0	0	0	0	0	0	0	0	**248**
10:00 AM	0	0	2	8	95	46	42	0	0	0	0	0	0	0	0	0	0	**193**
11:00 AM	0	1	3	107	78	6	0	0	0	0	0	0	0	0	0	0	0	**195**
12:00 PM	0	1	0	2	83	96	1	0	0	0	0	0	0	0	0	0	0	**183**
1:00 PM	0	0	0	1	154	62	0	0	0	0	0	0	0	0	0	0	0	**217**
2:00 PM	0	61	0	19	34	11	22	2	0	0	0	0	0	0	0	0	0	**149**
3:00 PM	0	0	0	20	137	10	1	0	0	0	0	0	0	0	0	0	0	**168**
4:00 PM	2	45	0	68	140	3	0	0	0	0	0	0	0	0	0	0	0	**258**
5:00 PM	0	0	0	4	261	6	49	1	0	0	0	0	0	0	0	0	0	**321**
6:00 PM	0	0	20	36	164	89	26	2	0	0	0	0	0	0	0	0	0	**337**
7:00 PM	2	0	85	44	44	1	0	0	0	0	0	0	0	0	0	0	0	**176**
8:00 PM	0	0	12	73	28	0	0	0	0	0	0	0	0	0	0	0	0	**113**
9:00 PM	0	0	6	3	71	1	0	0	0	0	0	0	0	0	0	0	0	**81**
10:00 PM	1	0	30	13	17	0	0	0	0	0	0	0	0	0	0	0	0	**61**
11:00 PM	1	0	10	20	4	16	0	0	0	0	0	0	0	0	0	0	0	**51**
Total	**7**	**108**	**173**	**534**	**1,647**	**694**	**159**	**6**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3,329**
Percent	**0.2%**	**3.2%**	**5.2%**	**16.0%**	**49.5%**	**20.8%**	**4.8%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	27.6	mph	Mean (Average) Speed	27.2	mph
85th Percentile	31.9	mph	10 mph Pace	22.8 - 32.8	mph
95th Percentile	35.0	mph	Percent in Pace	76.0	%

Deon Fouche: (415) 757-7714
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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Tuesday, November 8, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	2	26	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**29**
1:00 AM	0	0	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
2:00 AM	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
4:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	2	14	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**17**
7:00 AM	0	2	9	26	2	0	0	0	0	0	0	0	0	0	0	0	0	**39**
8:00 AM	4	6	72	44	3	0	0	0	0	0	0	0	0	0	0	0	0	**129**
9:00 AM	2	3	54	52	2	0	0	0	0	0	0	0	0	0	0	0	0	**113**
10:00 AM	2	7	48	29	4	0	0	0	0	0	0	0	0	0	0	0	0	**90**
11:00 AM	2	13	44	35	3	0	0	0	0	0	0	0	0	0	0	0	0	**97**
12:00 PM	6	22	78	33	4	0	0	0	0	0	0	0	0	0	0	0	0	**143**
1:00 PM	1	14	89	59	2	1	0	0	0	0	0	0	0	0	0	0	0	**166**
2:00 PM	1	7	88	46	3	0	0	0	0	0	0	0	0	0	0	0	0	**145**
3:00 PM	2	23	71	38	5	0	0	0	0	0	0	0	0	0	0	0	0	**139**
4:00 PM	1	11	64	59	7	0	3	0	0	0	0	0	0	0	0	0	0	**145**
5:00 PM	1	4	137	56	1	0	0	0	0	0	0	0	0	0	0	0	0	**199**
6:00 PM	3	22	118	70	7	0	1	0	0	0	0	0	0	0	0	0	0	**221**
7:00 PM	5	25	98	76	1	0	0	0	0	0	0	0	0	0	0	0	0	**205**
8:00 PM	3	5	58	60	4	0	0	0	0	0	0	0	0	0	0	0	0	**130**
9:00 PM	0	4	24	54	10	0	0	0	0	0	0	0	0	0	0	0	0	**92**
10:00 PM	0	2	27	55	4	1	0	0	0	0	0	0	0	0	0	0	0	**89**
11:00 PM	0	1	33	28	1	0	0	0	0	0	0	0	0	0	0	0	0	**63**
Total	**33**	**176**	**1,171**	**826**	**64**	**2**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,276**
Percent	**1.4%**	**7.7%**	**51.4%**	**36.3%**	**2.8%**	**0.1%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.1	mph	Mean (Average) Speed	19.1	mph
85th Percentile	22.0	mph	10 mph Pace	14.5 - 24.5	mph
95th Percentile	24.0	mph	Percent in Pace	88.5	%

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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Wednesday, November 9, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	24	0	0	0	0	0	0	0	0	0	0	0	**24**
1:00 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	0	0	1	8	0	0	0	0	0	0	0	0	0	0	0	0	**9**
3:00 AM	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	**5**
4:00 AM	0	1	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
5:00 AM	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	**18**
6:00 AM	0	0	0	45	0	0	0	0	0	0	0	0	0	0	0	0	0	**45**
7:00 AM	0	0	0	7	138	3	0	0	1	0	0	0	0	0	0	0	0	**149**
8:00 AM	0	0	2	31	205	85	4	0	0	0	0	0	0	0	0	0	0	**327**
9:00 AM	0	1	56	25	151	4	0	0	0	0	0	0	0	0	0	0	0	**237**
10:00 AM	0	1	2	77	75	38	3	0	0	0	0	0	0	0	0	0	0	**196**
11:00 AM	1	0	6	2	127	41	2	0	0	0	0	0	0	0	0	0	0	**179**
12:00 PM	0	1	4	124	30	33	10	1	0	0	0	0	0	0	0	0	0	**203**
1:00 PM	0	0	0	2	148	75	4	0	1	0	0	0	0	0	0	0	0	**230**
2:00 PM	0	1	17	13	82	33	45	1	1	0	0	0	0	0	0	0	0	**193**
3:00 PM	0	0	2	28	83	36	0	17	1	0	0	0	0	0	0	0	0	**167**
4:00 PM	0	2	0	2	122	86	10	14	0	0	1	0	0	0	0	0	0	**237**
5:00 PM	0	1	0	24	235	41	3	1	0	0	0	0	0	0	0	0	0	**305**
6:00 PM	1	1	41	94	239	17	1	1	0	0	0	0	0	0	0	0	0	**395**
7:00 PM	0	0	0	96	97	1	0	0	0	0	0	0	0	0	0	0	0	**194**
8:00 PM	0	0	0	36	76	0	0	0	0	0	0	0	0	0	0	0	0	**112**
9:00 PM	0	0	0	18	51	0	0	0	0	0	0	0	0	0	0	0	0	**69**
10:00 PM	0	0	0	2	30	26	0	0	0	0	0	0	0	0	0	0	0	**58**
11:00 PM	0	0	0	4	39	5	0	0	0	0	0	0	0	0	0	0	0	**48**
Total	**2**	**9**	**130**	**655**	**1,940**	**552**	**82**	**35**	**4**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**3,410**
Percent	**0.1%**	**0.3%**	**3.8%**	**19.2%**	**56.9%**	**16.2%**	**2.4%**	**1.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	27.5	mph	Mean (Average) Speed	27.2	mph
85th Percentile	30.6	mph	10 mph Pace	22.9 - 32.9	mph
95th Percentile	33.3	mph	Percent in Pace	81.8	%

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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Wednesday, November 9, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	9	15	6	0	0	0	0	0	0	0	0	0	0	0	0	**31**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
3:00 AM	0	1	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
4:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	1	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
7:00 AM	0	4	26	10	0	0	0	0	0	0	0	0	0	0	0	0	0	**40**
8:00 AM	0	16	53	32	4	1	0	0	0	0	0	0	0	0	0	0	0	**106**
9:00 AM	0	1	59	46	1	1	0	0	0	0	0	0	0	0	0	0	0	**108**
10:00 AM	5	29	39	23	0	0	0	0	0	0	0	0	0	0	0	0	0	**96**
11:00 AM	1	11	56	29	2	0	0	0	0	0	0	0	0	0	0	0	0	**99**
12:00 PM	7	42	44	10	3	0	0	0	0	0	0	0	0	0	0	0	0	**106**
1:00 PM	3	51	85	60	7	0	1	0	0	0	0	0	0	0	0	0	0	**207**
2:00 PM	2	15	68	60	1	0	0	0	0	0	0	0	0	0	0	0	0	**146**
3:00 PM	6	22	65	25	6	0	0	0	0	0	0	0	0	0	0	0	0	**124**
4:00 PM	0	10	78	43	8	2	0	0	0	0	6	0	0	0	0	0	0	**147**
5:00 PM	2	5	85	72	2	0	0	0	0	0	0	0	0	0	0	0	0	**166**
6:00 PM	3	28	86	58	2	1	0	0	0	0	0	0	0	0	0	0	0	**178**
7:00 PM	2	22	116	24	4	0	0	0	0	0	0	0	0	0	0	0	0	**168**
8:00 PM	8	5	84	25	3	0	0	0	0	0	0	0	0	0	0	0	0	**125**
9:00 PM	0	3	62	31	2	0	0	0	0	0	0	0	0	0	0	0	0	**98**
10:00 PM	1	4	55	34	0	0	0	0	0	0	0	0	0	0	0	0	0	**94**
11:00 PM	0	1	18	36	1	0	0	0	0	0	0	0	0	0	0	0	0	**56**
Total	**40**	**273**	**1,110**	**637**	**53**	**5**	**1**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**2,125**
Percent	**1.9%**	**12.8%**	**52.2%**	**30.0%**	**2.5%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.7	mph	Mean (Average) Speed	18.6	mph
85th Percentile	21.4	mph	10 mph Pace	13.3 - 23.3	mph
95th Percentile	24.0	mph	Percent in Pace	86.2	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Total Study Average
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	7	1	11	0	0	0	0	0	0	0	0	0	0	0	**19**
1:00 AM	0	0	0	4	5	1	1	0	0	0	0	0	0	0	0	0	0	**11**
2:00 AM	0	0	0	2	2	2	1	0	0	0	0	0	0	0	0	0	0	**7**
3:00 AM	0	0	0	3	1	1	1	0	0	0	0	0	0	0	0	0	0	**6**
4:00 AM	0	0	1	5	1	3	1	0	0	0	0	0	0	0	0	0	0	**11**
5:00 AM	0	0	1	8	12	6	0	0	0	0	0	0	0	0	0	0	0	**27**
6:00 AM	0	0	1	11	17	26	6	0	0	0	0	0	0	0	0	0	0	**61**
7:00 AM	0	1	4	23	90	24	7	0	0	0	0	0	0	0	0	0	0	**149**
8:00 AM	0	0	7	36	114	69	7	0	0	0	0	0	0	0	0	0	0	**233**
9:00 AM	0	1	8	26	132	47	3	0	0	0	0	0	0	0	0	0	0	**217**
10:00 AM	0	0	4	38	102	34	12	0	0	0	0	0	0	0	0	0	0	**190**
11:00 AM	0	0	7	53	102	41	3	0	0	0	0	0	0	0	0	0	0	**206**
12:00 PM	0	5	6	66	101	43	4	0	0	0	0	0	0	0	0	0	0	**225**
1:00 PM	0	1	5	27	149	47	1	0	0	0	0	0	0	0	0	0	0	**230**
2:00 PM	0	9	14	33	88	21	11	1	0	0	0	0	0	0	0	0	0	**177**
3:00 PM	0	0	2	70	88	25	1	3	0	0	0	0	0	0	0	0	0	**189**
4:00 PM	1	7	21	77	104	45	8	2	0	0	0	0	0	0	0	0	0	**265**
5:00 PM	0	1	31	91	139	25	17	1	0	0	0	0	0	0	0	0	0	**305**
6:00 PM	0	0	26	57	115	60	8	1	0	0	0	0	0	0	0	0	0	**267**
7:00 PM	0	0	18	46	78	20	0	1	0	0	0	0	0	0	0	0	0	**163**
8:00 PM	0	0	6	32	58	0	0	0	0	0	0	0	0	0	0	0	0	**96**
9:00 PM	0	0	3	23	47	12	0	0	0	0	0	0	0	0	0	0	0	**85**
10:00 PM	0	0	4	45	13	21	0	0	0	0	0	0	0	0	0	0	0	**83**
11:00 PM	0	0	2	14	25	13	0	0	0	0	0	0	0	0	0	0	0	**54**
Total	**1**	**25**	**171**	**797**	**1,584**	**597**	**92**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3,276**
Percent	**0.0%**	**0.8%**	**5.2%**	**24.3%**	**48.4%**	**18.2%**	**2.8%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	27.0	mph	Mean (Average) Speed	26.9	mph
85th Percentile	30.9	mph	10 mph Pace	22.1 - 32.1	mph
95th Percentile	33.8	mph	Percent in Pace	78.1	%

Deon Fouche: (415) 757-7714
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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 to 11/9/2016
Site Code: 07

Total Study Average
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	13	9	1	0	0	0	0	0	0	0	0	0	0	0	0	**24**
1:00 AM	0	2	4	6	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
2:00 AM	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
3:00 AM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	1	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
6:00 AM	0	1	13	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**18**
7:00 AM	1	12	31	18	1	0	0	0	0	0	0	0	0	0	0	0	0	**63**
8:00 AM	1	9	52	34	2	0	0	0	0	0	0	0	0	0	0	0	0	**98**
9:00 AM	1	3	51	40	3	0	0	0	0	0	0	0	0	0	0	0	0	**98**
10:00 AM	3	12	39	29	2	0	0	0	0	0	0	0	0	0	0	0	0	**85**
11:00 AM	1	9	51	40	5	0	0	0	0	0	0	0	0	0	0	0	0	**106**
12:00 PM	3	15	62	43	4	1	0	0	0	0	0	0	0	0	0	0	0	**128**
1:00 PM	1	16	79	55	5	1	0	0	0	0	0	0	0	0	0	0	0	**157**
2:00 PM	1	10	71	52	4	1	0	0	0	0	0	0	0	0	0	0	0	**139**
3:00 PM	2	14	84	50	6	0	0	0	0	0	0	0	0	0	0	0	0	**156**
4:00 PM	1	14	83	45	5	0	0	0	0	0	1	0	0	0	0	0	0	**149**
5:00 PM	1	9	105	64	3	0	0	0	0	0	0	0	0	0	0	0	0	**182**
6:00 PM	2	25	102	55	3	0	0	0	0	0	0	0	0	0	0	0	0	**187**
7:00 PM	2	15	92	44	2	0	0	0	0	0	0	0	0	0	0	0	0	**155**
8:00 PM	2	9	60	43	3	0	0	0	0	0	0	0	0	0	0	0	0	**117**
9:00 PM	1	7	51	43	4	1	0	0	0	0	0	0	0	0	0	0	0	**107**
10:00 PM	0	5	45	32	2	0	0	0	0	0	0	0	0	0	0	0	0	**84**
11:00 PM	0	2	24	30	2	0	0	0	0	0	0	0	0	0	0	0	0	**58**
Total	**23**	**191**	**1,123**	**745**	**57**	**4**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**2,144**
Percent	**1.1%**	**8.9%**	**52.4%**	**34.7%**	**2.7%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	19.1	mph	Mean (Average) Speed	19.0	mph
85th Percentile	21.9	mph	10 mph Pace	14.3 - 24.3	mph
95th Percentile	24.0	mph	Percent in Pace	87.9	%

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Location: Casanova Ave N/O Melway Cir
Date Range: 11/3/2016 - 11/9/2016
Site Code: 07

	Thursday			Friday			Saturday			Sunday			Monday			Tuesday			Wednesday			Mid-Week Average		
	11/3/2016			11/4/2016			11/5/2016			11/6/2016			11/7/2016			11/8/2016			11/9/2016					
Time	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	8	13	21	19	16	35	15	37	52	29	17	46	15	29	44	30	29	59	24	31	55	21	24	45
1:00 AM	3	9	12	8	13	21	21	29	50	14	16	30	10	11	21	14	11	25	3	0	3	7	7	13
2:00 AM	3	3	6	5	1	6	8	12	20	10	15	25	6	5	11	5	4	9	9	8	17	6	5	11
3:00 AM	5	1	6	5	2	7	5	6	11	8	2	10	6	0	6	10	6	16	5	8	13	7	5	12
4:00 AM	10	0	10	16	2	18	9	9	18	9	11	20	15	1	16	8	1	9	7	2	9	8	1	9
5:00 AM	23	11	34	55	10	65	43	20	63	4	6	10	22	4	26	30	3	33	18	2	20	24	5	29
6:00 AM	77	30	107	109	36	145	64	17	81	41	10	51	45	12	57	50	17	67	45	10	55	57	19	76
7:00 AM	161	102	263	282	126	408	128	72	200	44	23	67	141	46	187	138	39	177	149	40	189	149	60	210
8:00 AM	161	98	259	262	109	371	173	93	266	89	37	126	326	117	443	293	129	422	327	106	433	260	111	371
9:00 AM	167	77	244	221	106	327	203	91	294	193	73	266	257	119	376	248	113	361	237	108	345	217	99	317
10:00 AM	157	66	223	175	80	255	209	90	299	213	73	286	186	99	285	193	90	283	196	96	292	182	84	266
11:00 AM	205	100	305	200	95	295	240	146	386	251	113	364	184	91	275	195	97	292	179	99	278	193	99	292
12:00 PM	174	128	302	286	140	426	234	150	384	217	123	340	270	102	372	183	143	326	203	106	309	187	126	312
1:00 PM	202	147	349	232	158	390	256	151	407	198	127	325	279	138	417	217	166	383	230	207	437	216	173	390
2:00 PM	146	150	296	241	107	348	188	154	342	162	119	281	168	148	316	149	145	294	193	146	339	163	147	310
3:00 PM	245	171	416	250	178	428	208	169	377	135	141	276	156	173	329	168	139	307	167	124	291	193	145	338
4:00 PM	358	152	510	347	146	493	208	217	425	180	132	312	270	108	378	258	145	403	237	147	384	284	148	432
5:00 PM	385	156	541	377	224	601	179	193	372	192	152	344	380	179	559	321	199	520	305	166	471	337	174	511
6:00 PM	217	214	431	203	217	420	164	146	310	160	177	337	395	163	558	337	221	558	395	178	573	316	204	521
7:00 PM	148	158	306	164	153	317	139	131	270	123	110	233	191	160	351	176	205	381	194	168	362	173	177	350
8:00 PM	94	128	222	95	128	223	108	101	209	53	78	131	99	130	229	113	130	243	112	125	237	106	128	234
9:00 PM	107	107	214	113	119	232	101	126	227	62	91	153	64	111	175	81	92	173	69	98	167	86	99	185
10:00 PM	64	67	131	121	76	197	157	100	257	67	83	150	56	85	141	61	89	150	58	94	152	61	83	144
11:00 PM	22	48	70	38	51	89	147	94	241	40	58	98	34	38	72	51	63	114	48	56	104	40	56	96
Total	**3,142**	**2,136**	**5,278**	**3,824**	**2,293**	**6,117**	**3,207**	**2,354**	**5,561**	**2,494**	**1,787**	**4,281**	**3,575**	**2,069**	**5,644**	**3,329**	**2,276**	**5,605**	**3,410**	**2,125**	**5,535**	**3,294**	**2,179**	**5,473**
Percent	**60%**	**40%**	-	**63%**	**37%**	-	**58%**	**42%**	-	**58%**	**42%**	-	**63%**	**37%**	-	**59%**	**41%**	-	**62%**	**38%**	-	**60%**	**40%**	-

1. Mid-week average includes data between Tuesday and Thursday.

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Vehicle Classification Report Summary

Location: Olmstead Rd N/O Garden Rd
Count Direction: Northbound / Southbound
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

	FHWA Vehicle Classification													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total														
Northbound	31	6,798	1,433	1	346	410	0	2	2	8	0	0	5	9,036
Percent	0.3%	75.2%	15.9%	0.0%	3.8%	4.5%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	100%
Southbound	17	6,130	1,313	0	270	13	0	0	0	0	0	0	0	7,743
Percent	0.2%	79.2%	17.0%	0.0%	3.5%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	48	12,928	2,746	1	616	423	0	2	2	8	0	0	5	16,779
Percent	0.3%	77.0%	16.4%	0.0%	3.7%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Thursday, November 3, 2016
Southbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
1:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	18	5	0	2	0	0	0	0	0	0	0	0	**25**
5:00 AM	0	31	7	0	0	1	0	0	0	0	0	0	0	**39**
6:00 AM	0	2	3	0	1	0	0	0	0	0	0	0	0	**6**
7:00 AM	0	5	1	0	1	0	0	0	0	0	0	0	0	**7**
8:00 AM	0	16	5	0	1	0	0	0	0	0	0	0	0	**22**
9:00 AM	0	88	12	0	7	0	0	0	0	0	0	0	0	**107**
10:00 AM	0	94	24	0	3	0	0	0	0	0	0	0	0	**121**
11:00 AM	1	84	17	0	3	0	0	0	0	0	0	0	0	**105**
12:00 PM	1	65	15	0	4	0	0	0	0	0	0	0	0	**85**
1:00 PM	0	58	6	0	4	0	0	0	0	0	0	0	0	**68**
2:00 PM	1	65	10	0	2	0	0	0	0	0	0	0	0	**78**
3:00 PM	0	66	12	0	5	0	0	0	0	0	0	0	0	**83**
4:00 PM	0	34	8	0	5	0	0	0	0	0	0	0	0	**47**
5:00 PM	0	95	13	0	3	0	0	0	0	0	0	0	0	**111**
6:00 PM	0	36	10	0	3	0	0	0	0	0	0	0	0	**49**
7:00 PM	0	47	7	0	0	1	0	0	0	0	0	0	0	**55**
8:00 PM	0	41	9	0	0	0	0	0	0	0	0	0	0	**50**
9:00 PM	0	22	9	0	0	0	0	0	0	0	0	0	0	**31**
10:00 PM	0	3	4	0	1	0	0	0	0	0	0	0	0	**8**
11:00 PM	0	53	13	0	3	0	0	0	0	0	0	0	0	**69**
Total	**3**	**931**	**192**	**0**	**48**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,176**
Percent	**0.3%**	**79.2%**	**16.3%**	**0.0%**	**4.1%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Friday, November 4, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	1	7	1	0	0	0	0	0	0	0	0	0	0	**9**
4:00 AM	0	48	11	0	2	2	0	0	0	0	0	0	0	**63**
5:00 AM	0	69	5	0	2	3	0	0	0	0	0	0	0	**79**
6:00 AM	0	17	2	0	0	3	0	0	0	0	0	0	0	**22**
7:00 AM	1	15	9	0	2	1	0	0	0	0	0	0	0	**28**
8:00 AM	0	34	6	0	7	0	0	0	0	0	0	0	0	**47**
9:00 AM	1	82	8	0	4	2	0	0	0	0	0	0	0	**97**
10:00 AM	1	120	21	0	8	6	0	0	0	0	0	0	0	**156**
11:00 AM	1	96	19	0	6	5	0	0	0	0	0	0	0	**127**
12:00 PM	2	60	18	0	4	3	0	0	0	0	0	0	0	**87**
1:00 PM	1	73	19	1	1	7	0	0	0	0	0	0	0	**102**
2:00 PM	0	63	8	0	4	5	0	0	0	0	0	0	0	**80**
3:00 PM	0	57	12	0	3	4	0	0	0	0	0	0	0	**76**
4:00 PM	2	83	22	0	5	1	0	1	0	0	0	0	0	**114**
5:00 PM	0	98	26	0	6	6	0	0	0	1	0	0	0	**137**
6:00 PM	0	52	15	0	2	6	0	0	0	0	0	0	0	**75**
7:00 PM	0	33	8	0	0	5	0	0	0	0	0	0	0	**46**
8:00 PM	0	46	8	0	0	1	0	0	0	0	0	0	0	**55**
9:00 PM	0	19	4	0	0	1	0	0	0	0	0	0	0	**24**
10:00 PM	0	25	5	0	1	2	0	0	0	0	0	0	0	**33**
11:00 PM	0	30	4	0	0	2	0	0	0	0	0	0	0	**36**
Total	**10**	**1,127**	**232**	**1**	**57**	**65**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**1,494**
Percent	**0.7%**	**75.4%**	**15.5%**	**0.1%**	**3.8%**	**4.4%**	**0.0%**	**0.1%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Friday, November 4, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	18	4	0	0	0	0	0	0	0	0	0	0	**22**
5:00 AM	0	37	5	0	1	1	0	0	0	0	0	0	0	**44**
6:00 AM	0	3	3	0	0	0	0	0	0	0	0	0	0	**6**
7:00 AM	1	7	3	0	1	0	0	0	0	0	0	0	0	**12**
8:00 AM	0	19	10	0	3	0	0	0	0	0	0	0	0	**32**
9:00 AM	0	52	11	0	1	0	0	0	0	0	0	0	0	**64**
10:00 AM	0	91	16	0	2	0	0	0	0	0	0	0	0	**109**
11:00 AM	0	94	20	0	10	0	0	0	0	0	0	0	0	**124**
12:00 PM	0	65	14	0	3	0	0	0	0	0	0	0	0	**82**
1:00 PM	0	60	19	0	1	0	0	0	0	0	0	0	0	**80**
2:00 PM	0	73	10	0	5	0	0	0	0	0	0	0	0	**88**
3:00 PM	0	40	10	0	1	0	0	0	0	0	0	0	0	**51**
4:00 PM	0	85	15	0	4	0	0	0	0	0	0	0	0	**104**
5:00 PM	0	109	21	0	4	0	0	0	0	0	0	0	0	**134**
6:00 PM	1	36	11	0	2	0	0	0	0	0	0	0	0	**50**
7:00 PM	1	60	16	0	2	0	0	0	0	0	0	0	0	**79**
8:00 PM	0	52	6	0	1	0	0	0	0	0	0	0	0	**59**
9:00 PM	0	27	8	0	0	0	0	0	0	0	0	0	0	**35**
10:00 PM	1	35	7	0	1	0	0	0	0	0	0	0	0	**44**
11:00 PM	0	28	5	0	0	0	0	0	0	0	0	0	0	**33**
Total	**4**	**995**	**215**	**0**	**42**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,257**
Percent	**0.3%**	**79.2%**	**17.1%**	**0.0%**	**3.3%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Saturday, November 5, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	48	9	0	3	4	0	0	0	0	0	0	0	**64**
5:00 AM	0	53	16	0	0	4	0	0	0	0	0	0	0	**73**
6:00 AM	0	5	4	0	0	2	0	0	0	0	0	0	0	**11**
7:00 AM	0	8	2	0	0	0	0	0	0	0	0	0	0	**10**
8:00 AM	0	42	7	0	1	1	0	0	0	0	0	0	0	**51**
9:00 AM	0	60	10	0	4	3	0	0	0	0	0	0	0	**77**
10:00 AM	1	111	13	0	3	4	0	0	0	0	0	0	0	**132**
11:00 AM	1	68	18	0	3	7	0	0	0	0	0	0	0	**97**
12:00 PM	0	52	21	0	2	2	0	0	0	0	0	0	0	**77**
1:00 PM	0	60	23	0	2	3	0	0	0	0	0	0	0	**88**
2:00 PM	0	51	13	0	3	1	0	0	0	0	0	0	0	**68**
3:00 PM	0	55	14	0	4	3	0	0	0	0	0	0	1	**77**
4:00 PM	0	38	18	0	3	3	0	0	0	0	0	0	0	**62**
5:00 PM	0	49	11	0	4	2	0	0	0	0	0	0	0	**66**
6:00 PM	0	31	7	0	1	3	0	0	0	0	0	0	0	**42**
7:00 PM	0	20	4	0	0	1	0	0	0	0	0	0	0	**25**
8:00 PM	0	24	4	0	1	5	0	0	0	0	0	0	0	**34**
9:00 PM	0	23	4	0	0	0	0	0	0	0	0	0	0	**27**
10:00 PM	0	9	3	0	1	0	0	0	0	0	0	0	0	**13**
11:00 PM	0	10	4	0	2	3	0	0	0	0	0	0	0	**19**
Total	**2**	**826**	**206**	**0**	**37**	**51**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1,123**
Percent	**0.2%**	**73.6%**	**18.3%**	**0.0%**	**3.3%**	**4.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Saturday, November 5, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	11	0	0	0	0	0	0	0	0	0	0	0	**11**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	16	2	0	3	0	0	0	0	0	0	0	0	**21**
5:00 AM	0	36	9	0	1	0	0	0	0	0	0	0	0	**46**
6:00 AM	0	4	3	0	0	0	0	0	0	0	0	0	0	**7**
7:00 AM	0	5	2	0	0	0	0	0	0	0	0	0	0	**7**
8:00 AM	0	19	5	0	1	0	0	0	0	0	0	0	0	**25**
9:00 AM	0	40	7	0	0	0	0	0	0	0	0	0	0	**47**
10:00 AM	0	60	11	0	2	0	0	0	0	0	0	0	0	**73**
11:00 AM	0	80	16	0	2	0	0	0	0	0	0	0	0	**98**
12:00 PM	0	65	11	0	5	0	0	0	0	0	0	0	0	**81**
1:00 PM	0	51	15	0	3	0	0	0	0	0	0	0	0	**69**
2:00 PM	0	57	17	0	2	0	0	0	0	0	0	0	0	**76**
3:00 PM	0	46	13	0	0	0	0	0	0	0	0	0	0	**59**
4:00 PM	0	53	6	0	4	0	0	0	0	0	0	0	0	**63**
5:00 PM	0	46	12	0	1	0	0	0	0	0	0	0	0	**59**
6:00 PM	0	19	7	0	3	0	0	0	0	0	0	0	0	**29**
7:00 PM	1	32	8	0	1	0	0	0	0	0	0	0	0	**42**
8:00 PM	0	43	7	0	1	0	0	0	0	0	0	0	0	**51**
9:00 PM	0	10	4	0	0	0	0	0	0	0	0	0	0	**14**
10:00 PM	0	25	3	0	0	0	0	0	0	0	0	0	0	**28**
11:00 PM	0	15	5	0	0	0	0	0	0	0	0	0	0	**20**
Total	**1**	**737**	**163**	**0**	**29**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**930**
Percent	**0.1%**	**79.2%**	**17.5%**	**0.0%**	**3.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Sunday, November 6, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	5	2	0	0	0	0	0	0	0	0	0	0	**7**
5:00 AM	1	38	15	0	1	9	0	0	0	0	0	0	1	**65**
6:00 AM	0	51	5	0	4	2	0	0	0	1	0	0	0	**63**
7:00 AM	0	32	6	0	0	1	0	0	0	0	0	0	0	**39**
8:00 AM	0	21	3	0	0	0	0	0	0	0	0	0	0	**24**
9:00 AM	0	59	12	0	3	5	0	0	0	0	0	0	0	**79**
10:00 AM	0	117	16	0	3	9	0	0	0	0	0	0	1	**146**
11:00 AM	2	93	25	0	0	6	0	0	0	0	0	0	0	**126**
12:00 PM	0	87	21	0	4	2	0	0	0	0	0	0	0	**114**
1:00 PM	0	55	16	0	4	7	0	0	0	0	0	0	0	**82**
2:00 PM	0	79	23	0	2	7	0	0	0	0	0	0	1	**112**
3:00 PM	0	91	18	0	4	4	0	0	0	0	0	0	0	**117**
4:00 PM	0	60	9	0	4	2	0	0	0	1	0	0	0	**76**
5:00 PM	0	60	12	0	1	4	0	0	0	0	0	0	0	**77**
6:00 PM	0	53	8	0	4	0	0	0	0	0	0	0	0	**65**
7:00 PM	0	59	8	0	3	1	0	0	0	0	0	0	0	**71**
8:00 PM	0	41	6	0	1	3	0	0	0	0	0	0	0	**51**
9:00 PM	0	46	6	0	2	0	0	0	0	0	0	0	0	**54**
10:00 PM	0	26	8	0	0	0	0	0	0	0	0	0	0	**34**
11:00 PM	0	33	4	0	1	1	0	0	0	0	0	0	0	**39**
Total	**3**	**1,112**	**223**	**0**	**41**	**63**	**0**	**0**	**0**	**2**	**0**	**0**	**3**	**1,447**
Percent	**0.2%**	**76.8%**	**15.4%**	**0.0%**	**2.8%**	**4.4%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.2%**	

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Sunday, November 6, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	0	0	1	0	0	0	0	0	0	0	0	**5**
1:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	3	2	0	0	0	0	0	0	0	0	0	0	**5**
5:00 AM	0	19	7	0	0	0	0	0	0	0	0	0	0	**26**
6:00 AM	0	41	6	0	3	0	0	0	0	0	0	0	0	**50**
7:00 AM	0	15	3	0	0	0	0	0	0	0	0	0	0	**18**
8:00 AM	0	17	3	0	1	0	0	0	0	0	0	0	0	**21**
9:00 AM	0	29	6	0	1	0	0	0	0	0	0	0	0	**36**
10:00 AM	0	121	16	0	3	0	0	0	0	0	0	0	0	**140**
11:00 AM	0	58	6	0	4	0	0	0	0	0	0	0	0	**68**
12:00 PM	0	74	15	0	3	0	0	0	0	0	0	0	0	**92**
1:00 PM	0	80	20	0	2	0	0	0	0	0	0	0	0	**102**
2:00 PM	0	72	10	0	2	0	0	0	0	0	0	0	0	**84**
3:00 PM	0	94	14	0	2	0	0	0	0	0	0	0	0	**110**
4:00 PM	0	71	13	0	2	0	0	0	0	0	0	0	0	**86**
5:00 PM	0	40	8	0	1	0	0	0	0	0	0	0	0	**49**
6:00 PM	0	40	5	0	1	0	0	0	0	0	0	0	0	**46**
7:00 PM	0	78	18	0	3	0	0	0	0	0	0	0	0	**99**
8:00 PM	1	26	10	0	0	0	0	0	0	0	0	0	0	**37**
9:00 PM	0	61	8	0	2	0	0	0	0	0	0	0	0	**71**
10:00 PM	0	34	5	0	1	0	0	0	0	0	0	0	0	**40**
11:00 PM	0	53	4	0	1	0	0	0	0	0	0	0	0	**58**
Total	**1**	**1,034**	**179**	**0**	**33**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,247**
Percent	**0.1%**	**82.9%**	**14.4%**	**0.0%**	**2.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Monday, November 7, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	20	5	0	0	1	0	0	0	0	0	0	0	**26**
1:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
5:00 AM	0	59	7	0	5	6	0	0	0	0	0	0	0	**77**
6:00 AM	1	43	14	0	2	7	0	0	0	0	0	0	0	**67**
7:00 AM	0	52	9	0	1	3	0	0	0	0	0	0	0	**65**
8:00 AM	0	28	3	0	4	4	0	0	0	0	0	0	0	**39**
9:00 AM	0	42	9	0	4	3	0	0	0	0	0	0	0	**58**
10:00 AM	0	52	10	0	5	1	0	0	0	0	0	0	0	**68**
11:00 AM	1	85	18	0	8	5	0	0	0	1	0	0	0	**118**
12:00 PM	0	70	16	0	4	5	0	0	0	0	0	0	0	**95**
1:00 PM	0	44	10	0	3	3	0	0	0	0	0	0	0	**60**
2:00 PM	0	47	11	0	3	3	0	0	1	1	0	0	0	**66**
3:00 PM	0	71	16	0	3	8	0	0	0	0	0	0	0	**98**
4:00 PM	0	43	11	0	4	4	0	0	0	0	0	0	0	**62**
5:00 PM	0	51	10	0	2	2	0	0	0	0	0	0	0	**65**
6:00 PM	0	55	10	0	3	3	0	0	0	0	0	0	0	**71**
7:00 PM	0	40	6	0	0	0	0	0	0	0	0	0	0	**46**
8:00 PM	1	34	7	0	0	0	0	0	0	0	0	0	0	**42**
9:00 PM	0	37	8	0	1	1	0	0	0	0	0	0	0	**47**
10:00 PM	0	30	4	0	2	1	0	0	0	0	0	0	0	**37**
11:00 PM	0	8	1	0	0	0	0	0	0	0	0	0	0	**9**
Total	**3**	**919**	**186**	**0**	**54**	**60**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**1,225**
Percent	**0.2%**	**75.0%**	**15.2%**	**0.0%**	**4.4%**	**4.9%**	**0.0%**	**0.0%**	**0.1%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Monday, November 7, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	24	10	0	0	0	0	0	0	0	0	0	0	**34**
1:00 AM	0	7	1	0	0	0	0	0	0	0	0	0	0	**8**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	21	5	0	1	0	0	0	0	0	0	0	0	**27**
6:00 AM	0	29	14	0	2	0	0	0	0	0	0	0	0	**45**
7:00 AM	0	21	6	0	3	1	0	0	0	0	0	0	0	**31**
8:00 AM	0	30	3	0	0	0	0	0	0	0	0	0	0	**33**
9:00 AM	0	22	8	0	1	0	0	0	0	0	0	0	0	**31**
10:00 AM	0	48	7	0	3	0	0	0	0	0	0	0	0	**58**
11:00 AM	0	71	19	0	4	0	0	0	0	0	0	0	0	**94**
12:00 PM	0	66	15	0	1	0	0	0	0	0	0	0	0	**82**
1:00 PM	0	49	8	0	4	0	0	0	0	0	0	0	0	**61**
2:00 PM	0	40	13	0	3	0	0	0	0	0	0	0	0	**56**
3:00 PM	0	59	22	0	7	0	0	0	0	0	0	0	0	**88**
4:00 PM	0	67	18	0	3	0	0	0	0	0	0	0	0	**88**
5:00 PM	2	31	6	0	5	0	0	0	0	0	0	0	0	**44**
6:00 PM	0	64	9	0	3	0	0	0	0	0	0	0	0	**76**
7:00 PM	0	39	7	0	0	0	0	0	0	0	0	0	0	**46**
8:00 PM	1	28	10	0	2	0	0	0	0	0	0	0	0	**41**
9:00 PM	0	37	10	0	0	0	0	0	0	0	0	0	0	**47**
10:00 PM	0	48	8	0	1	0	0	0	0	0	0	0	0	**57**
11:00 PM	0	10	4	0	0	0	0	0	0	0	0	0	0	**14**
Total	**3**	**813**	**203**	**0**	**43**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,063**
Percent	**0.3%**	**76.5%**	**19.1%**	**0.0%**	**4.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Tuesday, November 8, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	25	3	0	0	3	0	0	0	0	0	0	0	**31**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	5	2	0	0	0	0	0	0	0	0	0	0	**7**
5:00 AM	0	32	7	0	3	2	0	0	0	0	0	0	0	**44**
6:00 AM	1	43	16	0	2	5	0	0	0	0	0	0	0	**67**
7:00 AM	0	24	4	0	1	2	0	0	0	0	0	0	0	**31**
8:00 AM	0	27	8	0	6	3	0	0	0	0	0	0	0	**44**
9:00 AM	0	36	9	0	4	2	0	0	0	0	0	0	0	**51**
10:00 AM	1	51	11	0	4	5	0	0	0	0	0	0	0	**72**
11:00 AM	1	66	18	0	6	4	0	0	0	0	0	0	0	**95**
12:00 PM	1	78	18	0	6	7	0	0	0	0	0	0	0	**110**
1:00 PM	0	50	11	0	6	2	0	0	0	0	0	0	0	**69**
2:00 PM	0	65	10	0	6	1	0	0	0	0	0	0	0	**82**
3:00 PM	0	59	14	0	1	1	0	0	0	0	0	0	0	**75**
4:00 PM	0	44	9	0	2	2	0	0	0	0	0	0	0	**57**
5:00 PM	0	48	2	0	4	5	0	0	0	0	0	0	0	**59**
6:00 PM	0	66	5	0	3	1	0	0	0	0	0	0	0	**75**
7:00 PM	0	28	10	0	1	0	0	0	0	0	0	0	0	**39**
8:00 PM	0	26	7	0	0	1	0	0	0	0	0	0	0	**34**
9:00 PM	0	18	5	0	0	1	0	0	0	0	0	0	0	**24**
10:00 PM	0	28	7	0	1	3	0	0	0	0	0	0	0	**39**
11:00 PM	0	10	1	0	0	0	0	0	0	0	0	0	0	**11**
Total	**4**	**830**	**177**	**0**	**56**	**50**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,117**
Percent	**0.4%**	**74.3%**	**15.8%**	**0.0%**	**5.0%**	**4.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Tuesday, November 8, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	37	7	0	0	1	0	0	0	0	0	0	0	**45**
1:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	15	4	0	0	0	0	0	0	0	0	0	0	**19**
6:00 AM	0	25	9	0	1	0	0	0	0	0	0	0	0	**35**
7:00 AM	0	7	0	0	0	0	0	0	0	0	0	0	0	**7**
8:00 AM	0	15	2	0	2	0	0	0	0	0	0	0	0	**19**
9:00 AM	0	15	9	0	3	0	0	0	0	0	0	0	0	**27**
10:00 AM	0	32	9	0	3	1	0	0	0	0	0	0	0	**45**
11:00 AM	0	60	10	0	1	0	0	0	0	0	0	0	0	**71**
12:00 PM	1	66	15	0	8	2	0	0	0	0	0	0	0	**92**
1:00 PM	0	53	7	0	3	0	0	0	0	0	0	0	0	**63**
2:00 PM	0	41	18	0	3	0	0	0	0	0	0	0	0	**62**
3:00 PM	0	66	11	0	1	0	0	0	0	0	0	0	0	**78**
4:00 PM	0	51	9	0	2	0	0	0	0	0	0	0	0	**62**
5:00 PM	1	54	15	0	4	0	0	0	0	0	0	0	0	**74**
6:00 PM	0	67	12	0	3	0	0	0	0	0	0	0	0	**82**
7:00 PM	0	27	4	0	2	0	0	0	0	0	0	0	0	**33**
8:00 PM	1	30	8	0	0	0	0	0	0	0	0	0	0	**39**
9:00 PM	0	36	6	0	0	0	0	0	0	0	0	0	0	**42**
10:00 PM	0	43	10	0	1	0	0	0	0	0	0	0	0	**54**
11:00 PM	0	12	6	0	0	0	0	0	0	0	0	0	0	**18**
Total	**3**	**757**	**172**	**0**	**37**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**973**
Percent	**0.3%**	**77.8%**	**17.7%**	**0.0%**	**3.8%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Wednesday, November 9, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	15	3	0	0	0	0	0	0	0	0	0	0	18
1:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	0	30	9	0	0	4	0	0	0	1	0	0	0	44
6:00 AM	0	60	9	0	1	6	0	0	0	0	0	0	0	76
7:00 AM	0	39	5	0	1	3	0	0	0	0	0	0	0	48
8:00 AM	1	32	3	0	1	1	0	0	0	0	0	0	0	38
9:00 AM	1	38	5	0	6	4	0	0	0	0	0	0	0	54
10:00 AM	1	46	9	0	6	4	0	0	0	1	0	0	0	67
11:00 AM	0	90	10	0	1	5	0	0	0	0	0	0	0	106
12:00 PM	0	80	26	0	6	4	0	0	0	0	0	0	0	116
1:00 PM	0	47	10	0	5	4	0	0	0	0	0	0	0	66
2:00 PM	0	51	10	0	2	2	0	0	0	0	0	0	0	65
3:00 PM	0	63	11	0	1	3	0	1	0	0	0	0	0	79
4:00 PM	1	61	12	0	4	1	0	0	0	0	0	0	0	79
5:00 PM	0	44	16	0	1	5	0	0	0	0	0	0	0	66
6:00 PM	0	78	7	0	3	1	0	0	0	0	0	0	1	90
7:00 PM	0	43	6	0	1	0	0	0	0	0	0	0	0	50
8:00 PM	0	38	9	0	2	1	0	0	0	0	0	0	0	50
9:00 PM	2	37	9	0	0	1	0	0	0	0	0	0	0	49
10:00 PM	0	40	10	0	0	3	0	0	0	0	0	0	0	53
11:00 PM	0	10	1	0	0	1	0	0	0	0	0	0	0	12
Total	**6**	**947**	**183**	**0**	**41**	**53**	**0**	**1**	**0**	**2**	**0**	**0**	**1**	**1,234**
Percent	**0.5%**	**76.7%**	**14.8%**	**0.0%**	**3.3%**	**4.3%**	**0.0%**	**0.1%**	**0.0%**	**0.2%**	**0.0%**	**0.0%**	**0.1%**	

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Wednesday, November 9, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	19	7	0	0	0	0	0	0	0	0	0	0	26
1:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	19	4	0	0	0	0	0	0	0	0	0	0	23
6:00 AM	0	27	7	0	0	1	0	0	0	0	0	0	0	35
7:00 AM	0	18	3	0	1	0	0	0	0	0	0	0	0	22
8:00 AM	0	16	5	0	1	0	0	0	0	0	0	0	0	22
9:00 AM	0	21	9	0	1	0	0	0	0	0	0	0	0	31
10:00 AM	0	26	7	0	2	0	0	0	0	0	0	0	0	35
11:00 AM	1	61	12	0	0	0	0	0	0	0	0	0	0	74
12:00 PM	0	71	21	0	4	0	0	0	0	0	0	0	0	96
1:00 PM	0	43	8	0	2	0	0	0	0	0	0	0	0	53
2:00 PM	1	58	10	0	7	0	0	0	0	0	0	0	0	76
3:00 PM	0	54	20	0	5	1	0	0	0	0	0	0	0	80
4:00 PM	0	58	10	0	1	0	0	0	0	0	0	0	0	69
5:00 PM	0	62	14	0	7	1	0	0	0	0	0	0	0	84
6:00 PM	0	85	12	0	0	0	0	0	0	0	0	0	0	97
7:00 PM	0	41	6	0	3	0	0	0	0	0	0	0	0	50
8:00 PM	0	36	5	0	0	0	0	0	0	0	0	0	0	41
9:00 PM	0	59	10	0	3	1	0	0	0	0	0	0	0	73
10:00 PM	0	50	13	0	0	0	0	0	0	0	0	0	0	63
11:00 PM	0	34	6	0	1	1	0	0	0	0	0	0	0	42
Total	**2**	**863**	**189**	**0**	**38**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,097**
Percent	**0.2%**	**78.7%**	**17.2%**	**0.0%**	**3.5%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Total Study Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	10	2	0	0	1	0	0	0	0	0	0	0	**13**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	22	5	0	1	1	0	0	0	0	0	0	0	**29**
5:00 AM	0	46	11	0	2	5	0	0	0	0	0	0	0	**64**
6:00 AM	0	33	8	0	1	4	0	0	0	0	0	0	0	**46**
7:00 AM	0	27	6	0	1	2	0	0	0	0	0	0	0	**36**
8:00 AM	0	34	5	0	4	2	0	0	0	0	0	0	0	**45**
9:00 AM	0	65	11	0	4	5	0	0	0	0	0	0	0	**85**
10:00 AM	1	87	15	0	5	5	0	0	0	0	0	0	0	**113**
11:00 AM	1	87	18	0	4	5	0	0	0	0	0	0	0	**115**
12:00 PM	0	69	19	0	5	4	0	0	0	0	0	0	0	**97**
1:00 PM	0	56	14	0	3	4	0	0	0	0	0	0	0	**77**
2:00 PM	0	59	12	0	3	3	0	0	0	0	0	0	0	**77**
3:00 PM	0	64	14	0	3	4	0	0	0	0	0	0	0	**85**
4:00 PM	0	55	13	0	4	2	0	0	0	0	0	0	0	**74**
5:00 PM	0	60	14	0	3	4	0	0	0	0	0	0	0	**81**
6:00 PM	0	53	9	0	3	2	0	0	0	0	0	0	0	**67**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	35	7	0	1	2	0	0	0	0	0	0	0	**45**
9:00 PM	0	27	5	0	0	1	0	0	0	0	0	0	0	**33**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	19	3	0	1	1	0	0	0	0	0	0	0	**24**
Total	**2**	**912**	**192**	**0**	**48**	**57**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,211**
Percent	**0.2%**	**75.3%**	**15.9%**	**0.0%**	**4.0%**	**4.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Total Study Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	15	4	0	0	0	0	0	0	0	0	0	0	**19**
1:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	9	2	0	1	0	0	0	0	0	0	0	0	**12**
5:00 AM	0	25	6	0	0	0	0	0	0	0	0	0	0	**31**
6:00 AM	0	19	6	0	1	0	0	0	0	0	0	0	0	**26**
7:00 AM	0	11	3	0	1	0	0	0	0	0	0	0	0	**15**
8:00 AM	0	19	5	0	1	0	0	0	0	0	0	0	0	**25**
9:00 AM	0	38	9	0	2	0	0	0	0	0	0	0	0	**49**
10:00 AM	0	67	13	0	3	0	0	0	0	0	0	0	0	**83**
11:00 AM	0	73	14	0	3	0	0	0	0	0	0	0	0	**90**
12:00 PM	0	67	15	0	4	0	0	0	0	0	0	0	0	**86**
1:00 PM	0	56	12	0	3	0	0	0	0	0	0	0	0	**71**
2:00 PM	0	58	13	0	3	0	0	0	0	0	0	0	0	**74**
3:00 PM	0	61	15	0	3	0	0	0	0	0	0	0	0	**79**
4:00 PM	0	60	11	0	3	0	0	0	0	0	0	0	0	**74**
5:00 PM	0	62	13	0	4	0	0	0	0	0	0	0	0	**79**
6:00 PM	0	50	9	0	2	0	0	0	0	0	0	0	0	**61**
7:00 PM	0	46	9	0	2	0	0	0	0	0	0	0	0	**57**
8:00 PM	0	37	8	0	1	0	0	0	0	0	0	0	0	**46**
9:00 PM	0	36	8	0	1	0	0	0	0	0	0	0	0	**45**
10:00 PM	0	34	7	0	1	0	0	0	0	0	0	0	0	**42**
11:00 PM	0	29	6	0	1	0	0	0	0	0	0	0	0	**36**
Total	**0**	**876**	**188**	**0**	**40**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,104**
Percent	**0.0%**	**79.3%**	**17.0%**	**0.0%**	**3.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

3-Day (Tuesday - Thursday) Average
Northbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	25	3	0	0	3	0	0	0	0	0	0	0	**31**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	5	2	0	0	0	0	0	0	0	0	0	0	**7**
5:00 AM	0	32	7	0	3	2	0	0	0	0	0	0	0	**44**
6:00 AM	1	43	16	0	2	5	0	0	0	0	0	0	0	**67**
7:00 AM	0	24	4	0	1	2	0	0	0	0	0	0	0	**31**
8:00 AM	0	27	8	0	6	3	0	0	0	0	0	0	0	**44**
9:00 AM	0	36	9	0	4	2	0	0	0	0	0	0	0	**51**
10:00 AM	1	51	11	0	4	5	0	0	0	0	0	0	0	**72**
11:00 AM	1	66	18	0	6	4	0	0	0	0	0	0	0	**95**
12:00 PM	1	78	18	0	6	7	0	0	0	0	0	0	0	**110**
1:00 PM	0	50	11	0	6	2	0	0	0	0	0	0	0	**69**
2:00 PM	0	65	10	0	6	1	0	0	0	0	0	0	0	**82**
3:00 PM	0	59	14	0	1	1	0	0	0	0	0	0	0	**75**
4:00 PM	0	44	9	0	2	2	0	0	0	0	0	0	0	**57**
5:00 PM	0	48	2	0	4	5	0	0	0	0	0	0	0	**59**
6:00 PM	0	66	5	0	3	1	0	0	0	0	0	0	0	**75**
7:00 PM	0	28	10	0	1	0	0	0	0	0	0	0	0	**39**
8:00 PM	0	26	7	0	0	1	0	0	0	0	0	0	0	**34**
9:00 PM	0	18	5	0	0	1	0	0	0	0	0	0	0	**24**
10:00 PM	0	28	7	0	1	3	0	0	0	0	0	0	0	**39**
11:00 PM	0	10	1	0	0	0	0	0	0	0	0	0	0	**11**
Total	**4**	**830**	**177**	**0**	**56**	**50**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,117**
Percent	**0.4%**	**74.3%**	**15.8%**	**0.0%**	**5.0%**	**4.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

3-Day (Tuesday - Thursday) Average
Southbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	37	7	0	0	1	0	0	0	0	0	0	0	**45**
1:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	15	4	0	0	0	0	0	0	0	0	0	0	**19**
6:00 AM	0	25	9	0	1	0	0	0	0	0	0	0	0	**35**
7:00 AM	0	7	0	0	0	0	0	0	0	0	0	0	0	**7**
8:00 AM	0	15	2	0	2	0	0	0	0	0	0	0	0	**19**
9:00 AM	0	15	9	0	3	0	0	0	0	0	0	0	0	**27**
10:00 AM	0	32	9	0	3	1	0	0	0	0	0	0	0	**45**
11:00 AM	0	60	10	0	1	0	0	0	0	0	0	0	0	**71**
12:00 PM	1	66	15	0	8	2	0	0	0	0	0	0	0	**92**
1:00 PM	0	53	7	0	3	0	0	0	0	0	0	0	0	**63**
2:00 PM	0	41	18	0	3	0	0	0	0	0	0	0	0	**62**
3:00 PM	0	66	11	0	1	0	0	0	0	0	0	0	0	**78**
4:00 PM	0	51	9	0	2	0	0	0	0	0	0	0	0	**62**
5:00 PM	1	54	15	0	4	0	0	0	0	0	0	0	0	**74**
6:00 PM	0	67	12	0	3	0	0	0	0	0	0	0	0	**82**
7:00 PM	0	27	4	0	2	0	0	0	0	0	0	0	0	**33**
8:00 PM	1	30	8	0	0	0	0	0	0	0	0	0	0	**39**
9:00 PM	0	36	6	0	0	0	0	0	0	0	0	0	0	**42**
10:00 PM	0	43	10	0	1	0	0	0	0	0	0	0	0	**54**
11:00 PM	0	12	6	0	0	0	0	0	0	0	0	0	0	**18**
Total	**3**	**757**	**172**	**0**	**37**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**973**
Percent	**0.3%**	**77.8%**	**17.7%**	**0.0%**	**3.8%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Vehicle Speed Report Summary

Location: Olmstead Rd N/O Garden Rd
Count Direction: Northbound / Southbound
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

	Speed Range (mph)																	Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
Study Total																		
Northbound	112	867	1,503	3,777	2,396	352	28	1	0	0	0	0	0	0	0	0	0	9,036
Percent	1.2%	9.6%	16.6%	41.8%	26.5%	3.9%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	42	527	2,146	3,457	1,441	120	7	0	0	0	0	3	0	0	0	0	0	7,743
Percent	0.5%	6.8%	27.7%	44.6%	18.6%	1.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	154	1,394	3,649	7,234	3,837	472	35	1	0	0	0	3	0	0	0	0	0	16,779
Percent	0.9%	8.3%	21.7%	43.1%	22.9%	2.8%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Northbound			**Northbound**		
50th Percentile (Median)	22.9	mph	Mean (Average) Speed	22.3	mph
85th Percentile	27.0	mph	10 mph Pace	18.5 - 28.5	mph
95th Percentile	29.4	mph	Percent in Pace	71.1	%
Southbound			**Southbound**		
50th Percentile (Median)	21.5	mph	Mean (Average) Speed	21.5	mph
85th Percentile	25.7	mph	10 mph Pace	16.9 - 26.9	mph
95th Percentile	28.1	mph	Percent in Pace	76.1	%

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Thursday, November 3, 2016
Northbound

	Speed Range (mph)																	Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	1	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	**5**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	2	1	4	1	0	0	0	0	0	0	0	0	0	0	0	**8**
4:00 AM	0	4	2	24	19	6	0	0	0	0	0	0	0	0	0	0	0	**55**
5:00 AM	1	7	9	23	23	3	0	0	0	0	0	0	0	0	0	0	0	**66**
6:00 AM	0	1	5	4	5	1	0	0	0	0	0	0	0	0	0	0	0	**16**
7:00 AM	1	3	11	5	8	1	0	0	0	0	0	0	0	0	0	0	0	**29**
8:00 AM	0	0	7	34	31	1	0	0	0	0	0	0	0	0	0	0	0	**73**
9:00 AM	2	14	31	80	52	8	0	0	0	0	0	0	0	0	0	0	0	**187**
10:00 AM	3	7	19	79	30	7	0	0	0	0	0	0	0	0	0	0	0	**145**
11:00 AM	1	13	22	68	33	5	0	0	0	0	0	0	0	0	0	0	0	**142**
12:00 PM	1	7	13	34	20	3	2	0	0	0	0	0	0	0	0	0	0	**80**
1:00 PM	0	3	6	32	32	4	0	0	0	0	0	0	0	0	0	0	0	**77**
2:00 PM	2	3	6	25	22	8	0	0	0	0	0	0	0	0	0	0	0	**66**
3:00 PM	0	6	8	37	23	1	1	0	0	0	0	0	0	0	0	0	0	**76**
4:00 PM	1	7	12	35	18	2	0	0	0	0	0	0	0	0	0	0	0	**75**
5:00 PM	1	10	22	40	23	3	2	0	0	0	0	0	0	0	0	0	0	**101**
6:00 PM	0	3	8	26	11	3	0	0	0	0	0	0	0	0	0	0	0	**51**
7:00 PM	0	6	6	12	5	3	0	0	0	0	0	0	0	0	0	0	0	**32**
8:00 PM	1	8	6	15	11	3	1	0	0	0	0	0	0	0	0	0	0	**45**
9:00 PM	0	3	2	2	4	0	0	0	0	0	0	0	0	0	0	0	0	**11**
10:00 PM	0	4	2	4	3	1	0	0	0	0	0	0	0	0	0	0	0	**14**
11:00 PM	0	4	6	15	16	1	0	0	0	0	0	0	0	0	0	0	0	**42**
Total	**14**	**114**	**205**	**597**	**394**	**66**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,396**
Percent	**1.0%**	**8.2%**	**14.7%**	**42.8%**	**28.2%**	**4.7%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	23.2	mph	Mean (Average) Speed	22.7	mph
85th Percentile	27.2	mph	10 mph Pace	18.7 - 28.7	mph
95th Percentile	29.9	mph	Percent in Pace	74.8	%

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Thursday, November 3, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
1:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	1	8	7	6	3	0	0	0	0	0	0	0	0	0	0	0	**25**
5:00 AM	0	0	8	26	5	0	0	0	0	0	0	0	0	0	0	0	0	**39**
6:00 AM	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
7:00 AM	0	0	1	3	3	0	0	0	0	0	0	0	0	0	0	0	0	**7**
8:00 AM	0	2	6	6	7	1	0	0	0	0	0	0	0	0	0	0	0	**22**
9:00 AM	0	0	24	54	29	0	0	0	0	0	0	0	0	0	0	0	0	**107**
10:00 AM	1	11	26	63	19	1	0	0	0	0	0	0	0	0	0	0	0	**121**
11:00 AM	1	7	28	40	28	1	0	0	0	0	0	0	0	0	0	0	0	**105**
12:00 PM	3	3	27	32	19	1	0	0	0	0	0	0	0	0	0	0	0	**85**
1:00 PM	0	8	17	26	16	1	0	0	0	0	0	0	0	0	0	0	0	**68**
2:00 PM	2	5	16	40	15	0	0	0	0	0	0	0	0	0	0	0	0	**78**
3:00 PM	0	8	17	44	14	0	0	0	0	0	0	0	0	0	0	0	0	**83**
4:00 PM	1	6	11	20	8	0	1	0	0	0	0	0	0	0	0	0	0	**47**
5:00 PM	1	8	28	61	13	0	0	0	0	0	0	0	0	0	0	0	0	**111**
6:00 PM	0	2	18	25	3	1	0	0	0	0	0	0	0	0	0	0	0	**49**
7:00 PM	0	4	14	27	9	1	0	0	0	0	0	0	0	0	0	0	0	**55**
8:00 PM	0	4	17	24	5	0	0	0	0	0	0	0	0	0	0	0	0	**50**
9:00 PM	0	4	11	11	5	0	0	0	0	0	0	0	0	0	0	0	0	**31**
10:00 PM	0	0	3	1	4	0	0	0	0	0	0	0	0	0	0	0	0	**8**
11:00 PM	0	2	26	38	3	0	0	0	0	0	0	0	0	0	0	0	0	**69**
Total	**9**	**78**	**312**	**554**	**212**	**10**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,176**
Percent	**0.8%**	**6.6%**	**26.5%**	**47.1%**	**18.0%**	**0.9%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	21.6	mph	Mean (Average) Speed	21.4	mph
85th Percentile	25.3	mph	10 mph Pace	16.8 - 26.8	mph
95th Percentile	27.8	mph	Percent in Pace	79.1	%

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Friday, November 4, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	1	0	1	3	2	2	0	0	0	0	0	0	0	0	0	0	0	**9**
4:00 AM	0	5	6	34	16	2	0	0	0	0	0	0	0	0	0	0	0	**63**
5:00 AM	0	2	5	34	29	9	0	0	0	0	0	0	0	0	0	0	0	**79**
6:00 AM	0	1	0	9	12	0	0	0	0	0	0	0	0	0	0	0	0	**22**
7:00 AM	0	2	7	14	4	0	1	0	0	0	0	0	0	0	0	0	0	**28**
8:00 AM	1	6	8	15	14	3	0	0	0	0	0	0	0	0	0	0	0	**47**
9:00 AM	2	2	14	44	30	5	0	0	0	0	0	0	0	0	0	0	0	**97**
10:00 AM	3	12	16	64	56	5	0	0	0	0	0	0	0	0	0	0	0	**156**
11:00 AM	4	11	21	54	32	5	0	0	0	0	0	0	0	0	0	0	0	**127**
12:00 PM	2	5	9	33	35	3	0	0	0	0	0	0	0	0	0	0	0	**87**
1:00 PM	1	9	14	43	31	3	1	0	0	0	0	0	0	0	0	0	0	**102**
2:00 PM	0	9	17	34	18	1	1	0	0	0	0	0	0	0	0	0	0	**80**
3:00 PM	3	8	14	27	20	4	0	0	0	0	0	0	0	0	0	0	0	**76**
4:00 PM	0	8	21	58	26	1	0	0	0	0	0	0	0	0	0	0	0	**114**
5:00 PM	1	7	29	56	36	8	0	0	0	0	0	0	0	0	0	0	0	**137**
6:00 PM	1	5	16	26	24	3	0	0	0	0	0	0	0	0	0	0	0	**75**
7:00 PM	1	3	4	28	8	2	0	0	0	0	0	0	0	0	0	0	0	**46**
8:00 PM	0	9	13	21	10	2	0	0	0	0	0	0	0	0	0	0	0	**55**
9:00 PM	0	4	8	8	4	0	0	0	0	0	0	0	0	0	0	0	0	**24**
10:00 PM	1	12	10	7	3	0	0	0	0	0	0	0	0	0	0	0	0	**33**
11:00 PM	1	10	14	7	4	0	0	0	0	0	0	0	0	0	0	0	0	**36**
Total	**22**	**130**	**247**	**620**	**414**	**58**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,494**
Percent	**1.5%**	**8.7%**	**16.5%**	**41.5%**	**27.7%**	**3.9%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	23.0	mph	Mean (Average) Speed	22.4	mph
85th Percentile	27.0	mph	10 mph Pace	18.2 - 28.2	mph
95th Percentile	29.4	mph	Percent in Pace	72.6	%

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Friday, November 4, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	1	1	4	9	5	2	0	0	0	0	0	0	0	0	0	0	0	**22**
5:00 AM	0	5	5	21	13	0	0	0	0	0	0	0	0	0	0	0	0	**44**
6:00 AM	0	1	1	3	0	1	0	0	0	0	0	0	0	0	0	0	0	**6**
7:00 AM	0	5	3	3	0	1	0	0	0	0	0	0	0	0	0	0	0	**12**
8:00 AM	1	5	8	13	4	0	1	0	0	0	0	0	0	0	0	0	0	**32**
9:00 AM	0	4	22	26	11	1	0	0	0	0	0	0	0	0	0	0	0	**64**
10:00 AM	0	1	30	49	28	1	0	0	0	0	0	0	0	0	0	0	0	**109**
11:00 AM	1	7	38	54	23	1	0	0	0	0	0	0	0	0	0	0	0	**124**
12:00 PM	0	6	23	38	11	4	0	0	0	0	0	0	0	0	0	0	0	**82**
1:00 PM	1	2	24	38	13	2	0	0	0	0	0	0	0	0	0	0	0	**80**
2:00 PM	1	5	34	37	11	0	0	0	0	0	0	0	0	0	0	0	0	**88**
3:00 PM	1	3	16	21	9	1	0	0	0	0	0	0	0	0	0	0	0	**51**
4:00 PM	1	10	25	43	24	1	0	0	0	0	0	0	0	0	0	0	0	**104**
5:00 PM	0	6	37	65	25	1	0	0	0	0	0	0	0	0	0	0	0	**134**
6:00 PM	0	2	13	21	11	3	0	0	0	0	0	0	0	0	0	0	0	**50**
7:00 PM	1	6	26	36	10	0	0	0	0	0	0	0	0	0	0	0	0	**79**
8:00 PM	0	5	19	24	9	2	0	0	0	0	0	0	0	0	0	0	0	**59**
9:00 PM	0	2	13	17	3	0	0	0	0	0	0	0	0	0	0	0	0	**35**
10:00 PM	0	3	17	20	3	1	0	0	0	0	0	0	0	0	0	0	0	**44**
11:00 PM	0	0	15	14	3	1	0	0	0	0	0	0	0	0	0	0	0	**33**
Total	**8**	**79**	**376**	**553**	**217**	**23**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,257**
Percent	**0.6%**	**6.3%**	**29.9%**	**44.0%**	**17.3%**	**1.8%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	21.3	mph	Mean (Average) Speed	21.3	mph
85th Percentile	25.5	mph	10 mph Pace	16.6 - 26.6	mph
95th Percentile	27.7	mph	Percent in Pace	77.3	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Saturday, November 5, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	1	4	6	30	18	5	0	0	0	0	0	0	0	0	0	0	0	**64**
5:00 AM	0	8	5	23	34	3	0	0	0	0	0	0	0	0	0	0	0	**73**
6:00 AM	0	1	1	5	3	1	0	0	0	0	0	0	0	0	0	0	0	**11**
7:00 AM	1	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	**10**
8:00 AM	1	5	8	18	15	4	0	0	0	0	0	0	0	0	0	0	0	**51**
9:00 AM	1	4	10	37	20	5	0	0	0	0	0	0	0	0	0	0	0	**77**
10:00 AM	1	14	17	56	43	1	0	0	0	0	0	0	0	0	0	0	0	**132**
11:00 AM	2	10	11	47	26	1	0	0	0	0	0	0	0	0	0	0	0	**97**
12:00 PM	0	5	10	37	24	0	1	0	0	0	0	0	0	0	0	0	0	**77**
1:00 PM	2	9	7	40	27	3	0	0	0	0	0	0	0	0	0	0	0	**88**
2:00 PM	0	8	15	23	21	0	0	1	0	0	0	0	0	0	0	0	0	**68**
3:00 PM	4	6	15	36	13	3	0	0	0	0	0	0	0	0	0	0	0	**77**
4:00 PM	1	8	16	29	8	0	0	0	0	0	0	0	0	0	0	0	0	**62**
5:00 PM	1	6	10	35	14	0	0	0	0	0	0	0	0	0	0	0	0	**66**
6:00 PM	1	3	6	18	13	1	0	0	0	0	0	0	0	0	0	0	0	**42**
7:00 PM	0	5	3	12	3	2	0	0	0	0	0	0	0	0	0	0	0	**25**
8:00 PM	0	7	4	15	6	2	0	0	0	0	0	0	0	0	0	0	0	**34**
9:00 PM	0	11	4	8	1	3	0	0	0	0	0	0	0	0	0	0	0	**27**
10:00 PM	1	3	8	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**13**
11:00 PM	0	3	3	9	3	1	0	0	0	0	0	0	0	0	0	0	0	**19**
Total	**18**	**121**	**163**	**486**	**296**	**37**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,123**
Percent	**1.6%**	**10.8%**	**14.5%**	**43.3%**	**26.4%**	**3.3%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	22.7	mph	Mean (Average) Speed	22.2	mph
85th Percentile	26.8	mph	10 mph Pace	18.6 - 28.6	mph
95th Percentile	29.2	mph	Percent in Pace	73.4	%

Deon Fouche: (415) 757-7714
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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Saturday, November 5, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	4	3	3	0	0	0	0	0	0	0	0	0	0	0	0	**11**
1:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	0	5	7	8	1	0	0	0	0	0	0	0	0	0	0	0	**21**
5:00 AM	0	1	12	21	11	1	0	0	0	0	0	0	0	0	0	0	0	**46**
6:00 AM	0	1	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**7**
7:00 AM	0	1	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	**7**
8:00 AM	0	5	5	8	6	1	0	0	0	0	0	0	0	0	0	0	0	**25**
9:00 AM	0	2	5	19	18	3	0	0	0	0	0	0	0	0	0	0	0	**47**
10:00 AM	0	2	16	33	22	0	0	0	0	0	0	0	0	0	0	0	0	**73**
11:00 AM	0	5	27	43	22	1	0	0	0	0	0	0	0	0	0	0	0	**98**
12:00 PM	0	5	28	32	13	3	0	0	0	0	0	0	0	0	0	0	0	**81**
1:00 PM	0	2	21	27	17	2	0	0	0	0	0	0	0	0	0	0	0	**69**
2:00 PM	0	4	23	31	16	2	0	0	0	0	0	0	0	0	0	0	0	**76**
3:00 PM	0	4	19	31	3	2	0	0	0	0	0	0	0	0	0	0	0	**59**
4:00 PM	0	6	17	26	13	1	0	0	0	0	0	0	0	0	0	0	0	**63**
5:00 PM	0	6	15	26	12	0	0	0	0	0	0	0	0	0	0	0	0	**59**
6:00 PM	0	1	9	14	5	0	0	0	0	0	0	0	0	0	0	0	0	**29**
7:00 PM	0	3	18	18	3	0	0	0	0	0	0	0	0	0	0	0	0	**42**
8:00 PM	0	2	16	19	13	1	0	0	0	0	0	0	0	0	0	0	0	**51**
9:00 PM	0	3	2	9	0	0	0	0	0	0	0	0	0	0	0	0	0	**14**
10:00 PM	0	2	8	11	7	0	0	0	0	0	0	0	0	0	0	0	0	**28**
11:00 PM	0	0	9	7	4	0	0	0	0	0	0	0	0	0	0	0	0	**20**
Total	**0**	**57**	**260**	**394**	**200**	**19**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**930**
Percent	**0.0%**	**6.1%**	**28.0%**	**42.4%**	**21.5%**	**2.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	21.8	mph	Mean (Average) Speed	21.7	mph
85th Percentile	26.2	mph	10 mph Pace	17.3 - 27.3	mph
95th Percentile	28.3	mph	Percent in Pace	75.5	%

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Sunday, November 6, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	3	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	**7**
5:00 AM	0	4	15	24	20	2	0	0	0	0	0	0	0	0	0	0	0	**65**
6:00 AM	1	1	5	19	29	8	0	0	0	0	0	0	0	0	0	0	0	**63**
7:00 AM	1	3	5	22	8	0	0	0	0	0	0	0	0	0	0	0	0	**39**
8:00 AM	0	2	3	11	7	1	0	0	0	0	0	0	0	0	0	0	0	**24**
9:00 AM	2	5	21	29	18	4	0	0	0	0	0	0	0	0	0	0	0	**79**
10:00 AM	1	8	30	73	28	5	1	0	0	0	0	0	0	0	0	0	0	**146**
11:00 AM	0	8	50	48	18	2	0	0	0	0	0	0	0	0	0	0	0	**126**
12:00 PM	1	5	19	49	37	3	0	0	0	0	0	0	0	0	0	0	0	**114**
1:00 PM	0	8	22	38	12	2	0	0	0	0	0	0	0	0	0	0	0	**82**
2:00 PM	1	7	22	64	17	1	0	0	0	0	0	0	0	0	0	0	0	**112**
3:00 PM	0	11	30	55	18	3	0	0	0	0	0	0	0	0	0	0	0	**117**
4:00 PM	2	9	22	20	19	3	1	0	0	0	0	0	0	0	0	0	0	**76**
5:00 PM	1	6	29	31	9	1	0	0	0	0	0	0	0	0	0	0	0	**77**
6:00 PM	1	6	9	31	13	5	0	0	0	0	0	0	0	0	0	0	0	**65**
7:00 PM	1	14	12	27	16	0	1	0	0	0	0	0	0	0	0	0	0	**71**
8:00 PM	2	3	11	30	5	0	0	0	0	0	0	0	0	0	0	0	0	**51**
9:00 PM	4	12	5	24	9	0	0	0	0	0	0	0	0	0	0	0	0	**54**
10:00 PM	0	4	7	16	7	0	0	0	0	0	0	0	0	0	0	0	0	**34**
11:00 PM	0	4	12	8	12	2	1	0	0	0	0	0	0	0	0	0	0	**39**
Total	**19**	**125**	**330**	**622**	**304**	**42**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,447**
Percent	**1.3%**	**8.6%**	**22.8%**	**43.0%**	**21.0%**	**2.9%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	22.1	mph	Mean (Average) Speed	21.7	mph
85th Percentile	26.4	mph	10 mph Pace	17.1 - 27.1	mph
95th Percentile	29.0	mph	Percent in Pace	72.3	%

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Sunday, November 6, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
1:00 AM	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	1	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	**5**
5:00 AM	0	1	2	11	10	2	0	0	0	0	0	0	0	0	0	0	0	**26**
6:00 AM	0	2	9	24	15	0	0	0	0	0	0	0	0	0	0	0	0	**50**
7:00 AM	0	2	2	6	7	1	0	0	0	0	0	0	0	0	0	0	0	**18**
8:00 AM	0	1	4	11	5	0	0	0	0	0	0	0	0	0	0	0	0	**21**
9:00 AM	0	5	8	13	9	1	0	0	0	0	0	0	0	0	0	0	0	**36**
10:00 AM	0	10	41	61	27	1	0	0	0	0	0	0	0	0	0	0	0	**140**
11:00 AM	0	3	19	36	8	2	0	0	0	0	0	0	0	0	0	0	0	**68**
12:00 PM	0	5	25	45	15	2	0	0	0	0	0	0	0	0	0	0	0	**92**
1:00 PM	0	7	34	42	19	0	0	0	0	0	0	0	0	0	0	0	0	**102**
2:00 PM	0	3	19	45	16	1	0	0	0	0	0	0	0	0	0	0	0	**84**
3:00 PM	1	4	23	55	25	2	0	0	0	0	0	0	0	0	0	0	0	**110**
4:00 PM	0	6	23	33	21	3	0	0	0	0	0	0	0	0	0	0	0	**86**
5:00 PM	1	2	14	21	10	1	0	0	0	0	0	0	0	0	0	0	0	**49**
6:00 PM	0	0	10	31	5	0	0	0	0	0	0	0	0	0	0	0	0	**46**
7:00 PM	0	5	33	50	11	0	0	0	0	0	0	0	0	0	0	0	0	**99**
8:00 PM	3	6	13	11	4	0	0	0	0	0	0	0	0	0	0	0	0	**37**
9:00 PM	0	5	16	36	14	0	0	0	0	0	0	0	0	0	0	0	0	**71**
10:00 PM	0	2	15	18	5	0	0	0	0	0	0	0	0	0	0	0	0	**40**
11:00 PM	1	5	13	30	8	1	0	0	0	0	0	0	0	0	0	0	0	**58**
Total	**7**	**76**	**329**	**582**	**236**	**17**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,247**
Percent	**0.6%**	**6.1%**	**26.4%**	**46.7%**	**18.9%**	**1.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	21.6	mph	Mean (Average) Speed	21.6	mph
85th Percentile	25.6	mph	10 mph Pace	16.9 - 26.9	mph
95th Percentile	27.9	mph	Percent in Pace	78.8	%

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Monday, November 7, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	4	4	7	10	1	0	0	0	0	0	0	0	0	0	0	0	**26**
1:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	1	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	**6**
5:00 AM	0	3	9	41	18	6	0	0	0	0	0	0	0	0	0	0	0	**77**
6:00 AM	0	2	2	35	25	3	0	0	0	0	0	0	0	0	0	0	0	**67**
7:00 AM	0	4	12	22	25	2	0	0	0	0	0	0	0	0	0	0	0	**65**
8:00 AM	0	2	5	15	14	2	1	0	0	0	0	0	0	0	0	0	0	**39**
9:00 AM	0	2	9	18	26	2	1	0	0	0	0	0	0	0	0	0	0	**58**
10:00 AM	1	5	12	22	24	4	0	0	0	0	0	0	0	0	0	0	0	**68**
11:00 AM	0	8	14	51	43	2	0	0	0	0	0	0	0	0	0	0	0	**118**
12:00 PM	1	3	7	34	44	6	0	0	0	0	0	0	0	0	0	0	0	**95**
1:00 PM	0	1	10	26	22	1	0	0	0	0	0	0	0	0	0	0	0	**60**
2:00 PM	0	9	14	32	8	3	0	0	0	0	0	0	0	0	0	0	0	**66**
3:00 PM	1	17	16	44	16	4	0	0	0	0	0	0	0	0	0	0	0	**98**
4:00 PM	0	16	7	22	15	2	0	0	0	0	0	0	0	0	0	0	0	**62**
5:00 PM	2	1	10	26	24	2	0	0	0	0	0	0	0	0	0	0	0	**65**
6:00 PM	0	9	12	38	10	2	0	0	0	0	0	0	0	0	0	0	0	**71**
7:00 PM	3	8	9	19	6	1	0	0	0	0	0	0	0	0	0	0	0	**46**
8:00 PM	2	3	6	24	6	0	1	0	0	0	0	0	0	0	0	0	0	**42**
9:00 PM	0	9	6	17	11	4	0	0	0	0	0	0	0	0	0	0	0	**47**
10:00 PM	1	14	4	10	4	3	1	0	0	0	0	0	0	0	0	0	0	**37**
11:00 PM	0	5	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**9**
Total	**12**	**126**	**168**	**511**	**354**	**50**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,225**
Percent	**1.0%**	**10.3%**	**13.7%**	**41.7%**	**28.9%**	**4.1%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	23.3	mph	Mean (Average) Speed	22.6	mph
85th Percentile	27.6	mph	10 mph Pace	19.0 - 29.0	mph
95th Percentile	29.8	mph	Percent in Pace	71.9	%

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Monday, November 7, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	4	5	17	8	0	0	0	0	0	0	0	0	0	0	0	0	**34**
1:00 AM	0	1	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0	**8**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	1	13	9	3	1	0	0	0	0	0	0	0	0	0	0	0	**27**
6:00 AM	0	1	6	32	6	0	0	0	0	0	0	0	0	0	0	0	0	**45**
7:00 AM	0	1	7	12	10	1	0	0	0	0	0	0	0	0	0	0	0	**31**
8:00 AM	0	1	4	16	12	0	0	0	0	0	0	0	0	0	0	0	0	**33**
9:00 AM	0	2	6	5	15	2	1	0	0	0	0	0	0	0	0	0	0	**31**
10:00 AM	0	7	20	22	8	1	0	0	0	0	0	0	0	0	0	0	0	**58**
11:00 AM	0	4	19	42	25	0	1	0	0	0	0	3	0	0	0	0	0	**94**
12:00 PM	0	6	20	33	21	2	0	0	0	0	0	0	0	0	0	0	0	**82**
1:00 PM	0	6	13	25	17	0	0	0	0	0	0	0	0	0	0	0	0	**61**
2:00 PM	0	3	18	22	11	2	0	0	0	0	0	0	0	0	0	0	0	**56**
3:00 PM	0	8	23	39	16	2	0	0	0	0	0	0	0	0	0	0	0	**88**
4:00 PM	0	6	24	44	13	1	0	0	0	0	0	0	0	0	0	0	0	**88**
5:00 PM	0	2	5	21	16	0	0	0	0	0	0	0	0	0	0	0	0	**44**
6:00 PM	1	7	17	43	6	2	0	0	0	0	0	0	0	0	0	0	0	**76**
7:00 PM	0	4	17	17	8	0	0	0	0	0	0	0	0	0	0	0	0	**46**
8:00 PM	0	4	8	24	5	0	0	0	0	0	0	0	0	0	0	0	0	**41**
9:00 PM	0	3	14	21	9	0	0	0	0	0	0	0	0	0	0	0	0	**47**
10:00 PM	0	6	16	28	6	1	0	0	0	0	0	0	0	0	0	0	0	**57**
11:00 PM	0	1	5	4	3	1	0	0	0	0	0	0	0	0	0	0	0	**14**
Total	**1**	**79**	**263**	**478**	**221**	**16**	**2**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**1,063**
Percent	**0.1%**	**7.4%**	**24.7%**	**45.0%**	**20.8%**	**1.5%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	21.8	mph	Mean (Average) Speed	21.9	mph
85th Percentile	26.1	mph	10 mph Pace	17.4 - 27.4	mph
95th Percentile	28.5	mph	Percent in Pace	76.3	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Tuesday, November 8, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	6	3	8	10	3	0	0	0	0	0	0	0	0	0	0	0	**31**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	1	1	2	2	0	1	0	0	0	0	0	0	0	0	0	0	**7**
5:00 AM	0	0	5	21	16	2	0	0	0	0	0	0	0	0	0	0	0	**44**
6:00 AM	0	1	8	30	23	4	1	0	0	0	0	0	0	0	0	0	0	**67**
7:00 AM	0	2	2	8	17	1	1	0	0	0	0	0	0	0	0	0	0	**31**
8:00 AM	0	2	6	24	8	3	1	0	0	0	0	0	0	0	0	0	0	**44**
9:00 AM	0	3	7	21	17	3	0	0	0	0	0	0	0	0	0	0	0	**51**
10:00 AM	0	7	15	34	16	0	0	0	0	0	0	0	0	0	0	0	0	**72**
11:00 AM	0	11	11	50	21	2	0	0	0	0	0	0	0	0	0	0	0	**95**
12:00 PM	0	13	15	49	30	3	0	0	0	0	0	0	0	0	0	0	0	**110**
1:00 PM	0	5	7	22	26	9	0	0	0	0	0	0	0	0	0	0	0	**69**
2:00 PM	0	6	18	38	19	1	0	0	0	0	0	0	0	0	0	0	0	**82**
3:00 PM	0	13	13	22	24	3	0	0	0	0	0	0	0	0	0	0	0	**75**
4:00 PM	2	8	10	24	13	0	0	0	0	0	0	0	0	0	0	0	0	**57**
5:00 PM	2	5	10	29	11	2	0	0	0	0	0	0	0	0	0	0	0	**59**
6:00 PM	1	13	27	21	11	2	0	0	0	0	0	0	0	0	0	0	0	**75**
7:00 PM	0	5	9	8	14	3	0	0	0	0	0	0	0	0	0	0	0	**39**
8:00 PM	0	10	8	10	4	2	0	0	0	0	0	0	0	0	0	0	0	**34**
9:00 PM	0	2	5	11	4	2	0	0	0	0	0	0	0	0	0	0	0	**24**
10:00 PM	2	5	6	14	8	4	0	0	0	0	0	0	0	0	0	0	0	**39**
11:00 PM	0	4	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0	**11**
Total	**8**	**123**	**189**	**448**	**296**	**49**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,117**
Percent	**0.7%**	**11.0%**	**16.9%**	**40.1%**	**26.5%**	**4.4%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	22.8	mph	Mean (Average) Speed	22.3	mph
85th Percentile	27.3	mph	10 mph Pace	18.0 - 28.0	mph
95th Percentile	29.8	mph	Percent in Pace	68.1	%

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Tuesday, November 8, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	2	8	23	12	0	0	0	0	0	0	0	0	0	0	0	0	45
1:00 AM	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	0	0	2	14	3	0	0	0	0	0	0	0	0	0	0	0	0	19
6:00 AM	0	0	8	22	5	0	0	0	0	0	0	0	0	0	0	0	0	35
7:00 AM	0	1	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	7
8:00 AM	0	2	5	10	2	0	0	0	0	0	0	0	0	0	0	0	0	19
9:00 AM	0	3	9	8	6	1	0	0	0	0	0	0	0	0	0	0	0	27
10:00 AM	0	5	7	21	12	0	0	0	0	0	0	0	0	0	0	0	0	45
11:00 AM	0	3	19	32	14	3	0	0	0	0	0	0	0	0	0	0	0	71
12:00 PM	1	5	25	38	22	1	0	0	0	0	0	0	0	0	0	0	0	92
1:00 PM	3	4	14	30	11	1	0	0	0	0	0	0	0	0	0	0	0	63
2:00 PM	2	5	12	20	20	3	0	0	0	0	0	0	0	0	0	0	0	62
3:00 PM	0	3	17	36	20	2	0	0	0	0	0	0	0	0	0	0	0	78
4:00 PM	0	11	17	28	6	0	0	0	0	0	0	0	0	0	0	0	0	62
5:00 PM	0	2	25	25	17	4	1	0	0	0	0	0	0	0	0	0	0	74
6:00 PM	0	3	32	33	13	1	0	0	0	0	0	0	0	0	0	0	0	82
7:00 PM	0	2	8	14	9	0	0	0	0	0	0	0	0	0	0	0	0	33
8:00 PM	0	4	15	15	5	0	0	0	0	0	0	0	0	0	0	0	0	39
9:00 PM	0	3	14	22	2	0	1	0	0	0	0	0	0	0	0	0	0	42
10:00 PM	0	1	20	25	8	0	0	0	0	0	0	0	0	0	0	0	0	54
11:00 PM	0	1	8	7	2	0	0	0	0	0	0	0	0	0	0	0	0	18
Total	**6**	**60**	**268**	**428**	**192**	**17**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**973**
Percent	**0.6%**	**6.2%**	**27.5%**	**44.0%**	**19.7%**	**1.7%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	21.6	mph	Mean (Average) Speed	21.5	mph
85th Percentile	25.9	mph	10 mph Pace	16.9 - 26.9	mph
95th Percentile	28.3	mph	Percent in Pace	74.8	%

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Wednesday, November 9, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	2	4	4	2	5	1	0	0	0	0	0	0	0	0	0	0	0	18
1:00 AM	0	0	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	4
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	0	4	5	21	13	0	1	0	0	0	0	0	0	0	0	0	0	44
6:00 AM	0	1	5	34	32	4	0	0	0	0	0	0	0	0	0	0	0	76
7:00 AM	0	3	7	17	14	6	1	0	0	0	0	0	0	0	0	0	0	48
8:00 AM	0	0	3	19	13	2	1	0	0	0	0	0	0	0	0	0	0	38
9:00 AM	0	4	8	19	19	4	0	0	0	0	0	0	0	0	0	0	0	54
10:00 AM	0	7	14	20	24	1	1	0	0	0	0	0	0	0	0	0	0	67
11:00 AM	1	14	31	50	10	0	0	0	0	0	0	0	0	0	0	0	0	106
12:00 PM	1	12	12	41	44	6	0	0	0	0	0	0	0	0	0	0	0	116
1:00 PM	0	3	5	26	28	4	0	0	0	0	0	0	0	0	0	0	0	66
2:00 PM	2	1	8	26	22	5	1	0	0	0	0	0	0	0	0	0	0	65
3:00 PM	0	11	4	39	24	1	0	0	0	0	0	0	0	0	0	0	0	79
4:00 PM	3	7	14	37	15	3	0	0	0	0	0	0	0	0	0	0	0	79
5:00 PM	2	6	10	31	15	2	0	0	0	0	0	0	0	0	0	0	0	66
6:00 PM	3	16	20	35	12	4	0	0	0	0	0	0	0	0	0	0	0	90
7:00 PM	1	5	7	20	14	3	0	0	0	0	0	0	0	0	0	0	0	50
8:00 PM	1	4	13	21	9	2	0	0	0	0	0	0	0	0	0	0	0	50
9:00 PM	0	8	13	14	14	0	0	0	0	0	0	0	0	0	0	0	0	49
10:00 PM	2	14	14	15	7	1	0	0	0	0	0	0	0	0	0	0	0	53
11:00 PM	1	3	3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Total	**19**	**128**	**201**	**493**	**338**	**50**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,234**
Percent	**1.5%**	**10.4%**	**16.3%**	**40.0%**	**27.4%**	**4.1%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	23.0	mph	Mean (Average) Speed	22.3	mph
85th Percentile	27.5	mph	10 mph Pace	19.1 - 29.1	mph
95th Percentile	29.6	mph	Percent in Pace	68.7	%

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Wednesday, November 9, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	8	14	4	0	0	0	0	0	0	0	0	0	0	0	0	**26**
1:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	1	1	19	1	1	0	0	0	0	0	0	0	0	0	0	0	**23**
6:00 AM	0	1	10	20	4	0	0	0	0	0	0	0	0	0	0	0	0	**35**
7:00 AM	1	1	5	11	3	1	0	0	0	0	0	0	0	0	0	0	0	**22**
8:00 AM	0	1	1	12	7	1	0	0	0	0	0	0	0	0	0	0	0	**22**
9:00 AM	0	2	14	5	9	1	0	0	0	0	0	0	0	0	0	0	0	**31**
10:00 AM	0	3	5	19	6	1	1	0	0	0	0	0	0	0	0	0	0	**35**
11:00 AM	6	6	34	21	6	1	0	0	0	0	0	0	0	0	0	0	0	**74**
12:00 PM	0	6	23	46	20	1	0	0	0	0	0	0	0	0	0	0	0	**96**
1:00 PM	0	9	10	19	14	1	0	0	0	0	0	0	0	0	0	0	0	**53**
2:00 PM	2	3	18	36	15	2	0	0	0	0	0	0	0	0	0	0	0	**76**
3:00 PM	1	7	21	37	14	0	0	0	0	0	0	0	0	0	0	0	0	**80**
4:00 PM	0	10	26	28	4	1	0	0	0	0	0	0	0	0	0	0	0	**69**
5:00 PM	0	14	23	33	12	2	0	0	0	0	0	0	0	0	0	0	0	**84**
6:00 PM	0	7	30	47	11	2	0	0	0	0	0	0	0	0	0	0	0	**97**
7:00 PM	0	5	20	12	11	2	0	0	0	0	0	0	0	0	0	0	0	**50**
8:00 PM	0	2	10	26	3	0	0	0	0	0	0	0	0	0	0	0	0	**41**
9:00 PM	1	10	31	23	7	1	0	0	0	0	0	0	0	0	0	0	0	**73**
10:00 PM	0	4	24	27	8	0	0	0	0	0	0	0	0	0	0	0	0	**63**
11:00 PM	0	4	22	13	3	0	0	0	0	0	0	0	0	0	0	0	0	**42**
Total	**11**	**98**	**338**	**468**	**163**	**18**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,097**
Percent	**1.0%**	**8.9%**	**30.8%**	**42.7%**	**14.9%**	**1.6%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	20.9	mph	Mean (Average) Speed	20.8	mph
85th Percentile	25.1	mph	10 mph Pace	16.3 - 26.3	mph
95th Percentile	28.0	mph	Percent in Pace	74.7	%

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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Total Study Average
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	2	2	3	4	1	0	0	0	0	0	0	0	0	0	0	0	**13**
1:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	3	2	14	9	2	0	0	0	0	0	0	0	0	0	0	0	**30**
5:00 AM	0	4	8	27	22	4	0	0	0	0	0	0	0	0	0	0	0	**65**
6:00 AM	0	1	4	19	18	3	0	0	0	0	0	0	0	0	0	0	0	**45**
7:00 AM	0	2	7	13	11	1	0	0	0	0	0	0	0	0	0	0	0	**34**
8:00 AM	0	2	6	19	15	2	0	0	0	0	0	0	0	0	0	0	0	**44**
9:00 AM	1	5	14	35	26	4	0	0	0	0	0	0	0	0	0	0	0	**85**
10:00 AM	1	9	18	50	32	3	0	0	0	0	0	0	0	0	0	0	0	**113**
11:00 AM	1	11	23	53	26	2	0	0	0	0	0	0	0	0	0	0	0	**116**
12:00 PM	1	7	12	40	33	3	0	0	0	0	0	0	0	0	0	0	0	**96**
1:00 PM	0	5	10	32	25	4	0	0	0	0	0	0	0	0	0	0	0	**76**
2:00 PM	1	6	14	35	18	3	0	0	0	0	0	0	0	0	0	0	0	**77**
3:00 PM	1	10	14	37	20	3	0	0	0	0	0	0	0	0	0	0	0	**85**
4:00 PM	1	9	15	32	16	2	0	0	0	0	0	0	0	0	0	0	0	**75**
5:00 PM	1	6	17	35	19	3	0	0	0	0	0	0	0	0	0	0	0	**81**
6:00 PM	1	8	14	28	13	3	0	0	0	0	0	0	0	0	0	0	0	**67**
7:00 PM	1	7	7	18	9	2	0	0	0	0	0	0	0	0	0	0	0	**44**
8:00 PM	1	6	9	19	7	2	0	0	0	0	0	0	0	0	0	0	0	**44**
9:00 PM	1	7	6	12	7	1	0	0	0	0	0	0	0	0	0	0	0	**34**
10:00 PM	1	8	7	9	5	1	0	0	0	0	0	0	0	0	0	0	0	**31**
11:00 PM	0	5	6	7	5	1	0	0	0	0	0	0	0	0	0	0	0	**24**
Total	**14**	**123**	**216**	**539**	**341**	**51**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,284**
Percent	**1.1%**	**9.6%**	**16.8%**	**42.0%**	**26.6%**	**4.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	22.9	mph	Mean (Average) Speed	22.3	mph
85th Percentile	27.0	mph	10 mph Pace	18.5 - 28.5	mph
95th Percentile	29.4	mph	Percent in Pace	71.1	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 to 11/9/2016
Site Code: 08

Total Study Average
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	5	9	4	0	0	0	0	0	0	0	0	0	0	0	0	**19**
1:00 AM	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	1	3	3	3	1	0	0	0	0	0	0	0	0	0	0	0	**11**
5:00 AM	0	1	6	17	7	1	0	0	0	0	0	0	0	0	0	0	0	**32**
6:00 AM	0	1	5	15	4	0	0	0	0	0	0	0	0	0	0	0	0	**25**
7:00 AM	0	2	3	6	4	1	0	0	0	0	0	0	0	0	0	0	0	**16**
8:00 AM	0	2	5	11	6	0	0	0	0	0	0	0	0	0	0	0	0	**24**
9:00 AM	0	3	13	19	14	1	0	0	0	0	0	0	0	0	0	0	0	**50**
10:00 AM	0	6	21	38	17	1	0	0	0	0	0	0	0	0	0	0	0	**83**
11:00 AM	1	5	26	38	18	1	0	0	0	0	0	0	0	0	0	0	0	**89**
12:00 PM	1	5	24	38	17	2	0	0	0	0	0	0	0	0	0	0	0	**87**
1:00 PM	1	5	19	30	15	1	0	0	0	0	0	0	0	0	0	0	0	**71**
2:00 PM	1	4	20	33	15	1	0	0	0	0	0	0	0	0	0	0	0	**74**
3:00 PM	0	5	19	38	14	1	0	0	0	0	0	0	0	0	0	0	0	**77**
4:00 PM	0	8	20	32	13	1	0	0	0	0	0	0	0	0	0	0	0	**74**
5:00 PM	0	6	21	36	15	1	0	0	0	0	0	0	0	0	0	0	0	**79**
6:00 PM	0	3	18	31	8	1	0	0	0	0	0	0	0	0	0	0	0	**61**
7:00 PM	0	4	19	25	9	0	0	0	0	0	0	0	0	0	0	0	0	**57**
8:00 PM	0	4	14	20	6	0	0	0	0	0	0	0	0	0	0	0	0	**44**
9:00 PM	0	4	14	20	6	0	0	0	0	0	0	0	0	0	0	0	0	**44**
10:00 PM	0	3	15	19	6	0	0	0	0	0	0	0	0	0	0	0	0	**43**
11:00 PM	0	2	14	16	4	0	0	0	0	0	0	0	0	0	0	0	0	**36**
Total	**4**	**75**	**305**	**495**	**206**	**14**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,099**
Percent	**0.4%**	**6.8%**	**27.8%**	**45.0%**	**18.7%**	**1.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	21.5	mph	Mean (Average) Speed	21.5	mph
85th Percentile	25.7	mph	10 mph Pace	16.9 - 26.9	mph
95th Percentile	28.1	mph	Percent in Pace	76.1	%

Deon Fouche: (415) 757-7714
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Location: Olmstead Rd N/O Garden Rd
Date Range: 11/3/2016 - 11/9/2016
Site Code: 08

	Thursday			Friday			Saturday			Sunday			Monday			Tuesday			Wednesday			Mid-Week Average		
	11/3/2016			11/4/2016			11/5/2016			11/6/2016			11/7/2016			11/8/2016			11/9/2016					
Time	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	5	6	11	0	3	3	2	11	13	4	5	9	26	34	60	31	45	76	18	26	44	18	26	44
1:00 AM	0	2	2	1	0	1	4	1	5	1	4	5	2	8	10	0	3	3	4	2	6	1	2	4
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	0	0
3:00 AM	8	2	10	9	2	11	4	3	7	1	0	1	0	0	0	1	0	1	0	0	0	3	1	4
4:00 AM	55	25	80	63	22	85	64	21	85	7	5	12	6	2	8	7	3	10	4	2	6	22	10	32
5:00 AM	66	39	105	79	44	123	73	46	119	65	26	91	77	27	104	44	19	63	44	23	67	51	27	78
6:00 AM	16	6	22	22	6	28	11	7	18	63	50	113	67	45	112	67	35	102	76	35	111	53	25	78
7:00 AM	29	7	36	28	12	40	10	7	17	39	18	57	65	31	96	31	7	38	48	22	70	36	12	48
8:00 AM	73	22	95	47	32	79	51	25	76	24	21	45	39	33	72	44	19	63	38	22	60	52	21	73
9:00 AM	187	107	294	97	64	161	77	47	124	79	36	115	58	31	89	51	27	78	54	31	85	97	55	152
10:00 AM	145	121	266	156	109	265	132	73	205	146	140	286	68	58	126	72	45	117	67	35	102	95	67	162
11:00 AM	142	105	247	127	124	251	97	98	195	126	68	194	118	94	212	95	71	166	106	74	180	114	83	198
12:00 PM	80	85	165	87	82	169	77	81	158	114	92	206	95	82	177	110	92	202	116	96	212	102	91	193
1:00 PM	77	68	145	102	80	182	88	69	157	82	102	184	60	61	121	69	63	132	66	53	119	71	61	132
2:00 PM	66	78	144	80	88	168	68	76	144	112	84	196	66	56	122	82	62	144	65	76	141	71	72	143
3:00 PM	76	83	159	76	51	127	77	59	136	117	110	227	98	88	186	75	78	153	79	80	159	77	80	157
4:00 PM	75	47	122	114	104	218	62	63	125	76	86	162	62	88	150	57	62	119	79	69	148	70	59	130
5:00 PM	101	111	212	137	134	271	66	59	125	77	49	126	65	44	109	59	74	133	66	84	150	75	90	165
6:00 PM	51	49	100	75	50	125	42	29	71	65	46	111	71	76	147	75	82	157	90	97	187	72	76	148
7:00 PM	32	55	87	46	79	125	25	42	67	71	99	170	46	46	92	39	33	72	50	50	100	40	46	86
8:00 PM	45	50	95	55	59	114	34	51	85	51	37	88	42	41	83	34	39	73	50	41	91	43	43	86
9:00 PM	11	31	42	24	35	59	27	14	41	54	71	125	47	47	94	24	42	66	49	73	122	28	49	77
10:00 PM	14	8	22	33	44	77	13	28	41	34	40	74	37	57	94	39	54	93	53	63	116	35	42	77
11:00 PM	42	69	111	36	33	69	19	20	39	39	58	97	9	14	23	11	18	29	12	42	54	22	43	65
Total	**1,396**	**1,176**	**2,572**	**1,494**	**1,257**	**2,751**	**1,123**	**930**	**2,053**	**1,447**	**1,247**	**2,694**	**1,225**	**1,063**	**2,288**	**1,117**	**973**	**2,090**	**1,234**	**1,097**	**2,331**	**1,249**	**1,082**	**2,331**
Percent	**54%**	**46%**	-	**54%**	**46%**	-	**55%**	**45%**	-	**54%**	**46%**	-	**54%**	**46%**	-	**53%**	**47%**	-	**53%**	**47%**	-	**54%**	**46%**	-

1. Mid-week average includes data between Tuesday and Thursday.

Deon Fouche: (415) 757-7714
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Vehicle Classification Report Summary

Location: Skypark Dr at Airport Access
Count Direction: Northbound / Southbound
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

	FHWA Vehicle Classification													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total														
Northbound	19	887	307	0	106	10	0	0	2	0	0	0	0	1,331
Percent	1.4%	66.6%	23.1%	0.0%	8.0%	0.8%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	10	849	346	0	91	8	0	1	4	0	0	0	0	1,309
Percent	0.8%	64.9%	26.4%	0.0%	7.0%	0.6%	0.0%	0.1%	0.3%	0.0%	0.0%	0.0%	0.0%	100%
Total	29	1,736	653	0	197	18	0	1	6	0	0	0	0	2,640
Percent	1.1%	65.8%	24.7%	0.0%	7.5%	0.7%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

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Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Thursday, November 3, 2016
Southbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	2	0	0	1	0	0	0	0	0	0	0	**3**
6:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
7:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	**5**
8:00 AM	0	4	3	0	1	0	0	0	0	0	0	0	0	**8**
9:00 AM	0	10	2	0	1	0	0	0	0	0	0	0	0	**13**
10:00 AM	0	7	0	0	1	0	0	0	0	0	0	0	0	**8**
11:00 AM	0	4	4	0	1	0	0	0	0	0	0	0	0	**9**
12:00 PM	0	16	3	0	0	0	0	0	0	0	0	0	0	**19**
1:00 PM	0	11	3	0	1	0	0	0	0	0	0	0	0	**15**
2:00 PM	0	13	5	0	0	0	0	0	0	0	0	0	0	**18**
3:00 PM	0	11	4	0	1	0	0	0	0	0	0	0	0	**16**
4:00 PM	0	15	2	0	0	0	0	0	0	0	0	0	0	**17**
5:00 PM	0	19	3	0	0	0	0	0	0	0	0	0	0	**22**
6:00 PM	0	4	2	0	0	0	0	0	0	0	0	0	0	**6**
7:00 PM	0	4	7	0	0	0	0	0	0	0	0	0	0	**11**
8:00 PM	0	3	2	0	0	0	0	0	0	0	0	0	0	**5**
9:00 PM	0	8	8	0	1	0	0	0	0	0	0	0	0	**17**
10:00 PM	0	2	3	0	0	0	0	0	0	0	0	0	0	**5**
11:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**0**	**139**	**56**	**0**	**7**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**203**
Percent	**0.0%**	**68.5%**	**27.6%**	**0.0%**	**3.4%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Friday, November 4, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	2	1	0	1	0	0	0	0	0	0	0	0	**4**
5:00 AM	1	5	0	0	0	0	0	0	0	0	0	0	0	**6**
6:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	**5**
7:00 AM	0	7	1	0	0	0	0	0	0	0	0	0	0	**8**
8:00 AM	0	9	2	0	0	0	0	0	0	0	0	0	0	**11**
9:00 AM	0	19	2	0	2	0	0	0	0	0	0	0	0	**23**
10:00 AM	1	13	5	0	2	0	0	0	0	0	0	0	0	**21**
11:00 AM	1	16	4	0	0	1	0	0	0	0	0	0	0	**22**
12:00 PM	1	17	5	0	2	0	0	0	0	0	0	0	0	**25**
1:00 PM	0	18	7	0	0	0	0	0	0	0	0	0	0	**25**
2:00 PM	0	18	8	0	2	0	0	0	0	0	0	0	0	**28**
3:00 PM	0	5	5	0	1	0	0	0	0	0	0	0	0	**11**
4:00 PM	0	18	3	0	2	0	0	0	0	0	0	0	0	**23**
5:00 PM	0	10	4	0	0	0	0	0	0	0	0	0	0	**14**
6:00 PM	0	3	0	0	1	0	0	0	0	0	0	0	0	**4**
7:00 PM	0	4	1	0	0	0	0	0	0	0	0	0	0	**5**
8:00 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	**2**
9:00 PM	0	4	2	0	0	0	0	0	0	0	0	0	0	**6**
10:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
11:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	**1**
Total	**4**	**173**	**52**	**0**	**15**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**245**
Percent	**1.6%**	**70.6%**	**21.2%**	**0.0%**	**6.1%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Friday, November 4, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
8:00 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	**7**
9:00 AM	0	8	1	0	0	0	0	0	0	0	0	0	0	**9**
10:00 AM	0	12	2	0	2	0	0	0	0	0	0	0	0	**16**
11:00 AM	0	11	5	0	2	0	0	0	0	0	0	0	0	**18**
12:00 PM	0	19	7	0	1	0	0	0	1	0	0	0	0	**28**
1:00 PM	0	21	3	0	3	0	0	0	0	0	0	0	0	**27**
2:00 PM	0	10	7	0	3	0	0	0	0	0	0	0	0	**20**
3:00 PM	1	15	4	0	1	0	0	0	0	0	0	0	0	**21**
4:00 PM	0	9	3	0	3	0	0	0	0	0	0	0	0	**15**
5:00 PM	0	22	4	0	0	0	0	0	0	0	0	0	0	**26**
6:00 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
7:00 PM	0	9	1	0	1	0	0	0	0	0	0	0	0	**11**
8:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
9:00 PM	1	4	2	0	2	0	0	0	0	0	0	0	0	**9**
10:00 PM	0	4	2	0	0	0	0	0	0	0	0	0	0	**6**
11:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**2**	**161**	**43**	**0**	**18**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**225**
Percent	**0.9%**	**71.6%**	**19.1%**	**0.0%**	**8.0%**	**0.0%**	**0.0%**	**0.0%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Saturday, November 5, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
5:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	**5**
7:00 AM	0	8	4	0	0	0	0	0	0	0	0	0	0	**12**
8:00 AM	0	10	2	0	0	0	0	0	0	0	0	0	0	**12**
9:00 AM	0	6	2	0	1	0	0	0	0	0	0	0	0	**9**
10:00 AM	1	5	7	0	1	2	0	0	0	0	0	0	0	**16**
11:00 AM	0	9	1	0	2	0	0	0	0	0	0	0	0	**12**
12:00 PM	1	11	4	0	2	0	0	0	0	0	0	0	0	**18**
1:00 PM	0	16	3	0	1	0	0	0	0	0	0	0	0	**20**
2:00 PM	0	11	7	0	0	0	0	0	0	0	0	0	0	**18**
3:00 PM	0	8	1	0	0	0	0	0	0	0	0	0	0	**9**
4:00 PM	0	6	1	0	4	0	0	0	0	0	0	0	0	**11**
5:00 PM	0	8	2	0	0	0	0	0	0	0	0	0	0	**10**
6:00 PM	1	4	0	0	2	0	0	0	0	0	0	0	0	**7**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
9:00 PM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	**1**
Total	**3**	**116**	**38**	**0**	**15**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**174**
Percent	**1.7%**	**66.7%**	**21.8%**	**0.0%**	**8.6%**	**1.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Saturday, November 5, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
7:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
8:00 AM	0	5	2	0	0	0	0	0	0	0	0	0	0	**7**
9:00 AM	0	7	1	0	0	0	0	0	0	0	0	0	0	**8**
10:00 AM	0	5	4	0	1	0	0	0	0	0	0	0	0	**10**
11:00 AM	0	7	5	0	0	0	0	1	0	0	0	0	0	**13**
12:00 PM	0	5	1	0	3	1	0	0	0	0	0	0	0	**10**
1:00 PM	0	16	4	0	0	0	0	0	0	0	0	0	0	**20**
2:00 PM	0	10	8	0	0	0	0	0	0	0	0	0	0	**18**
3:00 PM	0	14	1	0	0	1	0	0	0	0	0	0	0	**16**
4:00 PM	0	7	2	0	4	0	0	0	0	0	0	0	0	**13**
5:00 PM	0	4	2	0	1	0	0	0	0	0	0	0	0	**7**
6:00 PM	1	3	1	0	3	0	0	0	0	0	0	0	0	**8**
7:00 PM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
8:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	**2**
9:00 PM	1	2	1	0	0	0	0	0	0	0	0	0	0	**4**
10:00 PM	0	1	2	0	0	0	0	0	0	0	0	0	0	**3**
11:00 PM	0	1	1	0	1	0	0	0	0	0	0	0	0	**3**
Total	**2**	**97**	**42**	**0**	**13**	**2**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**157**
Percent	**1.3%**	**61.8%**	**26.8%**	**0.0%**	**8.3%**	**1.3%**	**0.0%**	**0.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Sunday, November 6, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	1	3	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
6:00 AM	0	5	2	0	0	0	0	0	0	0	0	0	0	**7**
7:00 AM	0	7	3	0	1	0	0	0	0	0	0	0	0	**11**
8:00 AM	0	4	2	0	1	0	0	0	0	0	0	0	0	**7**
9:00 AM	0	7	1	0	0	0	0	0	0	0	0	0	0	**8**
10:00 AM	1	7	4	0	1	1	0	0	0	0	0	0	0	**14**
11:00 AM	0	7	3	0	2	0	0	0	0	0	0	0	0	**12**
12:00 PM	0	7	1	0	0	0	0	0	0	0	0	0	0	**8**
1:00 PM	1	13	4	0	1	1	0	0	0	0	0	0	0	**20**
2:00 PM	0	9	2	0	0	0	0	0	0	0	0	0	0	**11**
3:00 PM	0	8	1	0	2	0	0	0	0	0	0	0	0	**11**
4:00 PM	0	12	4	0	1	0	0	0	0	0	0	0	0	**17**
5:00 PM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
6:00 PM	0	3	3	0	1	0	0	0	0	0	0	0	0	**7**
7:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
8:00 PM	0	2	4	0	1	0	0	0	0	0	0	0	0	**7**
9:00 PM	0	1	1	0	1	0	0	0	0	0	0	0	0	**3**
10:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
11:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
Total	**2**	**104**	**40**	**0**	**13**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**161**
Percent	**1.2%**	**64.6%**	**24.8%**	**0.0%**	**8.1%**	**1.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Sunday, November 6, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	2	0	1	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
7:00 AM	0	3	3	0	0	0	0	0	0	0	0	0	0	**6**
8:00 AM	0	3	3	0	0	0	0	0	0	0	0	0	0	**6**
9:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
10:00 AM	0	7	4	0	0	0	0	0	0	0	0	0	0	**11**
11:00 AM	0	4	3	0	0	0	0	0	0	0	0	0	0	**7**
12:00 PM	1	9	3	0	0	0	0	0	0	0	0	0	0	**13**
1:00 PM	0	10	2	0	0	0	0	0	0	0	0	0	0	**12**
2:00 PM	1	6	5	0	0	0	0	0	0	0	0	0	0	**12**
3:00 PM	0	8	2	0	1	0	0	0	1	0	0	0	0	**12**
4:00 PM	0	13	7	0	2	0	0	0	0	0	0	0	0	**22**
5:00 PM	0	7	1	0	0	0	0	0	0	0	0	0	0	**8**
6:00 PM	0	5	4	0	1	0	0	0	0	0	0	0	0	**10**
7:00 PM	0	10	4	0	1	0	0	0	0	0	0	0	0	**15**
8:00 PM	0	6	2	0	1	0	0	0	0	0	0	0	0	**9**
9:00 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	**2**
10:00 PM	0	2	2	0	0	0	0	0	0	0	0	0	0	**4**
11:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
Total	**2**	**105**	**51**	**0**	**8**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**167**
Percent	**1.2%**	**62.9%**	**30.5%**	**0.0%**	**4.8%**	**0.0%**	**0.0%**	**0.0%**	**0.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Monday, November 7, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
6:00 AM	0	5	3	0	3	0	0	0	0	0	0	0	0	11
7:00 AM	1	6	2	0	0	0	0	0	0	0	0	0	0	9
8:00 AM	0	9	3	0	0	0	0	0	0	0	0	0	0	12
9:00 AM	1	15	3	0	1	0	0	0	0	0	0	0	0	20
10:00 AM	0	10	6	0	2	0	0	0	0	0	0	0	0	18
11:00 AM	0	18	5	0	2	0	0	0	0	0	0	0	0	25
12:00 PM	0	9	0	0	1	0	0	0	0	0	0	0	0	10
1:00 PM	0	7	1	0	2	0	0	0	0	0	0	0	0	10
2:00 PM	0	16	3	0	2	0	0	0	0	0	0	0	0	21
3:00 PM	0	4	1	0	1	0	0	0	0	0	0	0	0	6
4:00 PM	0	8	4	0	3	0	0	0	0	0	0	0	0	15
5:00 PM	1	5	3	0	0	0	0	0	0	0	0	0	0	9
6:00 PM	0	1	2	0	0	0	0	0	0	0	0	0	0	3
7:00 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
8:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
9:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
10:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
11:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	**4**	**126**	**36**	**0**	**17**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**183**
Percent	**2.2%**	**68.9%**	**19.7%**	**0.0%**	**9.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Monday, November 7, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
6:00 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	2
7:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	2
8:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	2
9:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	5
10:00 AM	0	2	5	0	2	0	0	0	0	0	0	0	0	9
11:00 AM	0	12	7	0	0	0	0	0	0	0	0	0	0	19
12:00 PM	0	8	3	0	2	0	0	0	0	0	0	0	0	13
1:00 PM	0	14	3	0	1	0	0	0	0	0	0	0	0	18
2:00 PM	0	14	5	0	1	0	0	0	0	0	0	0	0	20
3:00 PM	0	12	2	0	2	0	0	0	0	0	0	0	0	16
4:00 PM	1	15	5	0	3	0	0	0	0	0	0	0	0	24
5:00 PM	0	8	2	0	0	0	0	0	0	0	0	0	0	10
6:00 PM	1	14	2	0	0	0	0	0	0	0	0	0	0	17
7:00 PM	0	9	2	0	2	0	0	0	0	0	0	0	0	13
8:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
9:00 PM	0	2	0	0	1	0	0	0	0	0	0	0	0	3
10:00 PM	0	2	4	0	0	0	0	0	0	0	0	0	0	6
11:00 PM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
Total	**2**	**127**	**45**	**0**	**15**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**190**
Percent	**1.1%**	**66.8%**	**23.7%**	**0.0%**	**7.9%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Tuesday, November 8, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	**4**
6:00 AM	0	4	2	0	0	0	0	0	0	0	0	0	0	**6**
7:00 AM	1	3	2	0	0	0	0	0	1	0	0	0	0	**7**
8:00 AM	0	4	0	0	1	1	0	0	0	0	0	0	0	**6**
9:00 AM	0	14	5	0	1	0	0	0	0	0	0	0	0	**20**
10:00 AM	0	10	5	0	3	1	0	0	0	0	0	0	0	**19**
11:00 AM	0	9	6	0	2	0	0	0	0	0	0	0	0	**17**
12:00 PM	0	9	4	0	0	0	0	0	0	0	0	0	0	**13**
1:00 PM	0	12	2	0	1	0	0	0	0	0	0	0	0	**15**
2:00 PM	0	13	5	0	1	0	0	0	1	0	0	0	0	**20**
3:00 PM	0	8	2	0	3	0	0	0	0	0	0	0	0	**13**
4:00 PM	1	4	4	0	0	1	0	0	0	0	0	0	0	**10**
5:00 PM	0	9	1	0	1	0	0	0	0	0	0	0	0	**11**
6:00 PM	0	2	2	0	0	0	0	0	0	0	0	0	0	**4**
7:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
8:00 PM	0	2	2	0	0	0	0	0	0	0	0	0	0	**4**
9:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	**2**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**2**	**107**	**45**	**0**	**15**	**3**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**174**
Percent	**1.1%**	**61.5%**	**25.9%**	**0.0%**	**8.6%**	**1.7%**	**0.0%**	**0.0%**	**1.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Tuesday, November 8, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	**3**
8:00 AM	0	3	1	0	1	0	0	0	1	0	0	0	0	**6**
9:00 AM	0	4	3	0	0	0	0	0	0	0	0	0	0	**7**
10:00 AM	0	6	5	0	1	1	0	0	0	0	0	0	0	**13**
11:00 AM	0	5	4	0	4	0	0	0	0	0	0	0	0	**13**
12:00 PM	0	11	1	0	0	0	0	0	0	0	0	0	0	**12**
1:00 PM	0	13	5	0	0	0	0	0	0	0	0	0	0	**18**
2:00 PM	0	5	6	0	1	0	0	0	0	0	0	0	0	**12**
3:00 PM	1	12	8	0	1	1	0	0	0	0	0	0	0	**23**
4:00 PM	1	7	2	0	2	0	0	0	0	0	0	0	0	**12**
5:00 PM	0	12	4	0	0	0	0	0	1	0	0	0	0	**17**
6:00 PM	0	15	3	0	0	0	0	0	0	0	0	0	0	**18**
7:00 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
8:00 PM	0	2	1	0	3	0	0	0	0	0	0	0	0	**6**
9:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
10:00 PM	0	2	3	0	0	0	0	0	0	0	0	0	0	**5**
11:00 PM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
Total	**2**	**111**	**50**	**0**	**13**	**2**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**180**
Percent	**1.1%**	**61.7%**	**27.8%**	**0.0%**	**7.2%**	**1.1%**	**0.0%**	**0.0%**	**1.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Wednesday, November 9, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	1	2	0	1	0	0	0	0	0	0	0	0	**4**
6:00 AM	0	4	1	0	2	0	0	0	0	0	0	0	0	**7**
7:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
8:00 AM	0	9	3	0	0	0	0	0	0	0	0	0	0	**12**
9:00 AM	0	13	4	0	1	1	0	0	0	0	0	0	0	**19**
10:00 AM	0	12	9	0	3	1	0	0	0	0	0	0	0	**25**
11:00 AM	0	6	4	0	3	0	0	0	0	0	0	0	0	**13**
12:00 PM	0	10	5	0	1	0	0	0	0	0	0	0	0	**16**
1:00 PM	1	11	2	0	2	0	0	0	0	0	0	0	0	**16**
2:00 PM	0	18	3	0	2	0	0	0	0	0	0	0	0	**23**
3:00 PM	0	13	6	0	1	0	0	0	0	0	0	0	0	**20**
4:00 PM	0	5	4	0	2	0	0	0	0	0	0	0	0	**11**
5:00 PM	0	4	1	0	1	0	0	0	0	0	0	0	0	**6**
6:00 PM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
7:00 PM	0	4	2	0	0	0	0	0	0	0	0	0	0	**6**
8:00 PM	0	2	2	0	0	0	0	0	0	0	0	0	0	**4**
9:00 PM	0	2	0	0	1	0	0	0	0	0	0	0	0	**3**
10:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
11:00 PM	0	0	2	0	1	0	0	0	0	0	0	0	0	**3**
Total	**2**	**125**	**53**	**0**	**21**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**203**
Percent	**1.0%**	**61.6%**	**26.1%**	**0.0%**	**10.3%**	**1.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Wednesday, November 9, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
7:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
8:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	**2**
9:00 AM	0	4	2	0	3	0	0	0	0	0	0	0	0	**9**
10:00 AM	0	5	5	0	1	1	0	0	0	0	0	0	0	**12**
11:00 AM	0	1	6	0	2	1	0	0	0	0	0	0	0	**10**
12:00 PM	0	13	7	0	2	0	0	0	0	0	0	0	0	**22**
1:00 PM	0	9	0	0	1	0	0	0	0	0	0	0	0	**10**
2:00 PM	0	11	8	0	1	0	0	0	0	0	0	0	0	**20**
3:00 PM	0	12	11	0	3	0	0	0	0	0	0	0	0	**26**
4:00 PM	0	11	3	0	2	0	0	0	0	0	0	0	0	**16**
5:00 PM	0	15	1	0	1	0	0	0	0	0	0	0	0	**17**
6:00 PM	0	13	1	0	0	0	0	0	0	0	0	0	0	**14**
7:00 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
8:00 PM	0	2	2	0	0	0	0	0	0	0	0	0	0	**4**
9:00 PM	0	2	2	0	0	0	0	0	0	0	0	0	0	**4**
10:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
11:00 PM	0	1	6	0	1	0	0	0	0	0	0	0	0	**8**
Total	**0**	**109**	**59**	**0**	**17**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**187**
Percent	**0.0%**	**58.3%**	**31.6%**	**0.0%**	**9.1%**	**1.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Total Study Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
6:00 AM	0	5	1	0	1	0	0	0	0	0	0	0	0	**7**
7:00 AM	0	5	2	0	0	0	0	0	0	0	0	0	0	**7**
8:00 AM	0	8	2	0	0	0	0	0	0	0	0	0	0	**10**
9:00 AM	0	12	3	0	1	0	0	0	0	0	0	0	0	**16**
10:00 AM	0	10	5	0	2	1	0	0	0	0	0	0	0	**18**
11:00 AM	0	11	4	0	2	0	0	0	0	0	0	0	0	**17**
12:00 PM	0	11	3	0	1	0	0	0	0	0	0	0	0	**15**
1:00 PM	0	13	3	0	1	0	0	0	0	0	0	0	0	**17**
2:00 PM	0	13	4	0	1	0	0	0	0	0	0	0	0	**18**
3:00 PM	0	8	3	0	1	0	0	0	0	0	0	0	0	**12**
4:00 PM	0	9	3	0	2	0	0	0	0	0	0	0	0	**14**
5:00 PM	0	6	2	0	0	0	0	0	0	0	0	0	0	**8**
6:00 PM	0	3	2	0	1	0	0	0	0	0	0	0	0	**6**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
9:00 PM	0	2	1	0	1	0	0	0	0	0	0	0	0	**4**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**0**	**122**	**41**	**0**	**14**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**178**
Percent	**0.0%**	**68.5%**	**23.0%**	**0.0%**	**7.9%**	**0.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Deon Fouche: (415) 757-7714
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Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Total Study Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
7:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
8:00 AM	0	3	2	0	0	0	0	0	0	0	0	0	0	**5**
9:00 AM	0	6	1	0	1	0	0	0	0	0	0	0	0	**8**
10:00 AM	0	6	4	0	1	0	0	0	0	0	0	0	0	**11**
11:00 AM	0	6	5	0	1	0	0	0	0	0	0	0	0	**12**
12:00 PM	0	12	4	0	1	0	0	0	0	0	0	0	0	**17**
1:00 PM	0	13	3	0	1	0	0	0	0	0	0	0	0	**17**
2:00 PM	0	10	6	0	1	0	0	0	0	0	0	0	0	**17**
3:00 PM	0	12	5	0	1	0	0	0	0	0	0	0	0	**18**
4:00 PM	0	11	3	0	2	0	0	0	0	0	0	0	0	**16**
5:00 PM	0	12	2	0	0	0	0	0	0	0	0	0	0	**14**
6:00 PM	0	8	2	0	1	0	0	0	0	0	0	0	0	**11**
7:00 PM	0	6	2	0	1	0	0	0	0	0	0	0	0	**9**
8:00 PM	0	2	1	0	1	0	0	0	0	0	0	0	0	**4**
9:00 PM	0	3	2	0	1	0	0	0	0	0	0	0	0	**6**
10:00 PM	0	2	2	0	0	0	0	0	0	0	0	0	0	**4**
11:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
Total	**0**	**118**	**48**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**179**
Percent	**0.0%**	**65.9%**	**26.8%**	**0.0%**	**7.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

3-Day (Tuesday - Thursday) Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	**4**
6:00 AM	0	4	2	0	0	0	0	0	0	0	0	0	0	**6**
7:00 AM	1	3	2	0	0	0	0	0	1	0	0	0	0	**7**
8:00 AM	0	4	0	0	1	1	0	0	0	0	0	0	0	**6**
9:00 AM	0	14	5	0	1	0	0	0	0	0	0	0	0	**20**
10:00 AM	0	10	5	0	3	1	0	0	0	0	0	0	0	**19**
11:00 AM	0	9	6	0	2	0	0	0	0	0	0	0	0	**17**
12:00 PM	0	9	4	0	0	0	0	0	0	0	0	0	0	**13**
1:00 PM	0	12	2	0	1	0	0	0	0	0	0	0	0	**15**
2:00 PM	0	13	5	0	1	0	0	0	1	0	0	0	0	**20**
3:00 PM	0	8	2	0	3	0	0	0	0	0	0	0	0	**13**
4:00 PM	1	4	4	0	0	1	0	0	0	0	0	0	0	**10**
5:00 PM	0	9	1	0	1	0	0	0	0	0	0	0	0	**11**
6:00 PM	0	2	2	0	0	0	0	0	0	0	0	0	0	**4**
7:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
8:00 PM	0	2	2	0	0	0	0	0	0	0	0	0	0	**4**
9:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	**2**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**2**	**107**	**45**	**0**	**15**	**3**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**174**
Percent	**1.1%**	**61.5%**	**25.9%**	**0.0%**	**8.6%**	**1.7%**	**0.0%**	**0.0%**	**1.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

3-Day (Tuesday - Thursday) Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	**3**
8:00 AM	0	3	1	0	1	0	0	0	1	0	0	0	0	**6**
9:00 AM	0	4	3	0	0	0	0	0	0	0	0	0	0	**7**
10:00 AM	0	6	5	0	1	1	0	0	0	0	0	0	0	**13**
11:00 AM	0	5	4	0	4	0	0	0	0	0	0	0	0	**13**
12:00 PM	0	11	1	0	0	0	0	0	0	0	0	0	0	**12**
1:00 PM	0	13	5	0	0	0	0	0	0	0	0	0	0	**18**
2:00 PM	0	5	6	0	1	0	0	0	0	0	0	0	0	**12**
3:00 PM	1	12	8	0	1	1	0	0	0	0	0	0	0	**23**
4:00 PM	1	7	2	0	2	0	0	0	0	0	0	0	0	**12**
5:00 PM	0	12	4	0	0	0	0	0	1	0	0	0	0	**17**
6:00 PM	0	15	3	0	0	0	0	0	0	0	0	0	0	**18**
7:00 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
8:00 PM	0	2	1	0	3	0	0	0	0	0	0	0	0	**6**
9:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
10:00 PM	0	2	3	0	0	0	0	0	0	0	0	0	0	**5**
11:00 PM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
Total	**2**	**111**	**50**	**0**	**13**	**2**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**180**
Percent	**1.1%**	**61.7%**	**27.8%**	**0.0%**	**7.2%**	**1.1%**	**0.0%**	**0.0%**	**1.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Vehicle Speed Report Summary

Location: Skypark Dr at Airport Access
Count Direction: Northbound / Southbound
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

	Speed Range (mph)																	Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
Study Total																		
Northbound	15	145	340	526	260	41	1	0	3	0	0	0	0	0	0	0	0	1,331
Percent	1.1%	10.9%	25.5%	39.5%	19.5%	3.1%	0.1%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	15	132	503	537	106	14	1	1	0	0	0	0	0	0	0	0	0	1,309
Percent	1.1%	10.1%	38.4%	41.0%	8.1%	1.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	30	277	843	1,063	366	55	2	1	3	0	0	0	0	0	0	0	0	2,640
Percent	1.1%	10.5%	31.9%	40.3%	13.9%	2.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Northbound			**Northbound**		
50th Percentile (Median)	21.5	mph	Mean (Average) Speed	21.3	mph
85th Percentile	26.2	mph	10 mph Pace	16.9 - 26.9	mph
95th Percentile	29.1	mph	Percent in Pace	67.5	%
Southbound			**Southbound**		
50th Percentile (Median)	19.9	mph	Mean (Average) Speed	19.9	mph
85th Percentile	23.9	mph	10 mph Pace	14.9 - 24.9	mph
95th Percentile	26.1	mph	Percent in Pace	79.7	%

Deon Fouche: (415) 757-7714
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Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Thursday, November 3, 2016
Northbound

	Speed Range (mph)																	Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	0	1	6	4	0	0	0	0	0	0	0	0	0	0	0	0	**11**
6:00 AM	0	0	1	1	4	0	0	0	0	0	0	0	0	0	0	0	0	**6**
7:00 AM	0	0	0	5	1	1	0	0	0	0	0	0	0	0	0	0	0	**7**
8:00 AM	0	0	7	7	2	0	0	0	0	0	0	0	0	0	0	0	0	**16**
9:00 AM	0	1	4	6	5	0	0	0	0	0	0	0	0	0	0	0	0	**16**
10:00 AM	1	2	1	5	6	1	0	0	0	0	0	0	0	0	0	0	0	**16**
11:00 AM	0	0	4	8	6	1	0	0	0	0	0	0	0	0	0	0	0	**19**
12:00 PM	0	2	6	2	4	0	0	0	3	0	0	0	0	0	0	0	0	**17**
1:00 PM	0	2	4	9	3	1	0	0	0	0	0	0	0	0	0	0	0	**19**
2:00 PM	0	1	2	5	1	1	0	0	0	0	0	0	0	0	0	0	0	**10**
3:00 PM	1	0	0	5	4	1	0	0	0	0	0	0	0	0	0	0	0	**11**
4:00 PM	0	1	3	5	4	0	0	0	0	0	0	0	0	0	0	0	0	**13**
5:00 PM	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**5**
6:00 PM	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
7:00 PM	0	1	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
8:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
9:00 PM	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	**5**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**2**	**12**	**41**	**78**	**47**	**8**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**191**
Percent	**1.0%**	**6.3%**	**21.5%**	**40.8%**	**24.6%**	**4.2%**	**0.0%**	**0.0%**	**1.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	22.9	mph	Mean (Average) Speed	22.6	mph
85th Percentile	27.2	mph	10 mph Pace	16.8 - 26.8	mph
95th Percentile	30.3	mph	Percent in Pace	71.2	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Thursday, November 3, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3
6:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:00 AM	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
8:00 AM	0	2	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	8
9:00 AM	0	1	5	4	3	0	0	0	0	0	0	0	0	0	0	0	0	13
10:00 AM	0	0	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0	8
11:00 AM	0	1	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	9
12:00 PM	1	2	4	12	0	0	0	0	0	0	0	0	0	0	0	0	0	19
1:00 PM	0	2	2	9	2	0	0	0	0	0	0	0	0	0	0	0	0	15
2:00 PM	0	0	7	8	2	1	0	0	0	0	0	0	0	0	0	0	0	18
3:00 PM	0	1	4	8	3	0	0	0	0	0	0	0	0	0	0	0	0	16
4:00 PM	0	0	7	8	1	1	0	0	0	0	0	0	0	0	0	0	0	17
5:00 PM	0	0	12	6	4	0	0	0	0	0	0	0	0	0	0	0	0	22
6:00 PM	0	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6
7:00 PM	0	1	5	4	1	0	0	0	0	0	0	0	0	0	0	0	0	11
8:00 PM	0	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5
9:00 PM	0	0	5	10	2	0	0	0	0	0	0	0	0	0	0	0	0	17
10:00 PM	0	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5
11:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	**1**	**14**	**69**	**94**	**22**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**203**
Percent	**0.5%**	**6.9%**	**34.0%**	**46.3%**	**10.8%**	**1.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	20.6	mph	Mean (Average) Speed	20.7	mph
85th Percentile	24.4	mph	10 mph Pace	16.1 - 26.1	mph
95th Percentile	26.8	mph	Percent in Pace	84.2	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Friday, November 4, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	0	0	0	3	1	2	0	0	0	0	0	0	0	0	0	0	0	6
6:00 AM	0	0	0	3	1	1	0	0	0	0	0	0	0	0	0	0	0	5
7:00 AM	0	0	3	4	1	0	0	0	0	0	0	0	0	0	0	0	0	8
8:00 AM	0	0	2	4	3	2	0	0	0	0	0	0	0	0	0	0	0	11
9:00 AM	0	2	6	9	5	1	0	0	0	0	0	0	0	0	0	0	0	23
10:00 AM	2	2	5	6	5	1	0	0	0	0	0	0	0	0	0	0	0	21
11:00 AM	0	2	10	6	4	0	0	0	0	0	0	0	0	0	0	0	0	22
12:00 PM	1	2	4	14	4	0	0	0	0	0	0	0	0	0	0	0	0	25
1:00 PM	0	1	8	8	6	2	0	0	0	0	0	0	0	0	0	0	0	25
2:00 PM	0	3	9	11	5	0	0	0	0	0	0	0	0	0	0	0	0	28
3:00 PM	0	1	3	4	3	0	0	0	0	0	0	0	0	0	0	0	0	11
4:00 PM	0	2	4	14	3	0	0	0	0	0	0	0	0	0	0	0	0	23
5:00 PM	0	0	3	6	4	1	0	0	0	0	0	0	0	0	0	0	0	14
6:00 PM	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	4
7:00 PM	0	1	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	5
8:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
9:00 PM	0	0	1	3	1	1	0	0	0	0	0	0	0	0	0	0	0	6
10:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	**3**	**18**	**61**	**100**	**50**	**13**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**245**
Percent	**1.2%**	**7.3%**	**24.9%**	**40.8%**	**20.4%**	**5.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	22.1	mph	Mean (Average) Speed	21.9	mph
85th Percentile	26.7	mph	10 mph Pace	16.3 - 26.3	mph
95th Percentile	30.2	mph	Percent in Pace	69.8	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Friday, November 4, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
8:00 AM	0	0	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**7**
9:00 AM	0	2	1	3	2	1	0	0	0	0	0	0	0	0	0	0	0	**9**
10:00 AM	0	1	7	7	1	0	0	0	0	0	0	0	0	0	0	0	0	**16**
11:00 AM	0	4	6	7	1	0	0	0	0	0	0	0	0	0	0	0	0	**18**
12:00 PM	1	3	13	9	2	0	0	0	0	0	0	0	0	0	0	0	0	**28**
1:00 PM	0	0	11	16	0	0	0	0	0	0	0	0	0	0	0	0	0	**27**
2:00 PM	0	1	7	11	1	0	0	0	0	0	0	0	0	0	0	0	0	**20**
3:00 PM	0	1	8	8	2	2	0	0	0	0	0	0	0	0	0	0	0	**21**
4:00 PM	0	0	9	6	0	0	0	0	0	0	0	0	0	0	0	0	0	**15**
5:00 PM	0	0	13	10	3	0	0	0	0	0	0	0	0	0	0	0	0	**26**
6:00 PM	0	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**5**
7:00 PM	0	1	7	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**11**
8:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
9:00 PM	0	0	2	4	3	0	0	0	0	0	0	0	0	0	0	0	0	**9**
10:00 PM	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
11:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**1**	**14**	**95**	**93**	**19**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**225**
Percent	**0.4%**	**6.2%**	**42.2%**	**41.3%**	**8.4%**	**1.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	20.0	mph	Mean (Average) Speed	20.3	mph
85th Percentile	24.1	mph	10 mph Pace	15.9 - 25.9	mph
95th Percentile	26.1	mph	Percent in Pace	85.3	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Saturday, November 5, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	**4**
5:00 AM	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	1	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	**5**
7:00 AM	0	1	4	6	0	0	1	0	0	0	0	0	0	0	0	0	0	**12**
8:00 AM	0	1	3	5	3	0	0	0	0	0	0	0	0	0	0	0	0	**12**
9:00 AM	0	3	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	**9**
10:00 AM	2	0	5	7	2	0	0	0	0	0	0	0	0	0	0	0	0	**16**
11:00 AM	0	3	2	5	2	0	0	0	0	0	0	0	0	0	0	0	0	**12**
12:00 PM	2	1	4	8	3	0	0	0	0	0	0	0	0	0	0	0	0	**18**
1:00 PM	0	4	6	6	4	0	0	0	0	0	0	0	0	0	0	0	0	**20**
2:00 PM	0	4	3	8	3	0	0	0	0	0	0	0	0	0	0	0	0	**18**
3:00 PM	0	2	2	4	1	0	0	0	0	0	0	0	0	0	0	0	0	**9**
4:00 PM	0	3	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
5:00 PM	0	1	3	3	2	1	0	0	0	0	0	0	0	0	0	0	0	**10**
6:00 PM	0	2	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**7**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
9:00 PM	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	**6**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**4**	**26**	**43**	**67**	**29**	**4**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**174**
Percent	**2.3%**	**14.9%**	**24.7%**	**38.5%**	**16.7%**	**2.3%**	**0.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	21.0	mph	Mean (Average) Speed	20.5	mph
85th Percentile	26.4	mph	10 mph Pace	14.7 - 24.7	mph
95th Percentile	28.7	mph	Percent in Pace	64.9	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Saturday, November 5, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
6:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:00 AM	0	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6
8:00 AM	0	0	2	4	1	0	0	0	0	0	0	0	0	0	0	0	0	7
9:00 AM	0	1	4	2	0	0	0	1	0	0	0	0	0	0	0	0	0	8
10:00 AM	0	1	3	5	1	0	0	0	0	0	0	0	0	0	0	0	0	10
11:00 AM	1	1	3	7	1	0	0	0	0	0	0	0	0	0	0	0	0	13
12:00 PM	0	6	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	10
1:00 PM	0	2	7	8	3	0	0	0	0	0	0	0	0	0	0	0	0	20
2:00 PM	0	3	8	7	0	0	0	0	0	0	0	0	0	0	0	0	0	18
3:00 PM	0	4	8	3	0	1	0	0	0	0	0	0	0	0	0	0	0	16
4:00 PM	0	1	5	3	3	1	0	0	0	0	0	0	0	0	0	0	0	13
5:00 PM	0	0	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	7
6:00 PM	0	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	8
7:00 PM	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
8:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
9:00 PM	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	4
10:00 PM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3
11:00 PM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	**1**	**24**	**55**	**61**	**13**	**2**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**157**
Percent	**0.6%**	**15.3%**	**35.0%**	**38.9%**	**8.3%**	**1.3%**	**0.0%**	**0.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.7	mph	Mean (Average) Speed	19.8	mph
85th Percentile	23.9	mph	10 mph Pace	15.2 - 25.2	mph
95th Percentile	26.6	mph	Percent in Pace	75.8	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Sunday, November 6, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	4
6:00 AM	0	0	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	7
7:00 AM	0	0	5	5	1	0	0	0	0	0	0	0	0	0	0	0	0	11
8:00 AM	0	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	7
9:00 AM	0	2	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	8
10:00 AM	0	4	4	2	3	1	0	0	0	0	0	0	0	0	0	0	0	14
11:00 AM	0	4	4	2	2	0	0	0	0	0	0	0	0	0	0	0	0	12
12:00 PM	0	1	1	4	2	0	0	0	0	0	0	0	0	0	0	0	0	8
1:00 PM	2	1	6	9	1	1	0	0	0	0	0	0	0	0	0	0	0	20
2:00 PM	0	2	1	6	2	0	0	0	0	0	0	0	0	0	0	0	0	11
3:00 PM	0	2	3	5	1	0	0	0	0	0	0	0	0	0	0	0	0	11
4:00 PM	0	2	7	7	1	0	0	0	0	0	0	0	0	0	0	0	0	17
5:00 PM	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	4
6:00 PM	1	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	7
7:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 PM	0	2	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	7
9:00 PM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3
10:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	**3**	**26**	**44**	**64**	**20**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**161**
Percent	**1.9%**	**16.1%**	**27.3%**	**39.8%**	**12.4%**	**2.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	20.2	mph	Mean (Average) Speed	20.0	mph
85th Percentile	25.1	mph	10 mph Pace	15.0 - 25.0	mph
95th Percentile	28.4	mph	Percent in Pace	66.5	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Sunday, November 6, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
7:00 AM	0	0	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**6**
8:00 AM	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
9:00 AM	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	**5**
10:00 AM	0	3	2	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**11**
11:00 AM	0	1	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
12:00 PM	1	2	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**13**
1:00 PM	0	2	0	9	1	0	0	0	0	0	0	0	0	0	0	0	0	**12**
2:00 PM	1	0	7	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
3:00 PM	1	1	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
4:00 PM	0	1	11	7	3	0	0	0	0	0	0	0	0	0	0	0	0	**22**
5:00 PM	0	0	4	3	0	1	0	0	0	0	0	0	0	0	0	0	0	**8**
6:00 PM	0	2	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**10**
7:00 PM	0	1	2	11	1	0	0	0	0	0	0	0	0	0	0	0	0	**15**
8:00 PM	0	1	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
9:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
10:00 PM	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
11:00 PM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
Total	**4**	**18**	**65**	**67**	**12**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**167**
Percent	**2.4%**	**10.8%**	**38.9%**	**40.1%**	**7.2%**	**0.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.5	mph	Mean (Average) Speed	19.5	mph
85th Percentile	23.4	mph	10 mph Pace	13.9 - 23.9	mph
95th Percentile	25.7	mph	Percent in Pace	79.6	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Monday, November 7, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	1	1	5	3	1	0	0	0	0	0	0	0	0	0	0	0	**11**
7:00 AM	0	0	1	3	4	1	0	0	0	0	0	0	0	0	0	0	0	**9**
8:00 AM	0	0	1	8	3	0	0	0	0	0	0	0	0	0	0	0	0	**12**
9:00 AM	0	1	2	9	8	0	0	0	0	0	0	0	0	0	0	0	0	**20**
10:00 AM	0	3	5	8	2	0	0	0	0	0	0	0	0	0	0	0	0	**18**
11:00 AM	1	1	9	8	6	0	0	0	0	0	0	0	0	0	0	0	0	**25**
12:00 PM	0	0	6	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
1:00 PM	0	0	3	7	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
2:00 PM	0	1	6	8	6	0	0	0	0	0	0	0	0	0	0	0	0	**21**
3:00 PM	0	0	0	4	1	1	0	0	0	0	0	0	0	0	0	0	0	**6**
4:00 PM	0	6	4	4	1	0	0	0	0	0	0	0	0	0	0	0	0	**15**
5:00 PM	0	0	4	2	3	0	0	0	0	0	0	0	0	0	0	0	0	**9**
6:00 PM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
7:00 PM	0	0	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0	**4**
8:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
9:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
10:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
11:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**1**	**15**	**49**	**76**	**37**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**183**
Percent	**0.5%**	**8.2%**	**26.8%**	**41.5%**	**20.2%**	**2.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	21.7	mph	Mean (Average) Speed	21.6	mph
85th Percentile	26.0	mph	10 mph Pace	17.1 - 27.1	mph
95th Percentile	29.1	mph	Percent in Pace	72.1	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Monday, November 7, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
7:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
8:00 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	**2**
9:00 AM	0	0	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**5**
10:00 AM	0	1	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
11:00 AM	0	1	6	9	3	0	0	0	0	0	0	0	0	0	0	0	0	**19**
12:00 PM	0	2	7	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**13**
1:00 PM	1	5	4	7	1	0	0	0	0	0	0	0	0	0	0	0	0	**18**
2:00 PM	0	1	6	10	3	0	0	0	0	0	0	0	0	0	0	0	0	**20**
3:00 PM	0	1	6	8	1	0	0	0	0	0	0	0	0	0	0	0	0	**16**
4:00 PM	0	3	8	9	2	1	1	0	0	0	0	0	0	0	0	0	0	**24**
5:00 PM	0	1	3	4	2	0	0	0	0	0	0	0	0	0	0	0	0	**10**
6:00 PM	1	1	9	6	0	0	0	0	0	0	0	0	0	0	0	0	0	**17**
7:00 PM	0	0	3	9	1	0	0	0	0	0	0	0	0	0	0	0	0	**13**
8:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
9:00 PM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
10:00 PM	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
11:00 PM	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
Total	**2**	**19**	**68**	**82**	**16**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**190**
Percent	**1.1%**	**10.0%**	**35.8%**	**43.2%**	**8.4%**	**1.1%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	20.1	mph	Mean (Average) Speed	20.2	mph
85th Percentile	24.0	mph	10 mph Pace	14.3 - 24.3	mph
95th Percentile	26.5	mph	Percent in Pace	78.9	%

Deon Fouche: (415) 757-7714
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Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Tuesday, November 8, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	**4**
6:00 AM	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	**6**
7:00 AM	0	2	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	**7**
8:00 AM	0	1	0	3	1	1	0	0	0	0	0	0	0	0	0	0	0	**6**
9:00 AM	0	0	5	8	7	0	0	0	0	0	0	0	0	0	0	0	0	**20**
10:00 AM	1	2	3	10	3	0	0	0	0	0	0	0	0	0	0	0	0	**19**
11:00 AM	0	2	6	5	4	0	0	0	0	0	0	0	0	0	0	0	0	**17**
12:00 PM	0	0	6	6	1	0	0	0	0	0	0	0	0	0	0	0	0	**13**
1:00 PM	0	0	2	10	3	0	0	0	0	0	0	0	0	0	0	0	0	**15**
2:00 PM	0	1	5	7	7	0	0	0	0	0	0	0	0	0	0	0	0	**20**
3:00 PM	0	2	4	4	2	1	0	0	0	0	0	0	0	0	0	0	0	**13**
4:00 PM	0	2	2	4	2	0	0	0	0	0	0	0	0	0	0	0	0	**10**
5:00 PM	0	0	2	5	3	1	0	0	0	0	0	0	0	0	0	0	0	**11**
6:00 PM	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**4**
7:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
8:00 PM	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
9:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**1**	**14**	**43**	**72**	**40**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**174**
Percent	**0.6%**	**8.0%**	**24.7%**	**41.4%**	**23.0%**	**2.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	22.1	mph	Mean (Average) Speed	21.7	mph
85th Percentile	26.4	mph	10 mph Pace	16.7 - 26.7	mph
95th Percentile	28.8	mph	Percent in Pace	73.0	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Tuesday, November 8, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 AM	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
8:00 AM	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**6**
9:00 AM	0	0	2	4	1	0	0	0	0	0	0	0	0	0	0	0	0	**7**
10:00 AM	1	2	4	6	0	0	0	0	0	0	0	0	0	0	0	0	0	**13**
11:00 AM	0	2	6	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**13**
12:00 PM	0	0	5	6	1	0	0	0	0	0	0	0	0	0	0	0	0	**12**
1:00 PM	0	1	9	5	3	0	0	0	0	0	0	0	0	0	0	0	0	**18**
2:00 PM	0	1	7	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
3:00 PM	1	2	9	9	2	0	0	0	0	0	0	0	0	0	0	0	0	**23**
4:00 PM	0	1	5	5	0	1	0	0	0	0	0	0	0	0	0	0	0	**12**
5:00 PM	1	2	6	3	4	1	0	0	0	0	0	0	0	0	0	0	0	**17**
6:00 PM	0	2	8	7	1	0	0	0	0	0	0	0	0	0	0	0	0	**18**
7:00 PM	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
8:00 PM	0	1	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
9:00 PM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
10:00 PM	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
11:00 PM	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
Total	**4**	**19**	**71**	**69**	**15**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**180**
Percent	**2.2%**	**10.6%**	**39.4%**	**38.3%**	**8.3%**	**1.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.7	mph	Mean (Average) Speed	19.6	mph
85th Percentile	23.7	mph	10 mph Pace	14.8 - 24.8	mph
95th Percentile	26.0	mph	Percent in Pace	79.4	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Wednesday, November 9, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**4**
6:00 AM	0	0	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	**7**
7:00 AM	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
8:00 AM	0	0	2	4	5	1	0	0	0	0	0	0	0	0	0	0	0	**12**
9:00 AM	0	4	2	9	4	0	0	0	0	0	0	0	0	0	0	0	0	**19**
10:00 AM	1	1	5	10	8	0	0	0	0	0	0	0	0	0	0	0	0	**25**
11:00 AM	0	1	4	5	3	0	0	0	0	0	0	0	0	0	0	0	0	**13**
12:00 PM	0	1	8	5	2	0	0	0	0	0	0	0	0	0	0	0	0	**16**
1:00 PM	0	5	6	4	1	0	0	0	0	0	0	0	0	0	0	0	0	**16**
2:00 PM	0	16	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**23**
3:00 PM	0	3	11	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**20**
4:00 PM	0	0	3	6	1	1	0	0	0	0	0	0	0	0	0	0	0	**11**
5:00 PM	0	0	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**6**
6:00 PM	0	0	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**6**
7:00 PM	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	**6**
8:00 PM	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	**4**
9:00 PM	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
10:00 PM	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
11:00 PM	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
Total	**1**	**34**	**59**	**69**	**37**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**203**
Percent	**0.5%**	**16.7%**	**29.1%**	**34.0%**	**18.2%**	**1.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	20.5	mph	Mean (Average) Speed	20.4	mph
85th Percentile	25.9	mph	10 mph Pace	16.6 - 26.6	mph
95th Percentile	28.4	mph	Percent in Pace	66.5	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Wednesday, November 9, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
7:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
8:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
9:00 AM	0	0	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
10:00 AM	0	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
11:00 AM	0	2	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
12:00 PM	0	1	5	15	1	0	0	0	0	0	0	0	0	0	0	0	0	**22**
1:00 PM	0	3	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
2:00 PM	2	4	9	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**20**
3:00 PM	0	4	20	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**26**
4:00 PM	0	0	9	7	0	0	0	0	0	0	0	0	0	0	0	0	0	**16**
5:00 PM	0	2	4	8	2	1	0	0	0	0	0	0	0	0	0	0	0	**17**
6:00 PM	0	1	6	6	1	0	0	0	0	0	0	0	0	0	0	0	0	**14**
7:00 PM	0	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**5**
8:00 PM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
9:00 PM	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	**4**
10:00 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
11:00 PM	0	1	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**8**
Total	**2**	**24**	**80**	**71**	**9**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**187**
Percent	**1.1%**	**12.8%**	**42.8%**	**38.0%**	**4.8%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.1	mph	Mean (Average) Speed	19.1	mph
85th Percentile	23.5	mph	10 mph Pace	14.8 - 24.8	mph
95th Percentile	24.9	mph	Percent in Pace	81.8	%

Deon Fouche: (415) 757-7714
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Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Total Study Average
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	0	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	**5**
6:00 AM	0	0	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	**6**
7:00 AM	0	0	2	4	1	0	0	0	0	0	0	0	0	0	0	0	0	**7**
8:00 AM	0	0	3	5	2	1	0	0	0	0	0	0	0	0	0	0	0	**11**
9:00 AM	0	2	3	7	5	0	0	0	0	0	0	0	0	0	0	0	0	**17**
10:00 AM	1	2	4	7	4	0	0	0	0	0	0	0	0	0	0	0	0	**18**
11:00 AM	0	2	6	6	4	0	0	0	0	0	0	0	0	0	0	0	0	**18**
12:00 PM	0	1	5	6	2	0	0	0	0	0	0	0	0	0	0	0	0	**14**
1:00 PM	0	2	5	8	3	1	0	0	0	0	0	0	0	0	0	0	0	**19**
2:00 PM	0	4	5	7	3	0	0	0	0	0	0	0	0	0	0	0	0	**19**
3:00 PM	0	1	3	4	2	0	0	0	0	0	0	0	0	0	0	0	0	**10**
4:00 PM	0	2	4	6	2	0	0	0	0	0	0	0	0	0	0	0	0	**14**
5:00 PM	0	0	2	3	2	0	0	0	0	0	0	0	0	0	0	0	0	**7**
6:00 PM	0	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**6**
7:00 PM	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**4**
8:00 PM	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
9:00 PM	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
10:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
11:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**1**	**19**	**49**	**76**	**37**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**186**
Percent	**0.5%**	**10.2%**	**26.3%**	**40.9%**	**19.9%**	**2.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	21.5	mph	Mean (Average) Speed	21.3	mph
85th Percentile	26.2	mph	10 mph Pace	16.9 - 26.9	mph
95th Percentile	29.1	mph	Percent in Pace	67.5	%

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Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 09

Total Study Average
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
7:00 AM	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**4**
8:00 AM	0	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**6**
9:00 AM	0	1	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**8**
10:00 AM	0	2	4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
11:00 AM	0	2	5	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**13**
12:00 PM	0	2	6	7	1	0	0	0	0	0	0	0	0	0	0	0	0	**16**
1:00 PM	0	2	5	8	1	0	0	0	0	0	0	0	0	0	0	0	0	**16**
2:00 PM	0	1	7	7	1	0	0	0	0	0	0	0	0	0	0	0	0	**16**
3:00 PM	0	2	9	6	1	0	0	0	0	0	0	0	0	0	0	0	0	**18**
4:00 PM	0	1	8	6	1	1	0	0	0	0	0	0	0	0	0	0	0	**17**
5:00 PM	0	1	6	5	2	0	0	0	0	0	0	0	0	0	0	0	0	**14**
6:00 PM	0	1	5	4	1	0	0	0	0	0	0	0	0	0	0	0	0	**11**
7:00 PM	0	1	3	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**10**
8:00 PM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
9:00 PM	0	0	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**6**
10:00 PM	0	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
11:00 PM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
Total	**0**	**18**	**72**	**77**	**14**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**182**
Percent	**0.0%**	**9.9%**	**39.6%**	**42.3%**	**7.7%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	19.9	mph	Mean (Average) Speed	19.9	mph
85th Percentile	23.9	mph	10 mph Pace	14.9 - 24.9	mph
95th Percentile	26.1	mph	Percent in Pace	79.7	%

Deon Fouche: (415) 757-7714
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Location: Skypark Dr at Airport Access
Date Range: 11/3/2016 - 11/9/2016
Site Code: 09

Time	Thursday 11/3/2016			Friday 11/4/2016			Saturday 11/5/2016			Sunday 11/6/2016			Monday 11/7/2016			Tuesday 11/8/2016			Wednesday 11/9/2016			Mid-Week Average		
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	2	1	3	0	0	0	0	1	1	0	0	0	1	2	3	0	2	2	0	1	1	1	1	2
1:00 AM	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	1	0	1	1	1	2	1	1	1
2:00 AM	0	0	0	0	0	0	0	0	0	4	3	7	1	0	1	0	0	0	0	0	0	0	0	0
3:00 AM	1	1	2	0	2	2	0	0	0	1	2	3	0	0	0	0	0	0	1	1	2	1	1	1
4:00 AM	3	1	4	4	1	5	4	0	4	1	2	3	0	0	0	0	0	0	1	0	1	1	0	2
5:00 AM	11	3	14	6	0	6	3	2	5	4	2	6	3	1	4	4	2	6	4	0	4	6	2	8
6:00 AM	6	1	7	5	0	5	5	1	6	7	1	8	11	2	13	6	0	6	7	1	8	6	1	7
7:00 AM	7	5	12	8	2	10	12	6	18	11	6	17	9	2	11	7	3	10	3	2	5	6	3	9
8:00 AM	16	8	24	11	7	18	12	7	19	7	6	13	12	2	14	6	6	12	12	2	14	11	5	17
9:00 AM	16	13	29	23	9	32	9	8	17	8	5	13	20	5	25	20	7	27	19	9	28	18	10	28
10:00 AM	16	8	24	21	16	37	16	10	26	14	11	25	18	9	27	19	13	32	25	12	37	20	11	31
11:00 AM	19	9	28	22	18	40	12	13	25	12	7	19	25	19	44	17	13	30	13	10	23	16	11	27
12:00 PM	17	19	36	25	28	53	18	10	28	8	13	21	10	13	23	13	12	25	16	22	38	15	18	33
1:00 PM	19	15	34	25	27	52	20	20	40	20	12	32	10	18	28	15	18	33	16	10	26	17	14	31
2:00 PM	10	18	28	28	20	48	18	18	36	11	12	23	21	20	41	20	12	32	23	20	43	18	17	34
3:00 PM	11	16	27	11	21	32	9	16	25	11	12	23	6	16	22	13	23	36	20	26	46	15	22	36
4:00 PM	13	17	30	23	15	38	11	13	24	17	22	39	15	24	39	10	12	22	11	16	27	11	15	26
5:00 PM	5	22	27	14	26	40	10	7	17	4	8	12	9	10	19	11	17	28	6	17	23	7	19	26
6:00 PM	6	6	12	4	5	9	7	8	15	7	10	17	3	17	20	4	18	22	6	14	20	5	13	18
7:00 PM	6	11	17	5	11	16	0	4	4	1	15	16	4	13	17	2	4	6	6	5	11	5	7	11
8:00 PM	1	5	6	2	1	3	1	2	3	7	9	16	1	2	3	4	6	10	4	4	8	3	5	8
9:00 PM	5	17	22	6	9	15	6	4	10	3	2	5	1	3	4	2	3	5	3	4	7	3	8	11
10:00 PM	0	5	5	1	6	7	0	3	3	1	4	5	2	6	8	0	5	5	3	2	5	1	4	5
11:00 PM	1	1	2	1	1	2	1	3	4	2	3	5	1	6	7	0	4	4	3	8	11	1	4	6
Total	**191**	**203**	**394**	**245**	**225**	**470**	**174**	**157**	**331**	**161**	**167**	**328**	**183**	**190**	**373**	**174**	**180**	**354**	**203**	**187**	**390**	**189**	**190**	**379**
Percent	**48%**	**52%**	-	**52%**	**48%**	-	**53%**	**47%**	-	**49%**	**51%**	-	**49%**	**51%**	-	**49%**	**51%**	-	**52%**	**48%**	-	**50%**	**50%**	-

1. Mid-week average includes data between Tuesday and Thursday.

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Vehicle Classification Report Summary

Location: Henderson Way at Airport Access
Count Direction: Northbound / Southbound
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

	FHWA Vehicle Classification													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total														
Northbound	5	657	134	0	13	39	0	0	0	1	0	0	0	849
Percent	0.6%	77.4%	15.8%	0.0%	1.5%	4.6%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	100%
Southbound	5	1,444	203	0	105	25	0	0	0	1	0	0	1	1,784
Percent	0.3%	80.9%	11.4%	0.0%	5.9%	1.4%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	100%
Total	10	2,101	337	0	118	64	0	0	0	2	0	0	1	2,633
Percent	0.4%	79.8%	12.8%	0.0%	4.5%	2.4%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

Deon Fouche: (415) 757-7714
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Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Thursday, November 3, 2016
Southbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	7	1	0	0	0	0	0	0	0	0	0	0	**8**
5:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	0	**8**
6:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
7:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	0	**8**
8:00 AM	0	11	4	0	2	0	0	0	0	0	0	0	0	**17**
9:00 AM	0	22	2	0	1	0	0	0	0	0	0	0	0	**25**
10:00 AM	0	22	3	0	2	0	0	0	0	0	0	0	0	**27**
11:00 AM	0	30	5	0	0	3	0	0	0	0	0	0	0	**38**
12:00 PM	0	17	4	0	2	0	0	0	0	0	0	0	0	**23**
1:00 PM	1	22	7	0	1	1	0	0	0	0	0	0	0	**32**
2:00 PM	0	20	3	0	1	0	0	0	0	0	0	0	0	**24**
3:00 PM	0	14	2	0	1	0	0	0	0	0	0	0	0	**17**
4:00 PM	0	13	2	0	1	0	0	0	0	0	0	0	0	**16**
5:00 PM	0	23	0	0	2	0	0	0	0	0	0	0	0	**25**
6:00 PM	0	4	1	0	0	0	0	0	0	0	0	0	0	**5**
7:00 PM	0	6	0	0	0	0	0	0	0	0	0	0	0	**6**
8:00 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
9:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
10:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
11:00 PM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
Total	**1**	**246**	**35**	**0**	**13**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**299**
Percent	**0.3%**	**82.3%**	**11.7%**	**0.0%**	**4.3%**	**1.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Friday, November 4, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
7:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	**2**
8:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	**5**
9:00 AM	0	6	1	0	0	1	0	0	0	0	0	0	0	**8**
10:00 AM	0	12	2	0	0	4	0	0	0	0	0	0	0	**18**
11:00 AM	0	9	3	0	0	0	0	0	0	0	0	0	0	**12**
12:00 PM	0	6	1	0	0	0	0	0	0	0	0	0	0	**7**
1:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
2:00 PM	0	7	0	0	0	0	0	0	0	0	0	0	0	**7**
3:00 PM	0	11	1	0	0	1	0	0	0	0	0	0	0	**13**
4:00 PM	0	7	0	0	0	0	0	0	0	0	0	0	0	**7**
5:00 PM	0	12	0	0	0	0	0	0	0	0	0	0	0	**12**
6:00 PM	0	3	2	0	0	0	0	0	0	0	0	0	0	**5**
7:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
8:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
9:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
10:00 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**0**	**91**	**16**	**0**	**1**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**114**
Percent	**0.0%**	**79.8%**	**14.0%**	**0.0%**	**0.9%**	**5.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Friday, November 4, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	6	0	0	1	0	0	0	0	0	0	0	0	**7**
6:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
7:00 AM	0	4	1	0	2	0	0	0	0	0	0	0	0	**7**
8:00 AM	0	6	1	0	1	0	0	0	0	0	0	0	0	**8**
9:00 AM	0	17	2	0	3	0	0	0	0	0	0	0	0	**22**
10:00 AM	0	31	3	0	2	0	0	0	0	0	0	0	1	**37**
11:00 AM	0	33	7	0	0	0	0	0	0	0	0	0	0	**40**
12:00 PM	0	15	0	0	2	0	0	0	0	0	0	0	0	**17**
1:00 PM	0	12	2	0	0	0	0	0	0	0	0	0	0	**14**
2:00 PM	0	12	0	0	1	0	0	0	0	0	0	0	0	**13**
3:00 PM	0	16	3	0	2	0	0	0	0	0	0	0	0	**21**
4:00 PM	0	15	2	0	1	1	0	0	0	0	0	0	0	**19**
5:00 PM	0	34	2	0	2	0	0	0	0	0	0	0	0	**38**
6:00 PM	0	8	3	0	0	0	0	0	0	0	0	0	0	**11**
7:00 PM	0	6	2	0	0	1	0	0	0	0	0	0	0	**9**
8:00 PM	0	10	2	0	0	0	0	0	0	0	0	0	0	**12**
9:00 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
10:00 PM	0	4	0	0	1	0	0	0	0	0	0	0	0	**5**
11:00 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
Total	**0**	**247**	**31**	**0**	**18**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**299**
Percent	**0.0%**	**82.6%**	**10.4%**	**0.0%**	**6.0%**	**0.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.3%**	

Deon Fouche: (415) 757-7714
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Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Saturday, November 5, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
7:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
8:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
9:00 AM	0	4	0	0	1	0	0	0	0	0	0	0	0	**5**
10:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
11:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
12:00 PM	0	7	0	0	0	1	0	0	0	0	0	0	0	**8**
1:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 PM	0	7	2	0	0	1	0	0	0	0	0	0	0	**10**
3:00 PM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
4:00 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
5:00 PM	0	1	2	0	0	0	0	0	0	0	0	0	0	**3**
6:00 PM	0	2	0	0	0	1	0	0	0	0	0	0	0	**3**
7:00 PM	0	1	1	0	0	1	0	0	0	0	0	0	0	**3**
8:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**0**	**50**	**8**	**0**	**1**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**63**
Percent	**0.0%**	**79.4%**	**12.7%**	**0.0%**	**1.6%**	**6.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Saturday, November 5, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
5:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
6:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
7:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
8:00 AM	0	5	2	0	1	0	0	0	0	0	0	0	0	**8**
9:00 AM	0	10	0	0	1	0	0	0	0	0	0	0	0	**11**
10:00 AM	0	20	0	0	0	0	0	0	0	0	0	0	0	**20**
11:00 AM	1	18	0	0	0	0	0	0	0	0	0	0	0	**19**
12:00 PM	0	15	1	0	2	0	0	0	0	0	0	0	0	**18**
1:00 PM	0	10	2	0	0	1	0	0	0	0	0	0	0	**13**
2:00 PM	0	7	3	0	2	0	0	0	0	0	0	0	0	**12**
3:00 PM	0	15	2	0	1	0	0	0	0	0	0	0	0	**18**
4:00 PM	0	7	0	0	1	0	0	0	0	0	0	0	0	**8**
5:00 PM	0	17	2	0	1	0	0	0	0	0	0	0	0	**20**
6:00 PM	0	8	0	0	0	1	0	0	0	0	0	0	0	**9**
7:00 PM	0	10	2	0	0	0	0	0	0	0	0	0	0	**12**
8:00 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
9:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
10:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
11:00 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
Total	**1**	**171**	**14**	**0**	**9**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**197**
Percent	**0.5%**	**86.8%**	**7.1%**	**0.0%**	**4.6%**	**1.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Sunday, November 6, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
7:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
8:00 AM	0	3	0	0	1	0	0	0	0	0	0	0	0	**4**
9:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
10:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
11:00 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	**9**
12:00 PM	0	10	1	0	0	0	0	0	0	0	0	0	0	**11**
1:00 PM	0	2	2	0	0	0	0	0	0	0	0	0	0	**4**
2:00 PM	0	10	0	0	0	1	0	0	0	0	0	0	0	**11**
3:00 PM	0	7	4	0	0	0	0	0	0	0	0	0	0	**11**
4:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 PM	0	6	1	0	0	1	0	0	0	0	0	0	0	**8**
6:00 PM	0	10	0	0	0	1	0	0	0	0	0	0	0	**11**
7:00 PM	0	4	1	0	0	0	0	0	0	0	0	0	0	**5**
8:00 PM	0	4	2	0	0	0	0	0	0	0	0	0	0	**6**
9:00 PM	0	5	4	0	0	0	0	0	0	0	0	0	0	**9**
10:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
11:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
Total	**0**	**90**	**19**	**0**	**1**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**113**
Percent	**0.0%**	**79.6%**	**16.8%**	**0.0%**	**0.9%**	**2.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Sunday, November 6, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
7:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
8:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
9:00 AM	0	7	0	0	1	0	0	0	0	0	0	0	0	**8**
10:00 AM	0	12	6	0	1	0	0	0	0	0	0	0	0	**19**
11:00 AM	0	20	1	0	0	0	0	0	0	0	0	0	0	**21**
12:00 PM	0	17	1	0	0	0	0	0	0	0	0	0	0	**18**
1:00 PM	0	22	2	0	2	0	0	0	0	0	0	0	0	**26**
2:00 PM	0	10	2	0	0	1	0	0	0	0	0	0	0	**13**
3:00 PM	0	30	5	0	2	4	0	0	0	0	0	0	0	**41**
4:00 PM	0	19	2	0	1	1	0	0	0	0	0	0	0	**23**
5:00 PM	0	16	1	0	1	0	0	0	0	0	0	0	0	**18**
6:00 PM	0	2	3	0	1	0	0	0	0	0	0	0	0	**6**
7:00 PM	0	9	1	0	0	0	0	0	0	0	0	0	0	**10**
8:00 PM	0	3	3	0	0	0	0	0	0	0	0	0	0	**6**
9:00 PM	0	13	7	0	0	2	0	0	0	0	0	0	0	**22**
10:00 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
11:00 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
Total	**0**	**199**	**35**	**0**	**9**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**251**
Percent	**0.0%**	**79.3%**	**13.9%**	**0.0%**	**3.6%**	**3.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Monday, November 7, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	**2**
6:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
8:00 AM	0	3	0	0	0	1	0	0	0	0	0	0	0	**4**
9:00 AM	1	11	0	0	1	2	0	0	0	0	0	0	0	**15**
10:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
11:00 AM	0	11	2	0	0	0	0	0	0	0	0	0	0	**13**
12:00 PM	0	3	2	0	0	0	0	0	0	0	0	0	0	**5**
1:00 PM	0	6	0	0	0	1	0	0	0	0	0	0	0	**7**
2:00 PM	0	6	2	0	0	2	0	0	0	0	0	0	0	**10**
3:00 PM	0	7	3	0	0	1	0	0	0	0	0	0	0	**11**
4:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 PM	0	5	2	0	0	0	0	0	0	0	0	0	0	**7**
6:00 PM	0	10	4	0	0	0	0	0	0	0	0	0	0	**14**
7:00 PM	0	6	2	0	0	0	0	0	0	0	0	0	0	**8**
8:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
9:00 PM	0	2	2	0	0	0	0	0	0	0	0	0	0	**4**
10:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
11:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	**1**
Total	**1**	**86**	**21**	**0**	**1**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**118**
Percent	**0.8%**	**72.9%**	**17.8%**	**0.0%**	**0.8%**	**7.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Monday, November 7, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	**6**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	2	1	0	0	1	0	0	0	0	0	0	0	**4**
6:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
8:00 AM	0	8	2	0	2	1	0	0	0	0	0	0	0	**13**
9:00 AM	0	17	2	0	1	0	0	0	0	0	0	0	0	**20**
10:00 AM	0	8	2	0	2	0	0	0	0	0	0	0	0	**12**
11:00 AM	0	29	3	0	2	0	0	0	0	0	0	0	0	**34**
12:00 PM	0	20	2	0	0	0	0	0	0	0	0	0	0	**22**
1:00 PM	0	9	2	0	2	1	0	0	0	0	0	0	0	**14**
2:00 PM	0	13	1	0	0	1	0	0	0	0	0	0	0	**15**
3:00 PM	0	21	7	0	1	0	0	0	0	0	0	0	0	**29**
4:00 PM	0	7	0	0	2	0	0	0	0	0	0	0	0	**9**
5:00 PM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
6:00 PM	0	11	3	0	2	0	0	0	0	0	0	0	0	**16**
7:00 PM	0	7	2	0	0	0	0	0	0	0	0	0	0	**9**
8:00 PM	0	7	1	0	0	0	0	0	0	0	0	0	0	**8**
9:00 PM	0	8	3	0	0	0	0	0	0	0	0	0	0	**11**
10:00 PM	0	7	1	0	0	0	0	0	0	0	0	0	0	**8**
11:00 PM	1	10	0	0	0	0	0	0	0	0	0	0	0	**11**
Total	**1**	**201**	**33**	**0**	**14**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**253**
Percent	**0.4%**	**79.4%**	**13.0%**	**0.0%**	**5.5%**	**1.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Tuesday, November 8, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	1	0	1	0	0	0	0	0	0	0	0	3
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
6:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
7:00 AM	0	1	2	0	0	2	0	0	0	0	0	0	0	5
8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	1
9:00 AM	1	10	0	0	0	1	0	0	0	0	0	0	0	12
10:00 AM	0	6	1	0	1	1	0	0	0	0	0	0	0	9
11:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	6
12:00 PM	0	7	3	0	0	0	0	0	0	0	0	0	0	10
1:00 PM	0	4	2	0	0	0	0	0	0	0	0	0	0	6
2:00 PM	0	14	1	0	0	0	0	0	0	0	0	0	0	15
3:00 PM	0	9	0	0	0	1	0	0	0	0	0	0	0	10
4:00 PM	0	5	1	0	0	0	0	0	0	0	0	0	0	6
5:00 PM	0	5	2	0	0	0	0	0	0	0	0	0	0	7
6:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
7:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
8:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
9:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
10:00 PM	0	5	1	0	0	0	0	0	0	0	0	0	0	6
11:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	**1**	**81**	**19**	**0**	**3**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**109**
Percent	**0.9%**	**74.3%**	**17.4%**	**0.0%**	**2.8%**	**4.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Tuesday, November 8, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	5	0	0	1	0	0	0	0	0	0	0	0	6
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
6:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
7:00 AM	0	1	1	0	0	1	0	0	0	0	0	0	0	3
8:00 AM	0	6	0	0	2	0	0	0	0	0	0	0	0	8
9:00 AM	0	19	1	0	2	0	0	0	0	1	0	0	0	23
10:00 AM	1	20	0	0	2	0	0	0	0	0	0	0	0	23
11:00 AM	0	13	1	0	3	0	0	0	0	0	0	0	0	17
12:00 PM	0	10	5	0	0	0	0	0	0	0	0	0	0	15
1:00 PM	0	13	1	0	3	0	0	0	0	0	0	0	0	17
2:00 PM	0	13	1	0	1	1	0	0	0	0	0	0	0	16
3:00 PM	0	17	2	0	2	0	0	0	0	0	0	0	0	21
4:00 PM	0	11	1	0	1	0	0	0	0	0	0	0	0	13
5:00 PM	0	14	1	0	2	0	0	0	0	0	0	0	0	17
6:00 PM	0	9	2	0	2	0	0	0	0	0	0	0	0	13
7:00 PM	0	6	2	0	0	0	0	0	0	0	0	0	0	8
8:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
9:00 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
10:00 PM	1	8	0	0	0	1	0	0	0	0	0	0	0	10
11:00 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
Total	**2**	**183**	**18**	**0**	**21**	**3**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**228**
Percent	**0.9%**	**80.3%**	**7.9%**	**0.0%**	**9.2%**	**1.3%**	**0.0%**	**0.0%**	**0.0%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Wednesday, November 9, 2016
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
7:00 AM	0	2	1	0	1	0	0	0	0	0	0	0	0	**4**
8:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	**3**
9:00 AM	0	3	0	0	2	0	0	0	0	1	0	0	0	**6**
10:00 AM	0	7	1	0	0	0	0	0	0	0	0	0	0	**8**
11:00 AM	0	10	1	0	1	3	0	0	0	0	0	0	0	**15**
12:00 PM	0	15	4	0	0	0	0	0	0	0	0	0	0	**19**
1:00 PM	0	9	1	0	0	1	0	0	0	0	0	0	0	**11**
2:00 PM	1	19	2	0	0	1	0	0	0	0	0	0	0	**23**
3:00 PM	0	5	4	0	0	0	0	0	0	0	0	0	0	**9**
4:00 PM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
5:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	**2**
6:00 PM	0	6	0	0	0	0	0	0	0	0	0	0	0	**6**
7:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
8:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
9:00 PM	0	4	2	0	0	0	0	0	0	0	0	0	0	**6**
10:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
11:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
Total	**1**	**97**	**23**	**0**	**4**	**5**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**131**
Percent	**0.8%**	**74.0%**	**17.6%**	**0.0%**	**3.1%**	**3.8%**	**0.0%**	**0.0%**	**0.0%**	**0.8%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Wednesday, November 9, 2016
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
6:00 AM	0	10	0	0	0	0	0	0	0	0	0	0	0	**10**
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
8:00 AM	0	4	0	0	1	0	0	0	0	0	0	0	0	**5**
9:00 AM	0	7	0	0	5	0	0	0	0	0	0	0	0	**12**
10:00 AM	0	15	1	0	2	1	0	0	0	0	0	0	0	**19**
11:00 AM	0	13	5	0	3	1	0	0	0	0	0	0	0	**22**
12:00 PM	0	28	7	0	1	0	0	0	0	0	0	0	0	**36**
1:00 PM	0	21	6	0	2	0	0	0	0	0	0	0	0	**29**
2:00 PM	0	18	3	0	0	0	0	0	0	0	0	0	0	**21**
3:00 PM	0	12	4	0	1	0	0	0	0	0	0	0	0	**17**
4:00 PM	0	13	2	0	2	0	0	0	0	0	0	0	0	**17**
5:00 PM	0	10	5	0	0	0	0	0	0	0	0	0	0	**15**
6:00 PM	0	11	2	0	2	0	0	0	0	0	0	0	0	**15**
7:00 PM	0	6	1	0	0	0	0	0	0	0	0	0	0	**7**
8:00 PM	0	6	0	0	1	0	0	0	0	0	0	0	0	**7**
9:00 PM	0	7	1	0	1	0	0	0	0	0	0	0	0	**9**
10:00 PM	0	6	0	0	0	0	0	0	0	0	0	0	0	**6**
11:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**0**	**197**	**37**	**0**	**21**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**257**
Percent	**0.0%**	**76.7%**	**14.4%**	**0.0%**	**8.2%**	**0.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Total Study Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
7:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
8:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	**5**
9:00 AM	0	6	0	0	1	1	0	0	0	0	0	0	0	**8**
10:00 AM	0	7	1	0	0	1	0	0	0	0	0	0	0	**9**
11:00 AM	0	12	2	0	0	0	0	0	0	0	0	0	0	**14**
12:00 PM	0	8	2	0	0	0	0	0	0	0	0	0	0	**10**
1:00 PM	0	8	1	0	0	1	0	0	0	0	0	0	0	**10**
2:00 PM	0	11	1	0	0	1	0	0	0	0	0	0	0	**13**
3:00 PM	0	7	2	0	0	0	0	0	0	0	0	0	0	**9**
4:00 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
5:00 PM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
6:00 PM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
9:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**0**	**89**	**14**	**0**	**1**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**108**
Percent	**0.0%**	**82.4%**	**13.0%**	**0.0%**	**0.9%**	**3.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Deon Fouche: (415) 757-7714
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Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Total Study Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
6:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
7:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
8:00 AM	0	6	1	0	1	0	0	0	0	0	0	0	0	**8**
9:00 AM	0	14	1	0	2	0	0	0	0	0	0	0	0	**17**
10:00 AM	0	18	2	0	2	0	0	0	0	0	0	0	0	**22**
11:00 AM	0	22	3	0	1	1	0	0	0	0	0	0	0	**27**
12:00 PM	0	17	3	0	1	0	0	0	0	0	0	0	0	**21**
1:00 PM	0	16	3	0	1	0	0	0	0	0	0	0	0	**20**
2:00 PM	0	13	2	0	1	0	0	0	0	0	0	0	0	**16**
3:00 PM	0	18	4	0	1	1	0	0	0	0	0	0	0	**24**
4:00 PM	0	12	1	0	1	0	0	0	0	0	0	0	0	**14**
5:00 PM	0	17	2	0	1	0	0	0	0	0	0	0	0	**20**
6:00 PM	0	8	2	0	1	0	0	0	0	0	0	0	0	**11**
7:00 PM	0	7	1	0	0	0	0	0	0	0	0	0	0	**8**
8:00 PM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
9:00 PM	0	6	2	0	0	0	0	0	0	0	0	0	0	**8**
10:00 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
11:00 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
Total	**0**	**205**	**28**	**0**	**13**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**248**
Percent	**0.0%**	**82.7%**	**11.3%**	**0.0%**	**5.2%**	**0.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Deon Fouche: (415) 757-7714
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Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

3-Day (Tuesday - Thursday) Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	1	0	1	0	0	0	0	0	0	0	0	3
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
6:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
7:00 AM	0	1	2	0	0	2	0	0	0	0	0	0	0	5
8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	1
9:00 AM	1	10	0	0	0	1	0	0	0	0	0	0	0	12
10:00 AM	0	6	1	0	1	1	0	0	0	0	0	0	0	9
11:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	6
12:00 PM	0	7	3	0	0	0	0	0	0	0	0	0	0	10
1:00 PM	0	4	2	0	0	0	0	0	0	0	0	0	0	6
2:00 PM	0	14	1	0	0	0	0	0	0	0	0	0	0	15
3:00 PM	0	9	0	0	0	1	0	0	0	0	0	0	0	10
4:00 PM	0	5	1	0	0	0	0	0	0	0	0	0	0	6
5:00 PM	0	5	2	0	0	0	0	0	0	0	0	0	0	7
6:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
7:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
8:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
9:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
10:00 PM	0	5	1	0	0	0	0	0	0	0	0	0	0	6
11:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	**1**	**81**	**19**	**0**	**3**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**109**
Percent	**0.9%**	**74.3%**	**17.4%**	**0.0%**	**2.8%**	**4.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

3-Day (Tuesday - Thursday) Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	5	0	0	1	0	0	0	0	0	0	0	0	6
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
6:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
7:00 AM	0	1	1	0	0	1	0	0	0	0	0	0	0	3
8:00 AM	0	6	0	0	2	0	0	0	0	0	0	0	0	8
9:00 AM	0	19	1	0	2	0	0	0	0	1	0	0	0	23
10:00 AM	1	20	0	0	2	0	0	0	0	0	0	0	0	23
11:00 AM	0	13	1	0	3	0	0	0	0	0	0	0	0	17
12:00 PM	0	10	5	0	0	0	0	0	0	0	0	0	0	15
1:00 PM	0	13	1	0	3	0	0	0	0	0	0	0	0	17
2:00 PM	0	13	1	0	1	1	0	0	0	0	0	0	0	16
3:00 PM	0	17	2	0	2	0	0	0	0	0	0	0	0	21
4:00 PM	0	11	1	0	1	0	0	0	0	0	0	0	0	13
5:00 PM	0	14	1	0	2	0	0	0	0	0	0	0	0	17
6:00 PM	0	9	2	0	2	0	0	0	0	0	0	0	0	13
7:00 PM	0	6	2	0	0	0	0	0	0	0	0	0	0	8
8:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
9:00 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
10:00 PM	1	8	0	0	0	1	0	0	0	0	0	0	0	10
11:00 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
Total	**2**	**183**	**18**	**0**	**21**	**3**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**228**
Percent	**0.9%**	**80.3%**	**7.9%**	**0.0%**	**9.2%**	**1.3%**	**0.0%**	**0.0%**	**0.0%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Vehicle Speed Report Summary

Location: Henderson Way at Airport Access
Count Direction: Northbound / Southbound
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

	Speed Range (mph)																	Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
Study Total																		
Northbound	104	230	386	121	8	0	0	0	0	0	0	0	0	0	0	0	0	849
Percent	12.2%	27.1%	45.5%	14.3%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	41	433	1,003	292	14	1	0	0	0	0	0	0	0	0	0	0	0	1,784
Percent	2.3%	24.3%	56.2%	16.4%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	145	663	1,389	413	22	1	0	0	0	0	0	0	0	0	0	0	0	2,633
Percent	5.5%	25.2%	52.8%	15.7%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Northbound			**Northbound**		
50th Percentile (Median)	16.0	mph	Mean (Average) Speed	15.7	mph
85th Percentile	20.0	mph	10 mph Pace	10.7 - 20.7	mph
95th Percentile	22.5	mph	Percent in Pace	73.9	%
Southbound			**Southbound**		
50th Percentile (Median)	16.9	mph	Mean (Average) Speed	17.0	mph
85th Percentile	20.3	mph	10 mph Pace	11.9 - 21.9	mph
95th Percentile	22.3	mph	Percent in Pace	86.5	%

Deon Fouche: (415) 757-7714
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Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Thursday, November 3, 2016
Northbound

	Speed Range (mph)																	Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
5:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
7:00 AM	1	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
8:00 AM	5	10	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**19**
9:00 AM	4	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
10:00 AM	1	2	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
11:00 AM	3	24	16	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**45**
12:00 PM	2	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
1:00 PM	5	19	11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**36**
2:00 PM	1	9	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**15**
3:00 PM	0	2	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
4:00 PM	0	1	6	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
5:00 PM	0	1	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
6:00 PM	1	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
7:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
8:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
9:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
10:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**23**	**81**	**78**	**18**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**201**
Percent	**11.4%**	**40.3%**	**38.8%**	**9.0%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	14.5	mph	Mean (Average) Speed	14.6	mph
85th Percentile	18.3	mph	10 mph Pace	9.1 - 19.1	mph
95th Percentile	22.3	mph	Percent in Pace	80.1	%

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Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Thursday, November 3, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	1	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**8**
5:00 AM	0	0	3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
6:00 AM	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
7:00 AM	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
8:00 AM	0	3	12	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**17**
9:00 AM	0	3	17	4	1	0	0	0	0	0	0	0	0	0	0	0	0	**25**
10:00 AM	0	5	14	7	1	0	0	0	0	0	0	0	0	0	0	0	0	**27**
11:00 AM	2	11	21	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**38**
12:00 PM	2	6	11	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**23**
1:00 PM	0	14	13	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**32**
2:00 PM	0	9	13	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**24**
3:00 PM	0	4	11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**17**
4:00 PM	0	2	10	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**16**
5:00 PM	0	7	15	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**25**
6:00 PM	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
7:00 PM	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
8:00 PM	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
9:00 PM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
10:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
11:00 PM	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
Total	**5**	**73**	**164**	**54**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**299**
Percent	**1.7%**	**24.4%**	**54.8%**	**18.1%**	**1.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	16.9	mph	Mean (Average) Speed	17.1	mph
85th Percentile	20.5	mph	10 mph Pace	12.5 - 22.5	mph
95th Percentile	22.7	mph	Percent in Pace	85.3	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Friday, November 4, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
7:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
8:00 AM	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
9:00 AM	1	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
10:00 AM	5	6	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**18**
11:00 AM	0	2	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
12:00 PM	0	1	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
1:00 PM	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 PM	0	2	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
3:00 PM	2	2	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**13**
4:00 PM	0	2	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**7**
5:00 PM	0	4	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
6:00 PM	1	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
7:00 PM	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
8:00 PM	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
9:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
10:00 PM	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**13**	**26**	**52**	**22**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**114**
Percent	**11.4%**	**22.8%**	**45.6%**	**19.3%**	**0.9%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	16.4	mph	Mean (Average) Speed	16.2	mph
85th Percentile	20.7	mph	10 mph Pace	13.1 - 23.1	mph
95th Percentile	22.6	mph	Percent in Pace	78.9	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Friday, November 4, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	1	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
6:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
7:00 AM	0	1	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
8:00 AM	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
9:00 AM	0	2	15	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**22**
10:00 AM	0	11	21	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**37**
11:00 AM	0	6	29	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**40**
12:00 PM	0	0	12	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**17**
1:00 PM	1	1	6	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**14**
2:00 PM	0	2	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**13**
3:00 PM	0	3	15	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**21**
4:00 PM	0	3	12	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**19**
5:00 PM	2	8	24	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**38**
6:00 PM	0	4	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
7:00 PM	2	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
8:00 PM	0	5	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
9:00 PM	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
10:00 PM	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
11:00 PM	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
Total	**7**	**55**	**183**	**52**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**299**
Percent	**2.3%**	**18.4%**	**61.2%**	**17.4%**	**0.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	17.2	mph	Mean (Average) Speed	17.3	mph
85th Percentile	20.4	mph	10 mph Pace	11.9 - 21.9	mph
95th Percentile	21.6	mph	Percent in Pace	91.3	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Saturday, November 5, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
7:00 AM	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
8:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
9:00 AM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
10:00 AM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
11:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
12:00 PM	1	1	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
1:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 PM	2	3	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
3:00 PM	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 PM	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
5:00 PM	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
6:00 PM	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
7:00 PM	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
8:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**7**	**15**	**34**	**6**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**63**
Percent	**11.1%**	**23.8%**	**54.0%**	**9.5%**	**1.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	16.6	mph	Mean (Average) Speed	16.2	mph
85th Percentile	19.6	mph	10 mph Pace	12.8 - 22.8	mph
95th Percentile	22.6	mph	Percent in Pace	79.4	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Saturday, November 5, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	5
5:00 AM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
6:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:00 AM	1	2	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	8
9:00 AM	0	0	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	11
10:00 AM	1	6	12	1	0	0	0	0	0	0	0	0	0	0	0	0	0	20
11:00 AM	1	8	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	19
12:00 PM	1	6	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	18
1:00 PM	0	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
2:00 PM	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
3:00 PM	0	4	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
4:00 PM	0	1	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	8
5:00 PM	0	4	14	1	1	0	0	0	0	0	0	0	0	0	0	0	0	20
6:00 PM	0	3	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	9
7:00 PM	0	2	7	2	1	0	0	0	0	0	0	0	0	0	0	0	0	12
8:00 PM	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
9:00 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
10:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:00 PM	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	**4**	**52**	**123**	**16**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**197**
Percent	**2.0%**	**26.4%**	**62.4%**	**8.1%**	**1.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	17.0	mph	Mean (Average) Speed	16.7	mph
85th Percentile	19.3	mph	10 mph Pace	10.6 - 20.6	mph
95th Percentile	21.7	mph	Percent in Pace	90.9	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Sunday, November 6, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:00 AM	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
9:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
10:00 AM	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
11:00 AM	1	2	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	9
12:00 PM	0	5	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	11
1:00 PM	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4
2:00 PM	1	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
3:00 PM	4	1	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	11
4:00 PM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:00 PM	1	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	8
6:00 PM	3	6	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	11
7:00 PM	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
8:00 PM	2	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6
9:00 PM	0	1	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	9
10:00 PM	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
11:00 PM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	**13**	**30**	**53**	**15**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**113**
Percent	**11.5%**	**26.5%**	**46.9%**	**13.3%**	**1.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	16.0	mph	Mean (Average) Speed	15.8	mph
85th Percentile	20.1	mph	10 mph Pace	12.0 - 22.0	mph
95th Percentile	22.0	mph	Percent in Pace	77.9	%

Deon Fouche: (415) 757-7714
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Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Sunday, November 6, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3
6:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:00 AM	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
9:00 AM	0	1	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	8
10:00 AM	0	5	9	5	0	0	0	0	0	0	0	0	0	0	0	0	0	19
11:00 AM	0	4	13	4	0	0	0	0	0	0	0	0	0	0	0	0	0	21
12:00 PM	0	5	7	6	0	0	0	0	0	0	0	0	0	0	0	0	0	18
1:00 PM	1	6	15	4	0	0	0	0	0	0	0	0	0	0	0	0	0	26
2:00 PM	1	4	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
3:00 PM	2	15	22	2	0	0	0	0	0	0	0	0	0	0	0	0	0	41
4:00 PM	0	8	12	3	0	0	0	0	0	0	0	0	0	0	0	0	0	23
5:00 PM	0	6	11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	18
6:00 PM	0	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6
7:00 PM	0	0	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	10
8:00 PM	0	1	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	6
9:00 PM	0	8	10	4	0	0	0	0	0	0	0	0	0	0	0	0	0	22
10:00 PM	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
11:00 PM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	**4**	**69**	**133**	**44**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**251**
Percent	**1.6%**	**27.5%**	**53.0%**	**17.5%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	16.9	mph	Mean (Average) Speed	17	mph
85th Percentile	20.4	mph	10 mph Pace	12.0 - 22.0	mph
95th Percentile	22.4	mph	Percent in Pace	86.5	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Monday, November 7, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
6:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
9:00 AM	3	2	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	15
10:00 AM	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
11:00 AM	1	2	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	13
12:00 PM	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
1:00 PM	1	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	7
2:00 PM	3	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	10
3:00 PM	1	1	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	11
4:00 PM	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:00 PM	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
6:00 PM	0	0	11	3	0	0	0	0	0	0	0	0	0	0	0	0	0	14
7:00 PM	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
8:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9:00 PM	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	4
10:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	**13**	**25**	**64**	**15**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**118**
Percent	**11.0%**	**21.2%**	**54.2%**	**12.7%**	**0.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	16.8	mph	Mean (Average) Speed	16.1	mph
85th Percentile	19.8	mph	10 mph Pace	11.7 - 21.7	mph
95th Percentile	22.2	mph	Percent in Pace	78.0	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Monday, November 7, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
1:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
6:00 AM	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
8:00 AM	2	2	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**13**
9:00 AM	0	4	12	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**20**
10:00 AM	0	5	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
11:00 AM	0	7	22	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**34**
12:00 PM	1	5	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	**22**
1:00 PM	0	6	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**14**
2:00 PM	0	7	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**15**
3:00 PM	0	6	19	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**29**
4:00 PM	1	3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
5:00 PM	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
6:00 PM	0	5	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**16**
7:00 PM	0	3	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
8:00 PM	0	1	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
9:00 PM	0	3	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
10:00 PM	0	1	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
11:00 PM	3	2	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
Total	**7**	**63**	**134**	**48**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**253**
Percent	**2.8%**	**24.9%**	**53.0%**	**19.0%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	16.7	mph	Mean (Average) Speed	16.9	mph
85th Percentile	20.9	mph	10 mph Pace	12.0 - 22.0	mph
95th Percentile	22.3	mph	Percent in Pace	87	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Tuesday, November 8, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
7:00 AM	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
8:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
9:00 AM	2	3	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**12**
10:00 AM	2	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
11:00 AM	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
12:00 PM	1	2	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
1:00 PM	1	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
2:00 PM	3	5	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**15**
3:00 PM	1	3	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
4:00 PM	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
5:00 PM	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
6:00 PM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
7:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
8:00 PM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
9:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
10:00 PM	0	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
11:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**15**	**24**	**50**	**18**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**109**
Percent	**13.8%**	**22.0%**	**45.9%**	**16.5%**	**1.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	16.7	mph	Mean (Average) Speed	16.0	mph
85th Percentile	20.4	mph	10 mph Pace	11.5 - 21.5	mph
95th Percentile	24.2	mph	Percent in Pace	77.1	%

Deon Fouche: (415) 757-7714
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Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Tuesday, November 8, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
7:00 AM	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
8:00 AM	0	0	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**8**
9:00 AM	1	5	13	3	0	1	0	0	0	0	0	0	0	0	0	0	0	**23**
10:00 AM	1	7	11	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**23**
11:00 AM	0	1	11	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**17**
12:00 PM	0	3	5	7	0	0	0	0	0	0	0	0	0	0	0	0	0	**15**
1:00 PM	0	5	9	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**17**
2:00 PM	1	7	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**16**
3:00 PM	0	6	9	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**21**
4:00 PM	0	5	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**13**
5:00 PM	0	3	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**17**
6:00 PM	0	5	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**13**
7:00 PM	0	2	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
8:00 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
9:00 PM	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
10:00 PM	1	4	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
11:00 PM	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
Total	**8**	**57**	**119**	**40**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**228**
Percent	**3.5%**	**25.0%**	**52.2%**	**17.5%**	**1.3%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	16.9	mph	Mean (Average) Speed	17	mph
85th Percentile	20.5	mph	10 mph Pace	12.0 - 22.0	mph
95th Percentile	22.6	mph	Percent in Pace	84.6	%

Deon Fouche: (415) 757-7714
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Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Wednesday, November 9, 2016
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
7:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
8:00 AM	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
9:00 AM	2	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
10:00 AM	0	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
11:00 AM	3	3	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**15**
12:00 PM	3	3	9	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**19**
1:00 PM	2	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
2:00 PM	4	4	10	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**23**
3:00 PM	0	2	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
4:00 PM	3	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
5:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 PM	0	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
7:00 PM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
8:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
9:00 PM	0	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
10:00 PM	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
11:00 PM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
Total	**20**	**29**	**55**	**27**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**131**
Percent	**15.3%**	**22.1%**	**42.0%**	**20.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	16.8	mph	Mean (Average) Speed	15.9	mph
85th Percentile	20.5	mph	10 mph Pace	11.7 - 21.7	mph
95th Percentile	23.0	mph	Percent in Pace	73.3	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Wednesday, November 9, 2016
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
6:00 AM	0	4	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
7:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
8:00 AM	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
9:00 AM	3	2	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
10:00 AM	0	4	11	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**19**
11:00 AM	1	4	15	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**22**
12:00 PM	0	13	18	4	1	0	0	0	0	0	0	0	0	0	0	0	0	**36**
1:00 PM	0	7	18	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**29**
2:00 PM	0	3	14	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**21**
3:00 PM	0	3	9	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**17**
4:00 PM	1	5	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**17**
5:00 PM	0	6	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**15**
6:00 PM	0	5	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**15**
7:00 PM	1	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
8:00 PM	0	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
9:00 PM	0	2	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
10:00 PM	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
11:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**6**	**64**	**147**	**38**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**257**
Percent	**2.3%**	**24.9%**	**57.2%**	**14.8%**	**0.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	17.1	mph	Mean (Average) Speed	16.8	mph
85th Percentile	19.9	mph	10 mph Pace	11.3 - 21.3	mph
95th Percentile	22.0	mph	Percent in Pace	87.9	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Total Study Average
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
7:00 AM	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
8:00 AM	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
9:00 AM	2	1	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
10:00 AM	1	2	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
11:00 AM	1	5	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**15**
12:00 PM	1	3	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
1:00 PM	1	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
2:00 PM	2	4	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
3:00 PM	1	2	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
4:00 PM	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
5:00 PM	0	2	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
6:00 PM	1	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
7:00 PM	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
8:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
9:00 PM	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
10:00 PM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**14**	**32**	**55**	**17**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**118**
Percent	**11.9%**	**27.1%**	**46.6%**	**14.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	16.0	mph	Mean (Average) Speed	15.7	mph
85th Percentile	20.0	mph	10 mph Pace	10.7 - 20.7	mph
95th Percentile	22.5	mph	Percent in Pace	73.9	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Henderson Way at Airport Access
Date Range: 11/3/2016 to 11/9/2016
Site Code: 10

Total Study Average
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
6:00 AM	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
7:00 AM	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
8:00 AM	0	1	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
9:00 AM	1	2	11	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**17**
10:00 AM	0	6	12	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**21**
11:00 AM	1	6	17	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**28**
12:00 PM	1	5	10	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**21**
1:00 PM	0	6	11	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**20**
2:00 PM	0	5	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**16**
3:00 PM	0	6	14	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**23**
4:00 PM	0	4	8	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**15**
5:00 PM	0	5	12	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**19**
6:00 PM	0	4	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
7:00 PM	0	2	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
8:00 PM	0	2	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
9:00 PM	0	2	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
10:00 PM	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
11:00 PM	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
Total	**4**	**60**	**143**	**44**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**251**
Percent	**1.6%**	**23.9%**	**57.0%**	**17.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	16.9	mph	Mean (Average) Speed	17.0	mph
85th Percentile	20.3	mph	10 mph Pace	11.9 - 21.9	mph
95th Percentile	22.3	mph	Percent in Pace	86.5	%

Deon Fouche: (415) 757-7714
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Location: Henderson Way at Airport Access
Date Range: 11/3/2016 - 11/9/2016
Site Code: 10

	Thursday			Friday			Saturday			Sunday			Monday			Tuesday			Wednesday			Mid-Week Average		
	11/3/2016			11/4/2016			11/5/2016			11/6/2016			11/7/2016			11/8/2016			11/9/2016					
Time	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	0	0	0	0	0	0	0	1	1	0	1	1	2	6	8	3	6	9	0	3	3	1	3	4
1:00 AM	0	1	1	0	2	2	0	1	1	0	0	0	0	1	1	0	0	0	0	1	1	0	1	1
2:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	6	8	14	0	3	3	1	5	6	2	0	2	1	0	1	0	0	0	0	0	0	2	3	5
5:00 AM	3	8	11	1	7	8	1	4	5	1	3	4	2	4	6	2	3	5	1	4	5	2	5	7
6:00 AM	5	4	9	2	3	5	2	1	3	2	2	4	2	4	6	2	3	5	4	10	14	4	6	9
7:00 AM	6	8	14	2	7	9	3	3	6	2	3	5	1	1	2	5	3	8	4	1	5	5	4	9
8:00 AM	19	17	36	5	8	13	3	8	11	4	3	7	4	13	17	1	8	9	3	5	8	8	10	18
9:00 AM	10	25	35	8	22	30	5	11	16	2	8	10	15	20	35	12	23	35	6	12	18	9	20	29
10:00 AM	10	27	37	18	37	55	5	20	25	6	19	25	5	12	17	9	23	32	8	19	27	9	23	32
11:00 AM	45	38	83	12	40	52	4	19	23	9	21	30	13	34	47	6	17	23	15	22	37	22	26	48
12:00 PM	11	23	34	7	17	24	8	18	26	11	18	29	5	22	27	10	15	25	19	36	55	13	25	38
1:00 PM	36	32	68	3	14	17	2	13	15	4	26	30	7	14	21	6	17	23	11	29	40	18	26	44
2:00 PM	15	24	39	7	13	20	10	12	22	11	13	24	10	15	25	15	16	31	23	21	44	18	20	38
3:00 PM	7	17	24	13	21	34	4	18	22	11	41	52	11	29	40	10	21	31	9	17	26	9	18	27
4:00 PM	11	16	27	7	19	26	4	8	12	3	23	26	3	9	12	6	13	19	6	17	23	8	15	23
5:00 PM	6	25	31	12	38	50	3	20	23	8	18	26	7	6	13	7	17	24	2	15	17	5	19	24
6:00 PM	7	5	12	5	11	16	3	9	12	11	6	17	14	16	30	3	13	16	6	15	21	5	11	16
7:00 PM	1	6	7	3	9	12	3	12	15	5	10	15	8	9	17	1	8	9	3	7	10	2	7	9
8:00 PM	1	5	6	3	12	15	1	4	5	6	6	12	1	8	9	3	3	6	1	7	8	2	5	7
9:00 PM	1	3	4	2	4	6	0	3	3	9	22	31	4	11	15	1	4	5	6	9	15	3	5	8
10:00 PM	1	1	2	4	5	9	1	2	3	3	4	7	2	8	10	6	10	16	2	6	8	3	6	9
11:00 PM	0	6	6	0	5	5	0	4	4	3	4	7	1	11	12	1	5	6	2	1	3	1	4	5
Total	**201**	**299**	**500**	**114**	**299**	**413**	**63**	**197**	**260**	**113**	**251**	**364**	**118**	**253**	**371**	**109**	**228**	**337**	**131**	**257**	**388**	**147**	**261**	**408**
Percent	**40%**	**60%**	-	**28%**	**72%**	-	**24%**	**76%**	-	**31%**	**69%**	-	**32%**	**68%**	-	**32%**	**68%**	-	**34%**	**66%**	-	**36%**	**64%**	-

1. Mid-week average includes data between Tuesday and Thursday.

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Vehicle Classification Report Summary

Location: Fairground Rd W/O Airport Rd
Count Direction: Eastbound / Westbound
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

	FHWA Vehicle Classification													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total														
Eastbound	172	19,974	2,316	2	283	255	0	2	31	72	0	0	22	23,129
Percent	0.7%	86.4%	10.0%	0.0%	1.2%	1.1%	0.0%	0.0%	0.1%	0.3%	0.0%	0.0%	0.1%	100%
Westbound	267	11,065	1,345	2	324	82	0	1	1	7	0	0	4	13,098
Percent	2.0%	84.5%	10.3%	0.0%	2.5%	0.6%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	100%
Total	439	31,039	3,661	4	607	337	0	3	32	79	0	0	26	36,227
Percent	1.2%	85.7%	10.1%	0.0%	1.7%	0.9%	0.0%	0.0%	0.1%	0.2%	0.0%	0.0%	0.1%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

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Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Saturday, May 20, 2017
Westbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	5	4	0	0	0	0	0	0	0	0	0	0	**9**
1:00 AM	1	5	5	0	0	0	0	0	0	0	0	0	0	**11**
2:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	4	0	0	1	0	0	0	0	0	0	0	0	**5**
4:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	**7**
6:00 AM	1	9	4	0	1	0	0	0	0	0	0	0	0	**15**
7:00 AM	1	26	6	0	1	0	0	0	0	0	0	0	0	**34**
8:00 AM	1	47	10	0	0	0	0	0	0	0	0	0	0	**58**
9:00 AM	0	61	17	0	1	0	0	0	0	0	0	0	0	**79**
10:00 AM	2	37	8	0	2	0	0	0	0	0	0	0	0	**49**
11:00 AM	0	56	17	0	3	0	0	0	0	0	0	0	0	**76**
12:00 PM	1	56	21	0	3	1	0	0	0	0	0	0	0	**82**
1:00 PM	1	63	12	0	1	0	0	0	0	0	0	0	0	**77**
2:00 PM	2	55	15	0	4	0	0	0	0	1	0	0	0	**77**
3:00 PM	1	70	15	0	5	1	0	0	0	0	0	0	0	**92**
4:00 PM	3	45	14	0	2	1	0	0	0	0	0	0	0	**65**
5:00 PM	0	47	12	0	0	0	0	0	0	0	0	0	0	**59**
6:00 PM	3	40	9	0	3	1	0	0	0	0	0	0	0	**56**
7:00 PM	1	44	5	0	2	0	0	0	0	0	0	0	0	**52**
8:00 PM	0	32	7	0	1	0	0	0	0	0	0	0	0	**40**
9:00 PM	0	26	8	0	4	0	0	0	0	0	0	0	0	**38**
10:00 PM	0	14	1	0	0	0	0	0	0	0	0	0	0	**15**
11:00 PM	0	10	3	0	0	0	0	0	0	0	0	0	0	**13**
Total	**18**	**761**	**197**	**0**	**34**	**4**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1,015**
Percent	**1.8%**	**75.0%**	**19.4%**	**0.0%**	**3.3%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Sunday, May 21, 2017
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	13	4	0	0	0	0	0	0	0	0	0	0	17
1:00 AM	0	3	6	0	0	1	0	0	0	0	0	0	0	10
2:00 AM	0	9	2	0	0	0	0	0	0	0	0	0	0	11
3:00 AM	0	9	4	0	0	0	0	0	0	0	0	0	0	13
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	3
6:00 AM	0	4	9	0	2	0	0	0	0	0	0	0	0	15
7:00 AM	0	15	7	0	3	1	0	0	0	0	0	0	0	26
8:00 AM	1	37	13	0	0	3	0	0	0	0	0	0	0	54
9:00 AM	1	67	25	0	4	4	0	0	0	0	0	0	0	101
10:00 AM	2	74	26	0	2	3	0	0	0	0	0	0	0	107
11:00 AM	1	79	27	0	3	2	0	0	0	0	0	0	0	112
12:00 PM	1	112	30	0	5	1	0	0	0	1	0	0	0	150
1:00 PM	2	100	23	0	4	1	0	0	0	1	0	0	0	131
2:00 PM	1	95	18	0	2	1	0	0	0	0	0	0	0	117
3:00 PM	2	70	30	0	1	1	0	0	0	0	0	0	0	104
4:00 PM	2	85	27	0	3	2	0	0	0	0	0	0	0	119
5:00 PM	3	129	22	0	2	0	0	0	0	1	0	0	0	157
6:00 PM	0	61	19	0	3	4	0	0	0	0	0	0	0	87
7:00 PM	0	60	32	0	4	2	0	0	0	0	0	0	0	98
8:00 PM	0	30	22	0	1	1	0	0	0	0	0	0	0	54
9:00 PM	0	26	8	0	2	3	0	0	0	0	0	0	0	39
10:00 PM	1	14	7	0	3	0	0	0	0	0	0	0	0	25
11:00 PM	2	14	12	0	0	0	0	0	0	0	0	0	0	28
Total	**19**	**1,106**	**376**	**0**	**44**	**30**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**1,578**
Percent	**1.2%**	**70.1%**	**23.8%**	**0.0%**	**2.8%**	**1.9%**	**0.0%**	**0.0%**	**0.0%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Sunday, May 21, 2017
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	1	8	3	0	0	0	0	0	0	0	0	0	0	12
1:00 AM	0	3	1	0	1	0	0	0	0	0	0	0	0	5
2:00 AM	0	5	4	0	0	0	0	0	0	0	0	0	0	9
3:00 AM	0	1	2	0	0	1	0	0	0	0	0	0	0	4
4:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	2	7	2	0	1	1	0	0	0	0	0	0	0	13
6:00 AM	0	13	3	0	0	0	0	0	0	0	0	0	0	16
7:00 AM	0	15	2	0	1	0	0	0	0	0	0	0	0	18
8:00 AM	1	38	9	0	0	0	0	0	0	0	0	0	0	48
9:00 AM	1	39	12	0	2	2	0	0	0	0	0	0	0	56
10:00 AM	0	46	13	0	1	0	0	0	0	0	0	0	0	60
11:00 AM	3	38	8	0	0	1	0	0	0	0	0	0	0	50
12:00 PM	2	48	12	0	4	1	0	0	0	0	0	0	0	67
1:00 PM	2	39	11	0	2	0	0	0	0	0	0	0	0	54
2:00 PM	1	40	18	0	1	1	0	0	0	0	0	0	0	61
3:00 PM	0	42	12	0	1	0	0	0	0	0	0	0	0	55
4:00 PM	1	55	10	0	0	1	0	0	0	0	0	0	0	67
5:00 PM	2	35	9	0	4	0	0	0	0	0	0	0	0	50
6:00 PM	2	26	8	0	4	0	0	0	0	0	0	0	0	40
7:00 PM	0	36	5	0	1	0	0	0	0	0	0	0	0	42
8:00 PM	0	15	8	0	1	0	0	0	0	0	0	0	0	24
9:00 PM	2	17	5	0	1	0	0	0	0	0	0	0	0	25
10:00 PM	0	8	1	0	1	0	0	0	0	0	0	0	0	10
11:00 PM	0	9	5	0	0	0	0	0	0	0	0	0	0	14
Total	**20**	**587**	**163**	**0**	**26**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**804**
Percent	**2.5%**	**73.0%**	**20.3%**	**0.0%**	**3.2%**	**1.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Monday, May 22, 2017
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	10	0	1	0	0	0	0	0	0	0	0	**15**
1:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	2	1	0	0	1	0	0	0	0	0	0	0	**4**
3:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	11	1	0	1	0	0	0	0	0	0	0	0	**13**
5:00 AM	0	9	3	0	1	0	0	0	0	0	0	0	0	**13**
6:00 AM	0	21	17	0	7	4	0	0	0	0	0	0	1	**50**
7:00 AM	3	54	30	0	8	1	0	0	0	0	0	0	0	**96**
8:00 AM	0	54	54	0	4	11	0	0	1	0	0	0	0	**124**
9:00 AM	0	58	36	0	12	5	0	0	1	1	0	0	0	**113**
10:00 AM	2	43	56	0	1	14	0	0	0	0	0	0	0	**116**
11:00 AM	3	103	51	0	5	1	0	0	1	0	0	0	0	**164**
12:00 PM	8	168	63	0	4	2	0	0	0	0	0	0	0	**245**
1:00 PM	4	147	37	0	4	2	0	0	0	0	0	0	0	**194**
2:00 PM	2	137	40	0	7	2	0	0	0	0	0	0	1	**189**
3:00 PM	5	160	52	0	6	4	0	0	0	0	0	0	0	**227**
4:00 PM	9	216	124	0	8	12	0	0	0	0	0	0	1	**370**
5:00 PM	2	214	125	1	10	12	0	0	0	0	0	0	0	**364**
6:00 PM	2	110	41	0	1	2	0	0	0	1	0	0	0	**157**
7:00 PM	1	67	29	0	3	1	0	0	0	0	0	0	0	**101**
8:00 PM	0	57	15	0	1	1	0	0	0	0	0	0	0	**74**
9:00 PM	1	39	13	0	2	0	0	0	0	0	0	0	1	**56**
10:00 PM	1	23	3	0	3	0	0	0	0	0	0	0	0	**30**
11:00 PM	0	16	2	0	0	0	0	0	0	0	0	0	0	**18**
Total	**43**	**1,718**	**805**	**1**	**89**	**75**	**0**	**0**	**3**	**2**	**0**	**0**	**4**	**2,740**
Percent	**1.6%**	**62.7%**	**29.4%**	**0.0%**	**3.2%**	**2.7%**	**0.0%**	**0.0%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.1%**	

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Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Monday, May 22, 2017
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	8	2	0	0	0	0	0	0	0	0	0	0	**10**
1:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	4	1	0	0	1	0	0	0	0	0	0	0	**6**
5:00 AM	1	9	1	0	3	0	0	0	0	0	0	0	0	**14**
6:00 AM	1	28	7	0	0	2	0	0	0	0	0	0	0	**38**
7:00 AM	3	88	20	0	4	0	0	0	0	0	0	0	0	**115**
8:00 AM	1	79	17	0	3	0	0	0	0	0	0	0	0	**100**
9:00 AM	6	74	13	0	5	1	0	0	0	0	0	0	0	**99**
10:00 AM	0	52	17	0	7	0	0	0	0	0	0	0	0	**76**
11:00 AM	4	71	24	0	7	2	0	0	0	0	0	0	0	**108**
12:00 PM	6	93	17	0	5	2	0	0	0	0	0	0	0	**123**
1:00 PM	1	87	29	0	4	1	0	0	0	0	0	0	0	**122**
2:00 PM	2	92	19	0	6	1	0	0	0	0	0	0	0	**120**
3:00 PM	4	80	23	0	5	1	0	0	0	0	0	0	0	**113**
4:00 PM	2	76	25	0	5	2	0	0	0	0	0	0	0	**110**
5:00 PM	1	105	21	0	2	1	0	0	0	0	0	0	0	**130**
6:00 PM	2	55	14	0	1	1	0	0	0	0	0	0	0	**73**
7:00 PM	0	33	7	0	2	0	0	0	0	0	0	0	0	**42**
8:00 PM	2	26	7	0	2	0	0	0	0	0	0	0	0	**37**
9:00 PM	1	9	1	0	0	0	0	0	0	0	0	0	0	**11**
10:00 PM	0	11	3	0	1	1	0	0	0	0	0	0	0	**16**
11:00 PM	1	4	1	0	0	1	0	0	0	0	0	0	0	**7**
Total	**38**	**1,091**	**270**	**0**	**62**	**17**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,478**
Percent	**2.6%**	**73.8%**	**18.3%**	**0.0%**	**4.2%**	**1.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Tuesday, May 23, 2017
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	5	2	0	0	0	0	0	0	0	0	0	0	7
1:00 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	7
2:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	1	0	1	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	6
5:00 AM	0	10	4	0	2	0	0	0	0	0	0	0	0	16
6:00 AM	0	29	13	0	5	2	0	0	0	0	0	0	0	49
7:00 AM	1	29	32	0	8	2	0	0	0	0	0	0	1	73
8:00 AM	1	62	43	0	1	7	0	0	0	0	0	0	0	114
9:00 AM	4	64	47	0	6	8	0	0	0	1	0	0	1	131
10:00 AM	0	74	45	0	3	6	0	0	0	0	0	0	0	128
11:00 AM	2	141	37	0	4	8	0	0	0	0	0	0	0	192
12:00 PM	0	250	26	0	2	2	0	0	2	14	0	0	1	297
1:00 PM	0	208	8	0	0	2	0	0	0	2	0	0	2	222
2:00 PM	1	232	15	0	4	0	0	0	0	1	0	0	1	254
3:00 PM	0	276	9	0	2	0	0	0	0	2	0	0	0	289
4:00 PM	0	396	11	0	1	0	0	0	0	3	0	0	0	411
5:00 PM	0	309	14	0	3	0	0	1	0	0	0	0	1	328
6:00 PM	2	192	9	0	2	2	0	0	2	2	0	0	0	211
7:00 PM	0	150	7	0	0	0	0	0	0	1	0	0	2	160
8:00 PM	4	117	3	0	0	1	0	0	2	0	0	0	0	127
9:00 PM	0	77	0	0	0	0	0	0	1	1	0	0	1	80
10:00 PM	1	53	0	0	0	0	0	0	0	0	0	0	1	55
11:00 PM	0	34	1	0	0	0	0	0	0	0	0	0	0	35
Total	**17**	**2,721**	**329**	**0**	**43**	**40**	**0**	**1**	**7**	**27**	**0**	**0**	**11**	**3,196**
Percent	**0.5%**	**85.1%**	**10.3%**	**0.0%**	**1.3%**	**1.3%**	**0.0%**	**0.0%**	**0.2%**	**0.8%**	**0.0%**	**0.0%**	**0.3%**	

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Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Tuesday, May 23, 2017
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	0	13	3	0	2	0	0	0	0	0	0	0	0	18
6:00 AM	1	28	7	0	1	0	0	0	0	0	0	0	0	37
7:00 AM	4	80	18	0	1	0	0	0	0	0	0	0	0	103
8:00 AM	3	89	19	0	7	0	0	0	0	0	0	0	0	118
9:00 AM	2	69	24	0	6	1	0	0	0	0	0	0	0	102
10:00 AM	2	66	21	0	5	2	0	0	0	0	0	0	0	96
11:00 AM	4	82	26	0	5	1	0	0	0	0	0	0	0	118
12:00 PM	2	93	18	0	7	2	0	0	0	0	0	0	0	122
1:00 PM	4	91	33	0	7	2	0	0	0	0	0	0	0	137
2:00 PM	3	79	19	0	5	1	0	0	0	0	0	0	0	107
3:00 PM	1	89	15	0	9	3	0	0	0	0	0	0	0	117
4:00 PM	3	76	16	0	6	0	0	0	0	0	0	0	0	101
5:00 PM	7	73	16	0	8	1	0	0	0	0	0	0	0	105
6:00 PM	7	67	17	0	1	0	0	0	0	0	0	0	0	92
7:00 PM	2	39	11	0	4	0	0	0	0	0	0	0	0	56
8:00 PM	0	24	10	0	2	1	0	0	0	0	0	0	1	38
9:00 PM	1	29	5	0	2	0	0	0	0	0	0	0	0	37
10:00 PM	0	23	3	0	1	2	0	0	0	0	0	0	0	29
11:00 PM	0	3	2	0	0	1	0	0	0	0	0	0	0	6
Total	**46**	**1,121**	**287**	**0**	**79**	**17**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1,551**
Percent	**3.0%**	**72.3%**	**18.5%**	**0.0%**	**5.1%**	**1.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	

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Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Wednesday, May 24, 2017
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	14	0	0	1	0	0	0	0	1	0	0	0	16
1:00 AM	0	16	0	0	0	0	0	0	0	0	0	0	0	16
2:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	1	16	0	0	0	0	0	0	0	0	0	0	0	17
5:00 AM	0	41	0	0	0	0	0	0	0	0	0	0	0	41
6:00 AM	1	50	2	0	1	1	0	0	1	0	0	0	0	56
7:00 AM	1	121	0	0	1	2	0	0	0	1	0	0	0	126
8:00 AM	2	138	1	0	0	0	0	0	0	0	0	0	0	141
9:00 AM	0	153	1	0	0	0	0	0	0	0	0	0	0	154
10:00 AM	0	187	0	0	0	0	0	0	0	0	0	0	0	187
11:00 AM	0	220	5	0	0	0	0	0	2	0	0	0	0	227
12:00 PM	0	235	15	0	2	0	0	0	0	0	0	0	1	253
1:00 PM	0	179	14	0	5	3	0	0	1	1	0	0	0	203
2:00 PM	2	152	19	0	7	2	0	0	1	0	0	0	0	183
3:00 PM	1	189	22	0	10	5	0	0	0	0	0	0	0	227
4:00 PM	2	178	16	1	6	4	0	0	0	0	0	0	0	207
5:00 PM	3	249	13	0	10	2	0	0	0	0	0	0	0	277
6:00 PM	0	117	12	0	4	3	0	0	0	0	0	0	0	136
7:00 PM	0	97	7	0	1	0	0	0	0	0	0	0	0	105
8:00 PM	0	98	5	0	7	1	0	0	0	0	0	0	0	111
9:00 PM	0	75	1	0	0	0	0	0	0	0	0	0	0	76
10:00 PM	1	46	1	0	0	1	0	0	0	0	0	0	0	49
11:00 PM	0	36	1	0	0	0	0	0	0	0	0	0	0	37
Total	**14**	**2,613**	**135**	**1**	**55**	**24**	**0**	**0**	**5**	**3**	**0**	**0**	**1**	**2,851**
Percent	**0.5%**	**91.7%**	**4.7%**	**0.0%**	**1.9%**	**0.8%**	**0.0%**	**0.0%**	**0.2%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Wednesday, May 24, 2017
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	10	0	0	0	0	0	0	0	0	0	0	0	10
1:00 AM	2	3	0	0	0	0	0	0	0	0	0	0	0	5
2:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	1	3	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	1	12	6	0	3	1	0	0	0	0	0	0	0	23
6:00 AM	2	43	6	0	2	0	0	0	0	0	0	0	0	53
7:00 AM	2	161	9	0	0	1	0	0	0	0	0	0	0	173
8:00 AM	2	172	2	0	0	0	0	0	0	0	0	0	0	176
9:00 AM	3	124	3	0	1	0	0	0	0	0	0	0	0	131
10:00 AM	1	131	6	0	0	0	0	0	0	0	0	0	0	138
11:00 AM	3	146	3	0	2	1	0	0	0	0	0	0	0	155
12:00 PM	0	194	7	0	4	0	0	0	0	0	0	0	0	205
1:00 PM	2	166	5	0	0	0	0	0	0	0	0	0	0	173
2:00 PM	2	184	3	0	0	1	0	0	0	0	0	0	0	190
3:00 PM	1	192	2	0	1	0	0	0	0	0	0	0	0	196
4:00 PM	2	179	4	0	2	1	0	0	0	0	0	0	0	188
5:00 PM	2	156	6	0	0	1	0	0	0	0	0	0	0	165
6:00 PM	1	121	4	0	3	1	0	0	0	0	0	0	0	130
7:00 PM	0	92	1	0	0	0	0	0	0	0	0	0	0	93
8:00 PM	0	64	2	0	0	0	0	0	0	0	0	0	0	66
9:00 PM	1	27	1	0	1	0	0	0	0	0	0	0	1	31
10:00 PM	1	21	0	0	0	0	0	0	0	0	0	0	0	22
11:00 PM	0	24	0	0	0	0	0	0	0	0	0	0	1	25
Total	**28**	**2,226**	**74**	**0**	**19**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**2,356**
Percent	**1.2%**	**94.5%**	**3.1%**	**0.0%**	**0.8%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	

Deon Fouche: (415) 757-7714
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Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Thursday, May 25, 2017
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	27	0	0	0	1	0	0	0	0	0	0	0	28
1:00 AM	1	10	1	0	0	0	0	0	0	0	0	0	0	12
2:00 AM	0	23	0	0	0	1	0	0	0	0	0	0	0	24
3:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	7	0	0	0	0	0	0	0	1	0	0	0	8
5:00 AM	0	23	0	0	1	0	0	0	0	0	0	0	0	24
6:00 AM	0	33	1	0	2	1	0	0	0	0	0	0	0	37
7:00 AM	1	110	3	0	1	0	0	0	2	1	0	0	0	118
8:00 AM	0	140	4	0	0	1	0	0	0	0	0	0	0	145
9:00 AM	1	138	4	0	0	0	0	0	0	1	0	0	0	144
10:00 AM	0	112	6	0	0	4	0	0	0	3	0	0	0	125
11:00 AM	2	196	3	0	0	0	0	0	2	0	0	0	0	203
12:00 PM	0	345	5	0	0	1	0	0	1	3	0	0	0	355
1:00 PM	0	354	2	0	0	1	0	0	0	3	0	0	0	360
2:00 PM	3	323	5	0	0	0	0	0	0	4	0	0	0	335
3:00 PM	2	488	5	0	0	1	0	0	2	5	0	0	1	504
4:00 PM	0	646	4	0	0	8	0	0	0	4	0	0	1	663
5:00 PM	1	536	1	0	0	0	0	0	0	2	0	0	1	541
6:00 PM	3	313	1	0	0	0	0	0	0	0	0	0	0	317
7:00 PM	0	204	4	0	0	0	0	0	0	0	0	0	0	208
8:00 PM	0	220	1	0	0	1	0	0	0	1	0	0	0	223
9:00 PM	0	195	3	0	1	1	0	0	1	0	0	0	0	201
10:00 PM	3	120	2	0	0	1	0	0	0	0	0	0	0	126
11:00 PM	0	62	1	0	0	0	0	0	0	0	0	0	0	63
Total	**17**	**4,631**	**56**	**0**	**5**	**22**	**0**	**0**	**8**	**28**	**0**	**0**	**3**	**4,770**
Percent	**0.4%**	**97.1%**	**1.2%**	**0.0%**	**0.1%**	**0.5%**	**0.0%**	**0.0%**	**0.2%**	**0.6%**	**0.0%**	**0.0%**	**0.1%**	

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Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Thursday, May 25, 2017
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	1	10	2	0	0	0	0	0	0	0	0	0	0	13
1:00 AM	0	7	0	0	0	0	0	0	0	0	0	0	0	7
2:00 AM	0	6	2	0	0	0	0	0	0	0	0	0	0	8
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	7
5:00 AM	0	37	1	0	1	0	0	0	0	0	0	0	0	39
6:00 AM	1	52	2	0	2	0	0	0	0	0	0	0	0	57
7:00 AM	4	203	1	0	2	0	0	0	0	0	0	0	0	210
8:00 AM	2	159	7	0	1	0	0	0	0	0	0	0	0	169
9:00 AM	2	114	7	0	2	2	0	0	0	0	0	0	0	127
10:00 AM	2	119	11	0	2	0	0	0	0	0	0	0	0	134
11:00 AM	2	134	5	0	2	1	0	0	0	0	0	0	0	144
12:00 PM	2	186	5	0	0	1	0	0	0	0	0	0	0	194
1:00 PM	2	182	4	0	4	2	0	0	0	0	0	0	0	194
2:00 PM	1	217	8	0	3	0	0	0	0	0	0	0	0	229
3:00 PM	3	188	11	0	3	0	0	0	0	0	0	0	0	205
4:00 PM	4	224	6	0	2	0	0	1	0	0	0	0	0	237
5:00 PM	4	226	6	0	3	0	0	0	0	1	0	0	0	240
6:00 PM	2	125	4	0	3	0	0	0	0	0	0	0	0	134
7:00 PM	0	109	4	0	1	1	0	0	0	0	0	0	0	115
8:00 PM	2	80	1	0	2	1	0	0	0	0	0	0	0	86
9:00 PM	1	46	1	0	2	0	0	0	0	0	0	0	0	50
10:00 PM	1	26	5	1	1	0	0	0	0	0	0	0	0	34
11:00 PM	1	29	0	0	6	0	0	0	0	0	0	0	0	36
Total	**37**	**2,487**	**94**	**1**	**42**	**8**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**2,671**
Percent	**1.4%**	**93.1%**	**3.5%**	**0.0%**	**1.6%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Friday, May 26, 2017
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	47	2	0	0	0	0	0	0	0	0	0	0	49
1:00 AM	0	47	1	0	0	0	0	0	0	0	0	0	0	48
2:00 AM	1	22	0	0	0	0	0	0	0	0	0	0	0	23
3:00 AM	0	11	0	0	0	0	0	0	0	0	0	0	0	11
4:00 AM	1	14	0	0	0	0	0	0	0	0	0	0	0	15
5:00 AM	0	21	0	0	0	0	0	0	0	0	0	0	0	21
6:00 AM	0	78	1	0	0	0	0	0	0	0	0	0	0	79
7:00 AM	0	169	7	0	0	1	0	0	2	0	0	0	0	179
8:00 AM	0	278	6	0	0	2	0	0	0	0	0	0	0	286
9:00 AM	1	346	2	0	0	1	0	0	0	0	0	0	0	350
10:00 AM	1	335	0	0	0	1	0	0	0	0	0	0	1	338
11:00 AM	0	396	9	0	0	1	0	0	0	1	0	0	0	407
12:00 PM	1	419	10	0	0	1	0	0	0	0	0	0	0	431
1:00 PM	1	404	7	0	0	2	0	0	2	1	0	0	1	418
2:00 PM	6	402	9	0	0	3	0	0	1	0	0	0	0	421
3:00 PM	4	372	10	0	1	5	0	0	0	0	0	0	0	392
4:00 PM	0	466	14	0	0	2	0	0	0	0	0	0	1	483
5:00 PM	3	352	7	0	0	1	0	0	1	2	0	0	0	366
6:00 PM	1	396	4	0	0	0	0	0	0	0	0	0	0	401
7:00 PM	2	282	4	0	0	0	0	0	0	0	0	0	0	288
8:00 PM	0	221	7	0	0	4	0	0	0	0	0	0	0	232
9:00 PM	0	252	5	0	0	4	0	0	0	0	0	0	0	261
10:00 PM	2	276	6	0	1	0	0	0	1	0	0	0	0	286
11:00 PM	2	236	8	0	0	0	0	0	0	0	0	0	0	246
Total	**26**	**5,842**	**119**	**0**	**2**	**28**	**0**	**0**	**7**	**4**	**0**	**0**	**3**	**6,031**
Percent	**0.4%**	**96.9%**	**2.0%**	**0.0%**	**0.0%**	**0.5%**	**0.0%**	**0.0%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Friday, May 26, 2017
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	26	2	0	0	0	0	0	0	0	0	0	0	28
1:00 AM	1	20	1	0	0	0	0	0	0	0	0	0	0	22
2:00 AM	0	14	0	0	0	0	0	0	0	0	0	0	0	14
3:00 AM	0	10	1	0	0	0	0	0	0	0	0	0	0	11
4:00 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	9
5:00 AM	2	16	0	0	2	0	0	0	0	0	0	0	0	20
6:00 AM	2	52	4	0	2	0	0	0	0	0	0	0	0	60
7:00 AM	1	148	12	0	3	1	0	0	0	0	0	0	0	165
8:00 AM	5	166	9	0	1	3	0	0	0	2	0	0	0	186
9:00 AM	1	195	9	0	3	4	0	0	0	1	0	0	0	213
10:00 AM	3	161	16	0	5	1	0	0	0	2	0	0	0	188
11:00 AM	5	179	23	0	5	0	0	0	1	0	0	0	0	213
12:00 PM	6	165	18	0	3	2	0	0	0	0	0	0	0	194
1:00 PM	8	176	16	0	9	2	0	0	0	0	0	0	0	211
2:00 PM	5	187	20	0	4	1	0	0	0	0	0	0	0	217
3:00 PM	9	231	20	0	6	1	0	0	0	0	0	0	0	267
4:00 PM	9	198	16	0	3	1	0	0	0	0	0	0	0	227
5:00 PM	16	173	18	0	3	1	0	0	0	0	0	0	0	211
6:00 PM	3	120	23	0	2	0	0	0	0	0	0	0	0	148
7:00 PM	2	125	12	1	3	0	0	0	0	0	0	0	1	144
8:00 PM	1	96	17	0	1	0	0	0	0	0	0	0	0	115
9:00 PM	0	88	9	0	1	0	0	0	0	0	0	0	0	98
10:00 PM	1	113	8	0	5	1	0	0	0	0	0	0	0	128
11:00 PM	0	124	6	0	1	3	0	0	0	0	0	0	0	134
Total	**80**	**2,792**	**260**	**1**	**62**	**21**	**0**	**0**	**1**	**5**	**0**	**0**	**1**	**3,223**
Percent	**2.5%**	**86.6%**	**8.1%**	**0.0%**	**1.9%**	**0.7%**	**0.0%**	**0.0%**	**0.0%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Total Study Average
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	17	3	0	0	0	0	0	0	0	0	0	0	**20**
1:00 AM	0	13	2	0	0	0	0	0	0	0	0	0	0	**15**
2:00 AM	0	9	2	0	0	0	0	0	0	0	0	0	0	**11**
3:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
4:00 AM	0	8	1	0	0	0	0	0	0	0	0	0	0	**9**
5:00 AM	0	15	2	0	1	0	0	0	0	0	0	0	0	**18**
6:00 AM	0	33	7	0	2	1	0	0	0	0	0	0	0	**43**
7:00 AM	1	74	14	0	3	1	0	0	1	0	0	0	0	**94**
8:00 AM	1	105	21	0	1	4	0	0	0	0	0	0	0	**132**
9:00 AM	1	127	21	0	4	3	0	0	0	1	0	0	0	**157**
10:00 AM	1	126	22	0	1	4	0	0	0	1	0	0	0	**155**
11:00 AM	2	173	24	0	2	2	0	0	1	0	0	0	0	**204**
12:00 PM	2	236	25	0	3	1	0	0	0	3	0	0	0	**270**
1:00 PM	2	216	16	0	2	2	0	0	0	1	0	0	0	**239**
2:00 PM	3	205	19	0	3	1	0	0	0	1	0	0	0	**232**
3:00 PM	3	239	23	0	3	3	0	0	0	1	0	0	0	**272**
4:00 PM	2	301	35	0	3	5	0	0	0	1	0	0	0	**347**
5:00 PM	2	274	30	0	4	2	0	0	0	1	0	0	0	**313**
6:00 PM	1	182	17	0	2	2	0	0	0	0	0	0	0	**204**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	1	115	12	0	2	2	0	0	0	0	0	0	0	**132**
9:00 PM	0	103	7	0	1	1	0	0	0	0	0	0	0	**112**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	1	59	5	0	0	0	0	0	0	0	0	0	0	**65**
Total	**23**	**2,635**	**309**	**0**	**37**	**34**	**0**	**0**	**2**	**10**	**0**	**0**	**0**	**3,050**
Percent	**0.8%**	**86.4%**	**10.1%**	**0.0%**	**1.2%**	**1.1%**	**0.0%**	**0.0%**	**0.1%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Deon Fouche: (415) 757-7714
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Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Total Study Average
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	10	2	0	0	0	0	0	0	0	0	0	0	**12**
1:00 AM	1	6	1	0	0	0	0	0	0	0	0	0	0	**8**
2:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
3:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	**5**
5:00 AM	1	14	2	0	2	0	0	0	0	0	0	0	0	**19**
6:00 AM	1	32	5	0	1	0	0	0	0	0	0	0	0	**39**
7:00 AM	2	103	10	0	2	0	0	0	0	0	0	0	0	**117**
8:00 AM	2	107	10	0	2	0	0	0	0	0	0	0	0	**121**
9:00 AM	2	97	12	0	3	1	0	0	0	0	0	0	0	**115**
10:00 AM	1	87	13	0	3	0	0	0	0	0	0	0	0	**104**
11:00 AM	3	101	15	0	3	1	0	0	0	0	0	0	0	**123**
12:00 PM	3	119	14	0	4	1	0	0	0	0	0	0	0	**141**
1:00 PM	3	115	16	0	4	1	0	0	0	0	0	0	0	**139**
2:00 PM	2	122	15	0	3	1	0	0	0	0	0	0	0	**143**
3:00 PM	3	127	14	0	4	1	0	0	0	0	0	0	0	**149**
4:00 PM	3	122	13	0	3	1	0	0	0	0	0	0	0	**142**
5:00 PM	5	116	13	0	3	1	0	0	0	0	0	0	0	**138**
6:00 PM	3	79	11	0	2	0	0	0	0	0	0	0	0	**95**
7:00 PM	1	68	6	0	2	0	0	0	0	0	0	0	0	**77**
8:00 PM	1	48	7	0	1	0	0	0	0	0	0	0	0	**57**
9:00 PM	1	35	4	0	2	0	0	0	0	0	0	0	0	**42**
10:00 PM	0	31	3	0	1	1	0	0	0	0	0	0	0	**36**
11:00 PM	0	29	2	0	1	1	0	0	0	0	0	0	0	**33**
Total	**38**	**1,580**	**191**	**0**	**46**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,865**
Percent	**2.0%**	**84.7%**	**10.2%**	**0.0%**	**2.5%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Deon Fouche: (415) 757-7714
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Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

3-Day (Tuesday - Thursday) Average
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	15	1	0	0	0	0	0	0	0	0	0	0	17
1:00 AM	0	11	1	0	0	0	0	0	0	0	0	0	0	12
2:00 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	10
3:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	4
4:00 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	10
5:00 AM	0	25	1	0	1	0	0	0	0	0	0	0	0	27
6:00 AM	0	37	5	0	3	1	0	0	0	0	0	0	0	47
7:00 AM	1	87	12	0	3	1	0	0	1	1	0	0	0	106
8:00 AM	1	113	16	0	0	3	0	0	0	0	0	0	0	133
9:00 AM	2	118	17	0	2	3	0	0	0	1	0	0	0	143
10:00 AM	0	124	17	0	1	3	0	0	0	1	0	0	0	147
11:00 AM	1	186	15	0	1	3	0	0	1	0	0	0	0	207
12:00 PM	0	277	15	0	1	1	0	0	1	6	0	0	1	302
1:00 PM	0	247	8	0	2	2	0	0	0	2	0	0	1	262
2:00 PM	2	236	13	0	4	1	0	0	0	2	0	0	0	257
3:00 PM	1	318	12	0	4	2	0	0	1	2	0	0	0	340
4:00 PM	1	407	10	0	2	4	0	0	0	2	0	0	0	427
5:00 PM	1	365	9	0	4	1	0	0	0	1	0	0	1	382
6:00 PM	2	207	7	0	2	2	0	0	1	1	0	0	0	221
7:00 PM	0	150	6	0	0	0	0	0	0	0	0	0	1	158
8:00 PM	1	145	3	0	2	1	0	0	1	0	0	0	0	154
9:00 PM	0	116	1	0	0	0	0	0	1	0	0	0	0	119
10:00 PM	2	73	1	0	0	1	0	0	0	0	0	0	0	77
11:00 PM	0	44	1	0	0	0	0	0	0	0	0	0	0	45
Total	**16**	**3,322**	**173**	**0**	**34**	**29**	**0**	**0**	**7**	**19**	**0**	**0**	**5**	**3,606**
Percent	**0.4%**	**92.1%**	**4.8%**	**0.0%**	**1.0%**	**0.8%**	**0.0%**	**0.0%**	**0.2%**	**0.5%**	**0.0%**	**0.0%**	**0.1%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

3-Day (Tuesday - Thursday) Average
Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	7	1	0	0	0	0	0	0	0	0	0	0	8
1:00 AM	1	4	0	0	0	0	0	0	0	0	0	0	0	4
2:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	5
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	3	2	0	0	0	0	0	0	0	0	0	0	5
5:00 AM	0	21	3	0	2	0	0	0	0	0	0	0	0	27
6:00 AM	1	41	5	0	2	0	0	0	0	0	0	0	0	49
7:00 AM	3	148	9	0	1	0	0	0	0	0	0	0	0	162
8:00 AM	2	140	9	0	3	0	0	0	0	0	0	0	0	154
9:00 AM	2	102	11	0	3	1	0	0	0	0	0	0	0	120
10:00 AM	2	105	13	0	2	1	0	0	0	0	0	0	0	123
11:00 AM	3	121	11	0	3	1	0	0	0	0	0	0	0	139
12:00 PM	1	158	10	0	4	1	0	0	0	0	0	0	0	174
1:00 PM	3	146	14	0	4	1	0	0	0	0	0	0	0	168
2:00 PM	2	160	10	0	3	1	0	0	0	0	0	0	0	175
3:00 PM	2	156	9	0	4	1	0	0	0	0	0	0	0	173
4:00 PM	3	160	9	0	3	0	0	0	0	0	0	0	0	175
5:00 PM	4	152	9	0	4	1	0	0	0	0	0	0	0	170
6:00 PM	3	104	8	0	2	0	0	0	0	0	0	0	0	119
7:00 PM	1	80	5	0	2	0	0	0	0	0	0	0	0	88
8:00 PM	1	56	4	0	1	1	0	0	0	0	0	0	0	63
9:00 PM	1	34	2	0	2	0	0	0	0	0	0	0	0	39
10:00 PM	1	23	3	0	1	1	0	0	0	0	0	0	0	28
11:00 PM	0	19	1	0	2	0	0	0	0	0	0	0	0	22
Total	**37**	**1,945**	**152**	**0**	**47**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2,193**
Percent	**1.7%**	**88.7%**	**6.9%**	**0.0%**	**2.1%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Vehicle Speed Report Summary

Location: Fairground Rd W/O Airport Rd
Count Direction: Eastbound / Westbound
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

	Speed Range (mph)																Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
	Study Total																	
Eastbound	2,078	4,022	5,156	9,664	2,065	118	7	4	2	7	3	0	0	2	0	0	1	23,129
Percent	9.0%	17.4%	22.3%	41.8%	8.9%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Westbound	780	2,741	5,418	3,280	817	39	18	0	3	0	0	0	0	1	0	0	1	13,098
Percent	6.0%	20.9%	41.4%	25.0%	6.2%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	2,858	6,763	10,574	12,944	2,882	157	25	4	5	7	3	0	0	3	0	0	2	36,227
Percent	7.9%	18.7%	29.2%	35.7%	8.0%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Eastbound			**Eastbound**		
50th Percentile (Median)	20.0	mph	Mean (Average) Speed	18.8	mph
85th Percentile	24.0	mph	10 mph Pace	15.4 - 25.4	mph
95th Percentile	26.2	mph	Percent in Pace	64.3	%
Westbound			**Westbound**		
50th Percentile (Median)	17.4	mph	Mean (Average) Speed	17.7	mph
85th Percentile	22.8	mph	10 mph Pace	13.2 - 23.2	mph
95th Percentile	25.5	mph	Percent in Pace	68.4	%

Deon Fouche: (415) 757-7714
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Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Saturday, May 20, 2017
Eastbound

	Speed Range (mph)																Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	1	9	2	1	0	0	0	0	0	0	0	0	0	0	0	**13**
1:00 AM	0	0	1	8	2	0	0	0	0	0	0	0	0	0	0	0	0	**11**
2:00 AM	1	0	5	8	1	0	0	0	0	0	0	0	0	0	0	0	0	**15**
3:00 AM	0	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**6**
4:00 AM	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
5:00 AM	0	1	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**5**
6:00 AM	1	0	4	13	1	1	0	0	0	0	0	0	0	0	0	0	0	**20**
7:00 AM	0	0	3	20	9	3	0	0	0	0	0	0	0	0	0	0	0	**35**
8:00 AM	0	1	6	30	23	2	0	0	0	0	0	0	0	0	0	0	0	**62**
9:00 AM	0	2	12	61	31	3	0	0	0	0	0	0	0	0	0	0	0	**109**
10:00 AM	0	1	3	57	20	3	0	0	0	0	0	0	0	0	0	0	0	**84**
11:00 AM	1	3	25	71	21	2	0	0	0	0	0	0	0	0	0	0	0	**123**
12:00 PM	1	9	24	101	22	2	0	0	0	0	0	0	0	0	0	0	0	**159**
1:00 PM	1	6	32	92	24	1	0	0	0	0	0	0	0	0	0	0	0	**156**
2:00 PM	1	1	25	76	19	1	0	0	0	0	0	0	0	2	0	0	0	**125**
3:00 PM	1	4	32	95	23	4	0	0	0	0	1	0	0	0	0	0	1	**161**
4:00 PM	0	3	26	135	15	2	0	0	0	0	0	0	0	0	0	0	0	**181**
5:00 PM	0	1	36	105	20	2	0	0	0	0	0	0	0	0	0	0	0	**164**
6:00 PM	2	3	16	72	31	1	0	0	0	0	0	0	0	0	0	0	0	**125**
7:00 PM	0	3	24	83	19	1	0	0	0	0	0	0	0	0	0	0	0	**130**
8:00 PM	0	4	25	60	10	2	0	0	0	0	0	0	0	0	0	0	0	**101**
9:00 PM	0	3	17	50	8	0	0	0	0	0	0	0	0	0	0	0	0	**78**
10:00 PM	0	5	8	44	9	1	0	0	0	0	0	0	0	0	0	0	0	**67**
11:00 PM	0	0	3	18	5	0	0	0	0	0	0	0	0	0	0	0	0	**26**
Total	**9**	**51**	**330**	**1,220**	**317**	**32**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**1**	**1,963**
Percent	**0.5%**	**2.6%**	**16.8%**	**62.1%**	**16.1%**	**1.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.1%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	22.5	mph	Mean (Average) Speed	22.5	mph
85th Percentile	25.3	mph	10 mph Pace	17.3 - 27.3	mph
95th Percentile	27.7	mph	Percent in Pace	86.6	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Saturday, May 20, 2017
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	7	1	0	0	0	0	0	0	0	0	0	0	0	0	**9**
1:00 AM	0	3	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
2:00 AM	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	**5**
4:00 AM	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	0	1	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**7**
6:00 AM	0	2	2	9	2	0	0	0	0	0	0	0	0	0	0	0	0	**15**
7:00 AM	0	1	11	18	4	0	0	0	0	0	0	0	0	0	0	0	0	**34**
8:00 AM	1	1	13	31	12	0	0	0	0	0	0	0	0	0	0	0	0	**58**
9:00 AM	0	3	16	49	10	1	0	0	0	0	0	0	0	0	0	0	0	**79**
10:00 AM	0	3	8	27	10	1	0	0	0	0	0	0	0	0	0	0	0	**49**
11:00 AM	1	2	20	49	4	0	0	0	0	0	0	0	0	0	0	0	0	**76**
12:00 PM	1	5	19	50	7	0	0	0	0	0	0	0	0	0	0	0	0	**82**
1:00 PM	0	2	14	52	7	2	0	0	0	0	0	0	0	0	0	0	0	**77**
2:00 PM	0	8	18	39	11	1	0	0	0	0	0	0	0	0	0	0	0	**77**
3:00 PM	0	11	18	48	14	1	0	0	0	0	0	0	0	0	0	0	0	**92**
4:00 PM	2	6	24	26	7	0	0	0	0	0	0	0	0	0	0	0	0	**65**
5:00 PM	0	3	10	37	7	2	0	0	0	0	0	0	0	0	0	0	0	**59**
6:00 PM	1	5	11	29	10	0	0	0	0	0	0	0	0	0	0	0	0	**56**
7:00 PM	0	3	17	24	6	1	1	0	0	0	0	0	0	0	0	0	0	**52**
8:00 PM	0	1	15	20	3	1	0	0	0	0	0	0	0	0	0	0	0	**40**
9:00 PM	0	3	13	20	2	0	0	0	0	0	0	0	0	0	0	0	0	**38**
10:00 PM	0	0	2	9	4	0	0	0	0	0	0	0	0	0	0	0	0	**15**
11:00 PM	0	0	5	7	1	0	0	0	0	0	0	0	0	0	0	0	0	**13**
Total	**7**	**63**	**244**	**564**	**126**	**10**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,015**
Percent	**0.7%**	**6.2%**	**24.0%**	**55.6%**	**12.4%**	**1.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	21.4	mph	Mean (Average) Speed	21.3	mph
85th Percentile	24.8	mph	10 mph Pace	17.1 - 27.1	mph
95th Percentile	26.9	mph	Percent in Pace	84.9	%

Deon Fouche: (415) 757-7714
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Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Sunday, May 21, 2017
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	2	13	0	1	0	0	0	0	0	0	0	0	0	0	0	**17**
1:00 AM	0	0	2	6	2	0	0	0	0	0	0	0	0	0	0	0	0	**10**
2:00 AM	0	0	2	9	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
3:00 AM	0	1	2	9	1	0	0	0	0	0	0	0	0	0	0	0	0	**13**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	0	1	10	4	0	0	0	0	0	0	0	0	0	0	0	0	**15**
7:00 AM	0	0	2	12	11	1	0	0	0	0	0	0	0	0	0	0	0	**26**
8:00 AM	0	1	7	27	17	2	0	0	0	0	0	0	0	0	0	0	0	**54**
9:00 AM	0	1	7	66	26	1	0	0	0	0	0	0	0	0	0	0	0	**101**
10:00 AM	0	1	28	60	18	0	0	0	0	0	0	0	0	0	0	0	0	**107**
11:00 AM	1	2	15	71	20	2	1	0	0	0	0	0	0	0	0	0	0	**112**
12:00 PM	0	6	24	102	17	1	0	0	0	0	0	0	0	0	0	0	0	**150**
1:00 PM	1	7	18	92	13	0	0	0	0	0	0	0	0	0	0	0	0	**131**
2:00 PM	2	3	14	87	11	0	0	0	0	0	0	0	0	0	0	0	0	**117**
3:00 PM	1	2	24	69	8	0	0	0	0	0	0	0	0	0	0	0	0	**104**
4:00 PM	1	4	24	62	28	0	0	0	0	0	0	0	0	0	0	0	0	**119**
5:00 PM	1	7	31	85	33	0	0	0	0	0	0	0	0	0	0	0	0	**157**
6:00 PM	0	1	7	57	21	1	0	0	0	0	0	0	0	0	0	0	0	**87**
7:00 PM	0	4	23	54	15	2	0	0	0	0	0	0	0	0	0	0	0	**98**
8:00 PM	0	0	13	33	8	0	0	0	0	0	0	0	0	0	0	0	0	**54**
9:00 PM	0	0	10	21	8	0	0	0	0	0	0	0	0	0	0	0	0	**39**
10:00 PM	0	2	5	14	4	0	0	0	0	0	0	0	0	0	0	0	0	**25**
11:00 PM	2	3	6	12	5	0	0	0	0	0	0	0	0	0	0	0	0	**28**
Total	**9**	**46**	**268**	**973**	**270**	**11**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,578**
Percent	**0.6%**	**2.9%**	**17.0%**	**61.7%**	**17.1%**	**0.7%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	22.5	mph	Mean (Average) Speed	22.3	mph
85th Percentile	25.3	mph	10 mph Pace	17.9 - 27.9	mph
95th Percentile	27.3	mph	Percent in Pace	86.6	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Sunday, May 21, 2017
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	3	8	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
1:00 AM	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
2:00 AM	0	0	0	6	3	0	0	0	0	0	0	0	0	0	0	0	0	**9**
3:00 AM	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**4**
5:00 AM	3	0	2	6	2	0	0	0	0	0	0	0	0	0	0	0	0	**13**
6:00 AM	0	1	3	9	3	0	0	0	0	0	0	0	0	0	0	0	0	**16**
7:00 AM	0	0	3	10	4	1	0	0	0	0	0	0	0	0	0	0	0	**18**
8:00 AM	1	1	8	27	11	0	0	0	0	0	0	0	0	0	0	0	0	**48**
9:00 AM	0	2	13	31	10	0	0	0	0	0	0	0	0	0	0	0	0	**56**
10:00 AM	0	5	16	32	6	1	0	0	0	0	0	0	0	0	0	0	0	**60**
11:00 AM	0	2	5	35	8	0	0	0	0	0	0	0	0	0	0	0	0	**50**
12:00 PM	2	3	19	35	8	0	0	0	0	0	0	0	0	0	0	0	0	**67**
1:00 PM	2	3	13	31	5	0	0	0	0	0	0	0	0	0	0	0	0	**54**
2:00 PM	0	5	20	28	8	0	0	0	0	0	0	0	0	0	0	0	0	**61**
3:00 PM	0	4	17	30	4	0	0	0	0	0	0	0	0	0	0	0	0	**55**
4:00 PM	1	1	11	37	17	0	0	0	0	0	0	0	0	0	0	0	0	**67**
5:00 PM	1	2	9	29	9	0	0	0	0	0	0	0	0	0	0	0	0	**50**
6:00 PM	4	0	6	26	3	1	0	0	0	0	0	0	0	0	0	0	0	**40**
7:00 PM	0	1	14	21	6	0	0	0	0	0	0	0	0	0	0	0	0	**42**
8:00 PM	0	1	10	10	3	0	0	0	0	0	0	0	0	0	0	0	0	**24**
9:00 PM	1	3	2	14	5	0	0	0	0	0	0	0	0	0	0	0	0	**25**
10:00 PM	0	0	3	6	1	0	0	0	0	0	0	0	0	0	0	0	0	**10**
11:00 PM	0	4	5	4	1	0	0	0	0	0	0	0	0	0	0	0	0	**14**
Total	**15**	**39**	**185**	**442**	**119**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**804**
Percent	**1.9%**	**4.9%**	**23.0%**	**55.0%**	**14.8%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	21.8	mph	Mean (Average) Speed	21.4	mph
85th Percentile	25.0	mph	10 mph Pace	17.2 - 27.2	mph
95th Percentile	27.0	mph	Percent in Pace	82.5	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Monday, May 22, 2017
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	2	3	5	5	0	0	0	0	0	0	0	0	0	0	0	0	**15**
1:00 AM	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	1	0	3	8	1	0	0	0	0	0	0	0	0	0	0	0	**13**
5:00 AM	0	1	5	5	2	0	0	0	0	0	0	0	0	0	0	0	0	**13**
6:00 AM	1	2	5	29	11	0	0	0	0	0	2	0	0	0	0	0	0	**50**
7:00 AM	0	3	8	51	31	3	0	0	0	0	0	0	0	0	0	0	0	**96**
8:00 AM	0	3	26	57	37	1	0	0	0	0	0	0	0	0	0	0	0	**124**
9:00 AM	0	2	17	58	35	1	0	0	0	0	0	0	0	0	0	0	0	**113**
10:00 AM	0	3	24	55	29	4	1	0	0	0	0	0	0	0	0	0	0	**116**
11:00 AM	0	5	40	89	28	2	0	0	0	0	0	0	0	0	0	0	0	**164**
12:00 PM	1	5	68	126	44	0	1	0	0	0	0	0	0	0	0	0	0	**245**
1:00 PM	3	6	31	129	25	0	0	0	0	0	0	0	0	0	0	0	0	**194**
2:00 PM	0	5	42	104	35	3	0	0	0	0	0	0	0	0	0	0	0	**189**
3:00 PM	9	14	36	122	42	4	0	0	0	0	0	0	0	0	0	0	0	**227**
4:00 PM	10	26	141	164	27	1	1	0	0	0	0	0	0	0	0	0	0	**370**
5:00 PM	20	32	117	167	28	0	0	0	0	0	0	0	0	0	0	0	0	**364**
6:00 PM	0	4	33	90	28	2	0	0	0	0	0	0	0	0	0	0	0	**157**
7:00 PM	1	1	13	66	18	2	0	0	0	0	0	0	0	0	0	0	0	**101**
8:00 PM	1	3	14	44	12	0	0	0	0	0	0	0	0	0	0	0	0	**74**
9:00 PM	0	3	4	29	19	0	1	0	0	0	0	0	0	0	0	0	0	**56**
10:00 PM	1	1	1	15	10	2	0	0	0	0	0	0	0	0	0	0	0	**30**
11:00 PM	0	0	1	12	5	0	0	0	0	0	0	0	0	0	0	0	0	**18**
Total	**47**	**122**	**630**	**1,428**	**481**	**26**	**4**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**2,740**
Percent	**1.7%**	**4.5%**	**23.0%**	**52.1%**	**17.6%**	**0.9%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	22.0	mph	Mean (Average) Speed	21.6	mph
85th Percentile	25.4	mph	10 mph Pace	17.3 - 27.3	mph
95th Percentile	27.5	mph	Percent in Pace	80.3	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Monday, May 22, 2017
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	2	5	2	0	0	0	0	0	0	0	0	0	0	0	0	**10**
1:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	0	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	**6**
5:00 AM	0	1	2	8	3	0	0	0	0	0	0	0	0	0	0	0	0	**14**
6:00 AM	2	0	9	14	12	1	0	0	0	0	0	0	0	0	0	0	0	**38**
7:00 AM	1	1	11	77	23	2	0	0	0	0	0	0	0	0	0	0	0	**115**
8:00 AM	1	4	18	67	10	0	0	0	0	0	0	0	0	0	0	0	0	**100**
9:00 AM	1	4	27	51	16	0	0	0	0	0	0	0	0	0	0	0	0	**99**
10:00 AM	0	5	22	36	12	1	0	0	0	0	0	0	0	0	0	0	0	**76**
11:00 AM	2	13	32	49	12	0	0	0	0	0	0	0	0	0	0	0	0	**108**
12:00 PM	4	5	29	69	16	0	0	0	0	0	0	0	0	0	0	0	0	**123**
1:00 PM	1	9	31	65	16	0	0	0	0	0	0	0	0	0	0	0	0	**122**
2:00 PM	0	3	32	60	22	1	2	0	0	0	0	0	0	0	0	0	0	**120**
3:00 PM	3	8	27	61	13	1	0	0	0	0	0	0	0	0	0	0	0	**113**
4:00 PM	1	9	18	62	20	0	0	0	0	0	0	0	0	0	0	0	0	**110**
5:00 PM	2	5	37	75	10	1	0	0	0	0	0	0	0	0	0	0	0	**130**
6:00 PM	2	6	18	40	7	0	0	0	0	0	0	0	0	0	0	0	0	**73**
7:00 PM	0	2	11	24	5	0	0	0	0	0	0	0	0	0	0	0	0	**42**
8:00 PM	0	3	11	19	4	0	0	0	0	0	0	0	0	0	0	0	0	**37**
9:00 PM	1	1	1	6	2	0	0	0	0	0	0	0	0	0	0	0	0	**11**
10:00 PM	1	1	2	11	1	0	0	0	0	0	0	0	0	0	0	0	0	**16**
11:00 PM	1	1	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	**7**
Total	**23**	**82**	**346**	**806**	**211**	**8**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,478**
Percent	**1.6%**	**5.5%**	**23.4%**	**54.5%**	**14.3%**	**0.5%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	21.6	mph	Mean (Average) Speed	21.3	mph
85th Percentile	24.8	mph	10 mph Pace	16.6 - 26.6	mph
95th Percentile	26.6	mph	Percent in Pace	82.9	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Tuesday, May 23, 2017
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	0	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**7**
1:00 AM	0	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
2:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	0	1	4	1	0	0	0	0	0	0	0	0	0	0	0	0	**6**
5:00 AM	1	1	0	10	4	0	0	0	0	0	0	0	0	0	0	0	0	**16**
6:00 AM	1	2	9	27	10	0	0	0	0	0	0	0	0	0	0	0	0	**49**
7:00 AM	1	1	11	35	25	0	0	0	0	0	0	0	0	0	0	0	0	**73**
8:00 AM	0	1	22	62	28	1	0	0	0	0	0	0	0	0	0	0	0	**114**
9:00 AM	3	9	31	69	17	2	0	0	0	0	0	0	0	0	0	0	0	**131**
10:00 AM	0	9	46	58	15	0	0	0	0	0	0	0	0	0	0	0	0	**128**
11:00 AM	7	5	59	103	17	1	0	0	0	0	0	0	0	0	0	0	0	**192**
12:00 PM	0	0	68	183	45	0	1	0	0	0	0	0	0	0	0	0	0	**297**
1:00 PM	1	9	54	149	9	0	0	0	0	0	0	0	0	0	0	0	0	**222**
2:00 PM	1	9	103	117	22	2	0	0	0	0	0	0	0	0	0	0	0	**254**
3:00 PM	0	0	32	156	99	2	0	0	0	0	0	0	0	0	0	0	0	**289**
4:00 PM	1	27	149	203	30	1	0	0	0	0	0	0	0	0	0	0	0	**411**
5:00 PM	1	8	44	219	55	1	0	0	0	0	0	0	0	0	0	0	0	**328**
6:00 PM	1	5	62	78	63	2	0	0	0	0	0	0	0	0	0	0	0	**211**
7:00 PM	0	0	34	101	25	0	0	0	0	0	0	0	0	0	0	0	0	**160**
8:00 PM	1	0	26	77	21	2	0	0	0	0	0	0	0	0	0	0	0	**127**
9:00 PM	0	0	39	39	2	0	0	0	0	0	0	0	0	0	0	0	0	**80**
10:00 PM	1	0	42	9	3	0	0	0	0	0	0	0	0	0	0	0	0	**55**
11:00 PM	0	0	22	12	1	0	0	0	0	0	0	0	0	0	0	0	0	**35**
Total	**22**	**86**	**863**	**1,715**	**495**	**14**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3,196**
Percent	**0.7%**	**2.7%**	**27.0%**	**53.7%**	**15.5%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	21.9	mph	Mean (Average) Speed	21.6	mph
85th Percentile	25.0	mph	10 mph Pace	16.7 - 26.7	mph
95th Percentile	26.5	mph	Percent in Pace	86.8	%

Deon Fouche: (415) 757-7714
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Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Tuesday, May 23, 2017
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
1:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	0	0	4	11	2	1	0	0	0	0	0	0	0	0	0	0	0	18
6:00 AM	2	1	6	21	6	1	0	0	0	0	0	0	0	0	0	0	0	37
7:00 AM	1	0	20	59	23	0	0	0	0	0	0	0	0	0	0	0	0	103
8:00 AM	2	2	32	59	21	2	0	0	0	0	0	0	0	0	0	0	0	118
9:00 AM	0	8	25	56	13	0	0	0	0	0	0	0	0	0	0	0	0	102
10:00 AM	0	11	24	46	12	0	0	0	3	0	0	0	0	0	0	0	0	96
11:00 AM	2	6	24	60	26	0	0	0	0	0	0	0	0	0	0	0	0	118
12:00 PM	1	6	36	58	20	1	0	0	0	0	0	0	0	0	0	0	0	122
1:00 PM	2	14	37	73	11	0	0	0	0	0	0	0	0	0	0	0	0	137
2:00 PM	2	4	26	57	17	1	0	0	0	0	0	0	0	0	0	0	0	107
3:00 PM	1	8	34	60	14	0	0	0	0	0	0	0	0	0	0	0	0	117
4:00 PM	4	6	25	54	12	0	0	0	0	0	0	0	0	0	0	0	0	101
5:00 PM	7	1	26	54	15	1	1	0	0	0	0	0	0	0	0	0	0	105
6:00 PM	8	4	21	48	10	1	0	0	0	0	0	0	0	0	0	0	0	92
7:00 PM	1	6	13	33	3	0	0	0	0	0	0	0	0	0	0	0	0	56
8:00 PM	0	4	13	18	2	1	0	0	0	0	0	0	0	0	0	0	0	38
9:00 PM	1	3	17	12	4	0	0	0	0	0	0	0	0	0	0	0	0	37
10:00 PM	0	4	16	8	1	0	0	0	0	0	0	0	0	0	0	0	0	29
11:00 PM	0	1	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	6
Total	**34**	**89**	**401**	**797**	**217**	**9**	**1**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,551**
Percent	**2.2%**	**5.7%**	**25.9%**	**51.4%**	**14.0%**	**0.6%**	**0.1%**	**0.0%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	21.4	mph	Mean (Average) Speed	21	mph
85th Percentile	24.9	mph	10 mph Pace	16.6 - 26.6	mph
95th Percentile	26.7	mph	Percent in Pace	82.1	%

Deon Fouche: (415) 757-7714
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Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Wednesday, May 24, 2017
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	16
1:00 AM	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
2:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	0	9	8	0	0	0	0	0	0	0	0	0	0	0	0	0	17
5:00 AM	0	0	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
6:00 AM	0	0	9	47	0	0	0	0	0	0	0	0	0	0	0	0	0	56
7:00 AM	3	19	29	71	4	0	0	0	0	0	0	0	0	0	0	0	0	126
8:00 AM	0	1	29	107	4	0	0	0	0	0	0	0	0	0	0	0	0	141
9:00 AM	0	0	0	154	0	0	0	0	0	0	0	0	0	0	0	0	0	154
10:00 AM	0	0	0	145	42	0	0	0	0	0	0	0	0	0	0	0	0	187
11:00 AM	0	2	64	89	72	0	0	0	0	0	0	0	0	0	0	0	0	227
12:00 PM	0	1	30	160	28	23	0	4	0	7	0	0	0	0	0	0	0	253
1:00 PM	2	12	37	111	40	1	0	0	0	0	0	0	0	0	0	0	0	203
2:00 PM	4	18	36	101	24	0	0	0	0	0	0	0	0	0	0	0	0	183
3:00 PM	0	2	44	156	25	0	0	0	0	0	0	0	0	0	0	0	0	227
4:00 PM	0	4	31	137	29	4	0	0	2	0	0	0	0	0	0	0	0	207
5:00 PM	2	11	63	164	35	2	0	0	0	0	0	0	0	0	0	0	0	277
6:00 PM	0	1	5	89	40	1	0	0	0	0	0	0	0	0	0	0	0	136
7:00 PM	0	1	6	76	22	0	0	0	0	0	0	0	0	0	0	0	0	105
8:00 PM	1	1	11	85	13	0	0	0	0	0	0	0	0	0	0	0	0	111
9:00 PM	0	0	6	60	10	0	0	0	0	0	0	0	0	0	0	0	0	76
10:00 PM	1	0	6	39	3	0	0	0	0	0	0	0	0	0	0	0	0	49
11:00 PM	0	2	22	13	0	0	0	0	0	0	0	0	0	0	0	0	0	37
Total	**13**	**75**	**511**	**1,817**	**391**	**31**	**0**	**4**	**2**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,851**
Percent	**0.5%**	**2.6%**	**17.9%**	**63.7%**	**13.7%**	**1.1%**	**0.0%**	**0.1%**	**0.1%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	22.0	mph	Mean (Average) Speed	22.1	mph
85th Percentile	25.0	mph	10 mph Pace	17.2 - 27.2	mph
95th Percentile	26.6	mph	Percent in Pace	88.8	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Wednesday, May 24, 2017
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	7	2	0	0	0	0	0	0	0	0	0	0	0	0	**10**
1:00 AM	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
2:00 AM	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	**4**
5:00 AM	0	0	6	14	3	0	0	0	0	0	0	0	0	0	0	0	0	**23**
6:00 AM	1	1	25	20	5	1	0	0	0	0	0	0	0	0	0	0	0	**53**
7:00 AM	1	2	80	80	10	0	0	0	0	0	0	0	0	0	0	0	0	**173**
8:00 AM	0	2	128	45	1	0	0	0	0	0	0	0	0	0	0	0	0	**176**
9:00 AM	1	5	111	12	2	0	0	0	0	0	0	0	0	0	0	0	0	**131**
10:00 AM	0	16	58	12	43	0	8	0	0	0	0	0	0	0	0	0	1	**138**
11:00 AM	2	70	72	8	3	0	0	0	0	0	0	0	0	0	0	0	0	**155**
12:00 PM	0	3	188	11	3	0	0	0	0	0	0	0	0	0	0	0	0	**205**
1:00 PM	0	4	133	28	8	0	0	0	0	0	0	0	0	0	0	0	0	**173**
2:00 PM	1	7	174	8	0	0	0	0	0	0	0	0	0	0	0	0	0	**190**
3:00 PM	1	13	154	28	0	0	0	0	0	0	0	0	0	0	0	0	0	**196**
4:00 PM	1	31	150	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**188**
5:00 PM	0	86	48	30	1	0	0	0	0	0	0	0	0	0	0	0	0	**165**
6:00 PM	1	31	87	9	1	1	0	0	0	0	0	0	0	0	0	0	0	**130**
7:00 PM	1	3	54	34	1	0	0	0	0	0	0	0	0	0	0	0	0	**93**
8:00 PM	0	1	26	38	1	0	0	0	0	0	0	0	0	0	0	0	0	**66**
9:00 PM	2	6	17	4	2	0	0	0	0	0	0	0	0	0	0	0	0	**31**
10:00 PM	0	15	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**22**
11:00 PM	0	1	12	12	0	0	0	0	0	0	0	0	0	0	0	0	0	**25**
Total	**14**	**298**	**1,529**	**414**	**89**	**3**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2,356**
Percent	**0.6%**	**12.6%**	**64.9%**	**17.6%**	**3.8%**	**0.1%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	17.5	mph	Mean (Average) Speed	18.1	mph
85th Percentile	21.2	mph	10 mph Pace	12.6 - 22.6	mph
95th Percentile	24.4	mph	Percent in Pace	89.2	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Thursday, May 25, 2017
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	0	6	16	5	0	0	0	0	0	0	0	0	0	0	0	0	**28**
1:00 AM	0	0	0	10	2	0	0	0	0	0	0	0	0	0	0	0	0	**12**
2:00 AM	0	0	2	19	3	0	0	0	0	0	0	0	0	0	0	0	0	**24**
3:00 AM	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	**6**
4:00 AM	0	0	1	5	2	0	0	0	0	0	0	0	0	0	0	0	0	**8**
5:00 AM	0	1	16	2	5	0	0	0	0	0	0	0	0	0	0	0	0	**24**
6:00 AM	0	0	19	13	5	0	0	0	0	0	0	0	0	0	0	0	0	**37**
7:00 AM	8	3	31	55	20	1	0	0	0	0	0	0	0	0	0	0	0	**118**
8:00 AM	4	23	30	80	8	0	0	0	0	0	0	0	0	0	0	0	0	**145**
9:00 AM	0	3	18	109	14	0	0	0	0	0	0	0	0	0	0	0	0	**144**
10:00 AM	1	44	12	64	1	3	0	0	0	0	0	0	0	0	0	0	0	**125**
11:00 AM	3	6	29	164	1	0	0	0	0	0	0	0	0	0	0	0	0	**203**
12:00 PM	0	1	16	330	8	0	0	0	0	0	0	0	0	0	0	0	0	**355**
1:00 PM	0	0	95	261	4	0	0	0	0	0	0	0	0	0	0	0	0	**360**
2:00 PM	5	70	159	97	4	0	0	0	0	0	0	0	0	0	0	0	0	**335**
3:00 PM	2	13	168	315	6	0	0	0	0	0	0	0	0	0	0	0	0	**504**
4:00 PM	50	222	220	167	4	0	0	0	0	0	0	0	0	0	0	0	0	**663**
5:00 PM	25	46	303	159	8	0	0	0	0	0	0	0	0	0	0	0	0	**541**
6:00 PM	3	108	118	86	2	0	0	0	0	0	0	0	0	0	0	0	0	**317**
7:00 PM	0	0	51	154	3	0	0	0	0	0	0	0	0	0	0	0	0	**208**
8:00 PM	2	36	37	148	0	0	0	0	0	0	0	0	0	0	0	0	0	**223**
9:00 PM	6	72	65	58	0	0	0	0	0	0	0	0	0	0	0	0	0	**201**
10:00 PM	0	62	60	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**126**
11:00 PM	0	0	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**63**
Total	**110**	**710**	**1,519**	**2,320**	**107**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4,770**
Percent	**2.3%**	**14.9%**	**31.8%**	**48.6%**	**2.2%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.9	mph	Mean (Average) Speed	19.2	mph
85th Percentile	22.7	mph	10 mph Pace	14.5 - 24.5	mph
95th Percentile	24.0	mph	Percent in Pace	83.3	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Thursday, May 25, 2017
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	4	4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
1:00 AM	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
2:00 AM	1	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
5:00 AM	0	1	27	11	0	0	0	0	0	0	0	0	0	0	0	0	0	39
6:00 AM	2	1	29	22	3	0	0	0	0	0	0	0	0	0	0	0	0	57
7:00 AM	0	15	158	36	1	0	0	0	0	0	0	0	0	0	0	0	0	210
8:00 AM	0	4	114	50	1	0	0	0	0	0	0	0	0	0	0	0	0	169
9:00 AM	2	38	71	16	0	0	0	0	0	0	0	0	0	0	0	0	0	127
10:00 AM	1	43	62	25	3	0	0	0	0	0	0	0	0	0	0	0	0	134
11:00 AM	6	39	94	4	1	0	0	0	0	0	0	0	0	0	0	0	0	144
12:00 PM	1	9	136	18	29	0	0	0	0	0	0	0	0	1	0	0	0	194
1:00 PM	2	46	136	8	2	0	0	0	0	0	0	0	0	0	0	0	0	194
2:00 PM	1	44	179	4	1	0	0	0	0	0	0	0	0	0	0	0	0	229
3:00 PM	3	63	135	3	0	1	0	0	0	0	0	0	0	0	0	0	0	205
4:00 PM	1	35	199	2	0	0	0	0	0	0	0	0	0	0	0	0	0	237
5:00 PM	9	91	138	2	0	0	0	0	0	0	0	0	0	0	0	0	0	240
6:00 PM	11	48	73	2	0	0	0	0	0	0	0	0	0	0	0	0	0	134
7:00 PM	2	24	88	0	1	0	0	0	0	0	0	0	0	0	0	0	0	115
8:00 PM	16	48	21	1	0	0	0	0	0	0	0	0	0	0	0	0	0	86
9:00 PM	1	7	41	1	0	0	0	0	0	0	0	0	0	0	0	0	0	50
10:00 PM	1	8	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
11:00 PM	5	21	9	0	1	0	0	0	0	0	0	0	0	0	0	0	0	36
Total	**69**	**596**	**1,756**	**205**	**43**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2,671**
Percent	**2.6%**	**22.3%**	**65.7%**	**7.7%**	**1.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	16.6	mph	Mean (Average) Speed	16.6	mph
85th Percentile	18.9	mph	10 mph Pace	11.0 - 21.0	mph
95th Percentile	21.4	mph	Percent in Pace	90.2	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Friday, May 26, 2017
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	31	17	1	0	0	0	0	0	0	0	0	0	0	0	0	49
1:00 AM	1	0	8	39	0	0	0	0	0	0	0	0	0	0	0	0	0	48
2:00 AM	0	8	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
3:00 AM	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
4:00 AM	0	7	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	15
5:00 AM	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
6:00 AM	0	0	69	10	0	0	0	0	0	0	0	0	0	0	0	0	0	79
7:00 AM	0	5	110	63	1	0	0	0	0	0	0	0	0	0	0	0	0	179
8:00 AM	104	135	44	1	2	0	0	0	0	0	0	0	0	0	0	0	0	286
9:00 AM	207	143	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	350
10:00 AM	155	179	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	338
11:00 AM	39	300	68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	407
12:00 PM	82	147	197	5	0	0	0	0	0	0	0	0	0	0	0	0	0	431
1:00 PM	201	213	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	418
2:00 PM	84	289	46	2	0	0	0	0	0	0	0	0	0	0	0	0	0	421
3:00 PM	215	136	6	34	0	0	1	0	0	0	0	0	0	0	0	0	0	392
4:00 PM	134	305	43	1	0	0	0	0	0	0	0	0	0	0	0	0	0	483
5:00 PM	241	122	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	366
6:00 PM	160	103	133	5	0	0	0	0	0	0	0	0	0	0	0	0	0	401
7:00 PM	26	227	34	1	0	0	0	0	0	0	0	0	0	0	0	0	0	288
8:00 PM	80	120	31	1	0	0	0	0	0	0	0	0	0	0	0	0	0	232
9:00 PM	44	153	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	261
10:00 PM	54	156	74	2	0	0	0	0	0	0	0	0	0	0	0	0	0	286
11:00 PM	41	173	24	8	0	0	0	0	0	0	0	0	0	0	0	0	0	246
Total	**1,868**	**2,932**	**1,035**	**191**	**4**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6,031**
Percent	**31.0%**	**48.6%**	**17.2%**	**3.2%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	11.6	mph	Mean (Average) Speed	12.0	mph
85th Percentile	15.9	mph	10 mph Pace	6.7 - 16.7	mph
95th Percentile	18.8	mph	Percent in Pace	83.7	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Friday, May 26, 2017
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	4	21	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**28**
1:00 AM	1	8	12	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**22**
2:00 AM	1	11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**14**
3:00 AM	8	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
4:00 AM	1	4	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
5:00 AM	3	10	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**20**
6:00 AM	3	12	44	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**60**
7:00 AM	13	30	104	18	0	0	0	0	0	0	0	0	0	0	0	0	0	**165**
8:00 AM	18	98	65	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**186**
9:00 AM	23	98	91	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**213**
10:00 AM	31	69	85	2	0	1	0	0	0	0	0	0	0	0	0	0	0	**188**
11:00 AM	48	116	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**213**
12:00 PM	28	110	49	2	5	0	0	0	0	0	0	0	0	0	0	0	0	**194**
1:00 PM	58	115	33	1	4	0	0	0	0	0	0	0	0	0	0	0	0	**211**
2:00 PM	61	116	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**217**
3:00 PM	56	158	52	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**267**
4:00 PM	59	94	67	1	0	0	6	0	0	0	0	0	0	0	0	0	0	**227**
5:00 PM	52	102	49	7	0	1	0	0	0	0	0	0	0	0	0	0	0	**211**
6:00 PM	21	89	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**148**
7:00 PM	26	84	32	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**144**
8:00 PM	21	51	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**115**
9:00 PM	21	56	20	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**98**
10:00 PM	23	74	27	1	3	0	0	0	0	0	0	0	0	0	0	0	0	**128**
11:00 PM	41	63	24	4	0	2	0	0	0	0	0	0	0	0	0	0	0	**134**
Total	**618**	**1,574**	**957**	**52**	**12**	**4**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3,223**
Percent	**19.2%**	**48.8%**	**29.7%**	**1.6%**	**0.4%**	**0.1%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	13.0	mph	Mean (Average) Speed	13.1	mph
85th Percentile	16.7	mph	10 mph Pace	7.8 - 17.8	mph
95th Percentile	18.7	mph	Percent in Pace	83.2	%

Deon Fouche: (415) 757-7714
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Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Total Study Average
Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	9	9	2	0	0	0	0	0	0	0	0	0	0	0	0	**20**
1:00 AM	0	0	5	10	1	0	0	0	0	0	0	0	0	0	0	0	0	**16**
2:00 AM	0	1	4	6	1	0	0	0	0	0	0	0	0	0	0	0	0	**12**
3:00 AM	0	2	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**7**
4:00 AM	0	1	3	4	2	0	0	0	0	0	0	0	0	0	0	0	0	**10**
5:00 AM	0	1	12	3	2	0	0	0	0	0	0	0	0	0	0	0	0	**18**
6:00 AM	0	1	17	21	4	0	0	0	0	0	0	0	0	0	0	0	0	**43**
7:00 AM	2	4	28	44	14	1	0	0	0	0	0	0	0	0	0	0	0	**93**
8:00 AM	15	24	23	52	17	1	0	0	0	0	0	0	0	0	0	0	0	**132**
9:00 AM	30	23	12	74	18	1	0	0	0	0	0	0	0	0	0	0	0	**158**
10:00 AM	22	34	17	63	18	1	0	0	0	0	0	0	0	0	0	0	0	**155**
11:00 AM	7	46	43	84	23	1	0	0	0	0	0	0	0	0	0	0	0	**204**
12:00 PM	12	24	61	144	23	4	0	1	0	1	0	0	0	0	0	0	0	**270**
1:00 PM	30	36	39	119	16	0	0	0	0	0	0	0	0	0	0	0	0	**240**
2:00 PM	14	56	61	83	16	1	0	0	0	0	0	0	0	0	0	0	0	**231**
3:00 PM	33	24	49	135	29	1	0	0	0	0	0	0	0	0	0	0	0	**271**
4:00 PM	28	84	91	124	19	1	0	0	0	0	0	0	0	0	0	0	0	**347**
5:00 PM	41	32	85	129	26	1	0	0	0	0	0	0	0	0	0	0	0	**314**
6:00 PM	24	32	53	68	26	1	0	0	0	0	0	0	0	0	0	0	0	**204**
7:00 PM	4	34	26	76	15	1	0	0	0	0	0	0	0	0	0	0	0	**156**
8:00 PM	12	23	22	64	9	1	0	0	0	0	0	0	0	0	0	0	0	**131**
9:00 PM	7	33	29	37	7	0	0	0	0	0	0	0	0	0	0	0	0	**113**
10:00 PM	8	32	28	18	4	0	0	0	0	0	0	0	0	0	0	0	0	**90**
11:00 PM	6	25	20	11	2	0	0	0	0	0	0	0	0	0	0	0	0	**64**
Total	**295**	**572**	**738**	**1,381**	**295**	**16**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3,299**
Percent	**8.9%**	**17.3%**	**22.4%**	**41.9%**	**8.9%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	20.0	mph	Mean (Average) Speed	18.8	mph
85th Percentile	24.0	mph	10 mph Pace	15.4 - 25.4	mph
95th Percentile	26.2	mph	Percent in Pace	64.3	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 01

Total Study Average
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	1	5	4	1	0	0	0	0	0	0	0	0	0	0	0	0	**12**
1:00 AM	0	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
2:00 AM	0	2	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**6**
3:00 AM	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**6**
5:00 AM	1	2	7	8	2	0	0	0	0	0	0	0	0	0	0	0	0	**20**
6:00 AM	1	3	17	14	4	0	0	0	0	0	0	0	0	0	0	0	0	**39**
7:00 AM	2	7	55	43	9	0	0	0	0	0	0	0	0	0	0	0	0	**116**
8:00 AM	3	16	54	41	8	0	0	0	0	0	0	0	0	0	0	0	0	**122**
9:00 AM	4	23	51	31	7	0	0	0	0	0	0	0	0	0	0	0	0	**116**
10:00 AM	5	22	39	26	12	1	1	0	0	0	0	0	0	0	0	0	0	**106**
11:00 AM	9	35	42	29	8	0	0	0	0	0	0	0	0	0	0	0	0	**123**
12:00 PM	5	20	68	35	13	0	0	0	0	0	0	0	0	0	0	0	0	**141**
1:00 PM	9	28	57	37	8	0	0	0	0	0	0	0	0	0	0	0	0	**139**
2:00 PM	9	27	70	28	8	0	0	0	0	0	0	0	0	0	0	0	0	**142**
3:00 PM	9	38	62	33	6	0	0	0	0	0	0	0	0	0	0	0	0	**148**
4:00 PM	10	26	71	27	8	0	1	0	0	0	0	0	0	0	0	0	0	**143**
5:00 PM	10	41	45	33	6	1	0	0	0	0	0	0	0	0	0	0	0	**136**
6:00 PM	7	26	36	22	4	0	0	0	0	0	0	0	0	0	0	0	0	**95**
7:00 PM	4	18	33	20	3	0	0	0	0	0	0	0	0	0	0	0	0	**78**
8:00 PM	5	16	20	15	2	0	0	0	0	0	0	0	0	0	0	0	0	**58**
9:00 PM	4	11	16	8	2	0	0	0	0	0	0	0	0	0	0	0	0	**41**
10:00 PM	4	15	11	5	2	0	0	0	0	0	0	0	0	0	0	0	0	**37**
11:00 PM	7	13	8	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**34**
Total	**110**	**394**	**774**	**470**	**116**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,868**
Percent	**5.9%**	**21.1%**	**41.4%**	**25.2%**	**6.2%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	17.4	mph	Mean (Average) Speed	17.7	mph
85th Percentile	22.8	mph	10 mph Pace	13.2 - 23.2	mph
95th Percentile	25.5	mph	Percent in Pace	68.4	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Fairground Rd W/O Airport Rd
Date Range: 5/20/2017 - 5/26/2017
Site Code: 01

Time	Saturday 5/20/2017			Sunday 5/21/2017			Monday 5/22/2017			Tuesday 5/23/2017			Wednesday 5/24/2017			Thursday 5/25/2017			Friday 5/26/2017			Mid-Week Average		
	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total
12:00 AM	13	9	22	17	12	29	15	10	25	7	2	9	16	10	26	28	13	41	49	28	77	17	8	25
1:00 AM	11	11	22	10	5	15	3	2	5	7	1	8	16	5	21	12	7	19	48	22	70	12	4	16
2:00 AM	15	3	18	11	9	20	4	3	7	2	3	5	3	3	6	24	8	32	23	14	37	10	5	14
3:00 AM	6	5	11	13	4	17	4	3	7	2	2	4	3	1	4	6	2	8	11	11	22	4	2	5
4:00 AM	7	3	10	0	4	4	13	6	19	6	4	10	17	4	21	8	7	15	15	9	24	10	5	15
5:00 AM	5	7	12	3	13	16	13	14	27	16	18	34	41	23	64	24	39	63	21	20	41	27	27	54
6:00 AM	20	15	35	15	16	31	50	38	88	49	37	86	56	53	109	37	57	94	79	60	139	47	49	96
7:00 AM	35	34	69	26	18	44	96	115	211	73	103	176	126	173	299	118	210	328	179	165	344	106	162	268
8:00 AM	62	58	120	54	48	102	124	100	224	114	118	232	141	176	317	145	169	314	286	186	472	133	154	288
9:00 AM	109	79	188	101	56	157	113	99	212	131	102	233	154	131	285	144	127	271	350	213	563	143	120	263
10:00 AM	84	49	133	107	60	167	116	76	192	128	96	224	187	138	325	125	134	259	338	188	526	147	123	269
11:00 AM	123	76	199	112	50	162	164	108	272	192	118	310	227	155	382	203	144	347	407	213	620	207	139	346
12:00 PM	159	82	241	150	67	217	245	123	368	297	122	419	253	205	458	355	194	549	431	194	625	302	174	475
1:00 PM	156	77	233	131	54	185	194	122	316	222	137	359	203	173	376	360	194	554	418	211	629	262	168	430
2:00 PM	125	77	202	117	61	178	189	120	309	254	107	361	183	190	373	335	229	564	421	217	638	257	175	433
3:00 PM	161	92	253	104	55	159	227	113	340	289	117	406	227	196	423	504	205	709	392	267	659	340	173	513
4:00 PM	181	65	246	119	67	186	370	110	480	411	101	512	207	188	395	663	237	900	483	227	710	427	175	602
5:00 PM	164	59	223	157	50	207	364	130	494	328	105	433	277	165	442	541	240	781	366	211	577	382	170	552
6:00 PM	125	56	181	87	40	127	157	73	230	211	92	303	136	130	266	317	134	451	401	148	549	221	119	340
7:00 PM	130	52	182	98	42	140	101	42	143	160	56	216	105	93	198	208	115	323	288	144	432	158	88	246
8:00 PM	101	40	141	54	24	78	74	37	111	127	38	165	111	66	177	223	86	309	232	115	347	154	63	217
9:00 PM	78	38	116	39	25	64	56	11	67	80	37	117	76	31	107	201	50	251	261	98	359	119	39	158
10:00 PM	67	15	82	25	10	35	30	16	46	55	29	84	49	22	71	126	34	160	286	128	414	77	28	105
11:00 PM	26	13	39	28	14	42	18	7	25	35	6	41	37	25	62	63	36	99	246	134	380	45	22	67
Total	**1,963**	**1,015**	**2,978**	**1,578**	**804**	**2,382**	**2,740**	**1,478**	**4,218**	**3,196**	**1,551**	**4,747**	**2,851**	**2,356**	**5,207**	**4,770**	**2,671**	**7,441**	**6,031**	**3,223**	**9,254**	**3,606**	**2,193**	**5,798**
Percent	**66%**	**34%**	-	**66%**	**34%**	-	**65%**	**35%**	-	**67%**	**33%**	-	**55%**	**45%**	-	**64%**	**36%**	-	**65%**	**35%**	-	**62%**	**38%**	-

1. Mid-week average includes data between Tuesday and Thursday.

Deon Fouche: (415) 757-7714
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Vehicle Classification Report Summary

Location: Airport Rd N/O Bruce Ln
Count Direction: Northbound / Southbound
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

	FHWA Vehicle Classification													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total														
Northbound	143	15,340	1,712	28	399	84	0	12	11	6	0	0	1	17,736
Percent	0.8%	86.5%	9.7%	0.2%	2.2%	0.5%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	133	9,062	1,791	7	524	246	0	4	8	3	0	0	2	11,780
Percent	1.1%	76.9%	15.2%	0.1%	4.4%	2.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	100%
Total	276	24,402	3,503	35	923	330	0	16	19	9	0	0	3	29,516
Percent	0.9%	82.7%	11.9%	0.1%	3.1%	1.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

Deon Fouche: (415) 757-7714
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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Saturday, May 20, 2017
Southbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	10	4	0	0	0	0	0	0	0	0	0	0	**14**
1:00 AM	0	7	2	0	0	1	0	0	0	0	0	0	0	**10**
2:00 AM	0	4	1	0	1	0	0	0	0	0	0	0	0	**6**
3:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	8	1	0	0	0	0	0	0	0	0	0	0	**9**
6:00 AM	0	9	2	0	1	0	0	0	0	0	0	0	0	**12**
7:00 AM	0	27	8	0	3	1	0	1	0	0	0	0	0	**40**
8:00 AM	1	44	13	1	2	1	0	0	0	0	0	0	0	**62**
9:00 AM	1	45	14	0	2	3	0	0	0	0	0	0	0	**65**
10:00 AM	2	52	4	0	3	1	0	0	0	0	0	0	0	**62**
11:00 AM	1	63	15	0	3	6	0	1	0	0	0	0	0	**89**
12:00 PM	2	63	12	0	7	1	0	0	0	0	0	0	0	**85**
1:00 PM	0	64	12	0	4	3	0	0	0	0	0	0	0	**83**
2:00 PM	1	73	9	0	5	2	0	0	0	0	0	0	0	**90**
3:00 PM	1	67	15	0	3	3	0	0	0	0	0	0	0	**89**
4:00 PM	2	71	14	0	4	1	0	0	0	0	0	0	0	**92**
5:00 PM	0	54	3	0	0	2	0	0	0	0	0	0	0	**59**
6:00 PM	3	59	8	1	2	3	0	0	0	0	0	0	0	**76**
7:00 PM	0	53	4	0	0	1	0	0	0	0	0	0	0	**58**
8:00 PM	0	36	5	0	2	2	0	0	0	0	0	0	0	**45**
9:00 PM	0	32	8	0	1	1	0	0	0	0	0	0	0	**42**
10:00 PM	1	22	3	0	1	0	0	0	0	0	0	0	0	**27**
11:00 PM	0	21	4	0	0	0	0	0	0	0	0	0	0	**25**
Total	**15**	**889**	**163**	**2**	**44**	**32**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1,147**
Percent	**1.3%**	**77.5%**	**14.2%**	**0.2%**	**3.8%**	**2.8%**	**0.0%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Sunday, May 21, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	12	0	0	0	0	0	0	0	0	0	0	0	12
1:00 AM	0	12	0	0	0	0	0	0	0	0	0	0	0	12
2:00 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	7
3:00 AM	0	10	2	0	0	0	0	0	0	0	0	0	0	12
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
6:00 AM	0	16	2	0	2	0	0	0	0	0	0	0	0	20
7:00 AM	0	37	4	0	1	0	0	0	0	0	0	0	0	42
8:00 AM	0	53	5	0	2	0	0	0	0	0	0	0	0	60
9:00 AM	1	93	7	0	1	0	0	0	0	0	0	0	0	102
10:00 AM	1	132	3	0	1	0	0	0	0	0	0	0	0	137
11:00 AM	0	117	9	0	4	1	0	0	0	0	0	0	0	131
12:00 PM	1	147	11	0	0	0	0	0	0	0	0	0	0	159
1:00 PM	0	108	11	0	3	2	0	0	0	0	0	0	0	124
2:00 PM	1	101	8	0	2	0	0	0	0	0	0	0	0	112
3:00 PM	0	116	5	0	1	1	0	0	0	0	0	0	0	123
4:00 PM	1	106	4	0	2	0	0	0	0	0	0	0	0	113
5:00 PM	1	107	7	0	0	1	0	0	0	0	0	0	0	116
6:00 PM	1	81	7	0	0	0	0	0	0	0	0	0	0	89
7:00 PM	1	76	6	0	1	1	0	0	0	0	0	0	0	85
8:00 PM	0	66	3	0	0	0	0	0	0	0	0	0	0	69
9:00 PM	0	48	1	0	0	0	0	0	0	0	0	0	0	49
10:00 PM	0	26	0	0	1	0	0	0	0	0	0	0	0	27
11:00 PM	1	13	2	0	1	0	0	0	0	0	0	0	0	17
Total	**9**	**1,486**	**99**	**0**	**22**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,622**
Percent	**0.6%**	**91.6%**	**6.1%**	**0.0%**	**1.4%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Sunday, May 21, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	10	1	0	0	0	0	0	0	0	0	0	0	11
1:00 AM	0	5	0	0	2	0	0	0	0	0	0	0	0	7
2:00 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	9
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	1	8	1	0	0	1	0	0	0	0	0	0	0	11
6:00 AM	0	14	1	0	0	1	0	0	0	0	0	0	0	16
7:00 AM	2	13	2	0	1	0	0	0	0	0	0	0	0	18
8:00 AM	0	41	9	0	1	0	0	0	0	0	0	0	0	51
9:00 AM	0	47	8	0	2	1	0	0	0	0	0	0	0	58
10:00 AM	1	44	7	0	2	2	0	0	0	0	0	0	0	56
11:00 AM	0	37	9	0	3	3	0	0	0	0	0	0	0	52
12:00 PM	3	47	12	0	3	3	0	0	0	0	0	0	0	68
1:00 PM	0	60	10	0	2	1	0	0	0	0	0	0	0	73
2:00 PM	1	37	11	0	2	1	0	0	0	0	0	0	0	52
3:00 PM	1	62	10	0	1	2	0	0	0	0	0	0	0	76
4:00 PM	0	64	14	0	5	3	0	1	0	0	0	0	0	87
5:00 PM	2	46	6	0	1	3	0	0	0	0	0	0	0	58
6:00 PM	2	32	9	0	0	0	0	0	1	0	0	0	0	44
7:00 PM	1	32	1	0	0	0	0	0	0	0	0	0	0	34
8:00 PM	0	33	10	0	0	1	0	0	0	0	0	0	0	44
9:00 PM	1	22	2	0	0	1	0	0	0	0	0	0	0	26
10:00 PM	0	20	1	0	1	1	0	0	0	0	0	0	0	23
11:00 PM	1	23	2	0	0	0	0	0	0	0	0	0	0	26
Total	**16**	**710**	**127**	**0**	**26**	**24**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**905**
Percent	**1.8%**	**78.5%**	**14.0%**	**0.0%**	**2.9%**	**2.7%**	**0.0%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Monday, May 22, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	12	2	0	1	0	0	0	0	0	0	0	0	15
1:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
2:00 AM	0	5	0	0	1	0	0	0	0	0	0	0	0	6
3:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	7	1	0	0	1	0	0	0	0	0	0	0	9
5:00 AM	1	10	4	0	1	1	0	0	0	0	0	0	0	17
6:00 AM	1	34	3	0	5	0	0	0	0	0	0	0	0	43
7:00 AM	1	109	10	0	2	0	0	0	0	0	0	0	0	122
8:00 AM	1	156	12	0	3	1	0	0	0	0	0	0	1	174
9:00 AM	0	123	13	0	1	1	0	0	0	0	0	0	0	138
10:00 AM	1	109	18	0	4	1	0	0	0	0	0	0	0	133
11:00 AM	1	156	15	0	3	1	0	0	0	0	0	0	0	176
12:00 PM	2	154	19	0	4	1	0	0	0	0	0	0	0	180
1:00 PM	2	139	19	0	4	1	0	1	0	0	0	0	0	166
2:00 PM	2	157	12	0	4	1	0	0	0	0	0	0	0	176
3:00 PM	2	175	17	0	9	1	0	0	0	0	0	0	0	204
4:00 PM	0	210	38	0	3	1	0	0	0	0	0	0	0	252
5:00 PM	0	235	26	0	5	1	0	0	0	0	0	0	0	267
6:00 PM	0	118	14	0	2	0	0	0	0	0	0	0	0	134
7:00 PM	1	79	8	0	0	0	0	0	0	0	0	0	0	88
8:00 PM	0	69	10	0	2	0	0	0	0	0	0	0	0	81
9:00 PM	0	44	3	0	1	0	0	0	1	0	0	0	0	49
10:00 PM	1	16	5	0	1	0	0	0	0	0	0	0	0	23
11:00 PM	0	14	2	0	0	0	0	0	0	0	0	0	0	16
Total	**16**	**2,135**	**252**	**0**	**56**	**12**	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**2,474**
Percent	**0.6%**	**86.3%**	**10.2%**	**0.0%**	**2.3%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Monday, May 22, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	7
1:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	2
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	3	1	0	1	0	0	0	0	0	0	0	0	5
5:00 AM	2	11	2	0	3	0	0	0	0	0	0	0	0	18
6:00 AM	1	35	4	0	4	0	0	0	0	0	0	0	0	44
7:00 AM	0	103	26	0	4	4	0	0	0	0	0	0	0	137
8:00 AM	2	107	28	0	1	4	0	0	0	0	0	0	0	142
9:00 AM	1	86	16	0	8	3	0	0	0	0	0	0	0	114
10:00 AM	1	63	15	0	5	2	0	0	0	0	0	0	0	86
11:00 AM	0	93	18	0	8	4	0	0	0	0	0	0	0	123
12:00 PM	1	114	17	0	7	4	0	0	0	0	0	0	0	143
1:00 PM	0	88	28	0	6	2	0	0	0	0	0	0	0	124
2:00 PM	1	80	13	0	5	1	0	0	0	0	0	0	0	100
3:00 PM	1	92	28	0	5	6	0	0	0	0	0	0	0	132
4:00 PM	0	83	17	0	8	0	0	0	0	0	0	0	0	108
5:00 PM	1	98	15	0	3	2	0	0	0	0	0	0	0	119
6:00 PM	1	49	12	0	1	0	0	0	0	0	0	0	0	63
7:00 PM	0	47	9	0	2	0	0	0	0	0	0	0	0	58
8:00 PM	1	37	5	0	2	5	0	0	1	0	0	0	0	51
9:00 PM	1	15	1	0	1	1	0	0	0	0	0	0	0	19
10:00 PM	0	15	4	0	1	0	0	0	0	0	0	0	0	20
11:00 PM	1	9	0	0	0	0	0	0	0	0	0	0	0	10
Total	**15**	**1,238**	**260**	**0**	**76**	**38**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1,628**
Percent	**0.9%**	**76.0%**	**16.0%**	**0.0%**	**4.7%**	**2.3%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Tuesday, May 23, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	5
1:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
2:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	0	11	4	0	2	0	0	0	0	0	0	0	0	17
6:00 AM	0	33	5	0	7	0	0	0	0	0	0	0	0	45
7:00 AM	1	90	12	0	8	2	0	0	1	0	0	0	0	114
8:00 AM	3	118	18	0	3	0	0	0	0	0	0	0	0	142
9:00 AM	1	110	18	0	1	2	0	0	0	0	0	0	0	132
10:00 AM	1	108	18	0	3	1	0	0	0	0	0	0	0	131
11:00 AM	1	154	25	0	3	1	0	0	0	0	0	0	0	184
12:00 PM	3	162	19	0	1	1	0	0	0	0	0	0	0	186
1:00 PM	1	123	15	0	4	1	0	0	0	0	0	0	0	144
2:00 PM	2	145	22	0	5	3	0	1	0	0	0	0	0	178
3:00 PM	0	179	21	0	6	1	0	0	0	0	0	0	0	207
4:00 PM	3	222	20	0	4	2	0	0	0	0	0	0	0	251
5:00 PM	3	206	15	0	1	2	0	0	0	0	0	0	0	227
6:00 PM	0	136	16	0	4	0	0	0	0	0	0	0	0	156
7:00 PM	0	73	8	0	2	0	0	0	0	0	0	0	0	83
8:00 PM	0	59	6	0	1	0	0	0	0	0	0	0	0	66
9:00 PM	0	42	3	0	0	0	0	0	0	0	0	0	0	45
10:00 PM	0	31	4	0	1	0	0	0	0	0	0	0	0	36
11:00 PM	0	17	1	0	0	0	0	0	0	0	0	0	0	18
Total	**19**	**2,033**	**251**	**0**	**56**	**16**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**2,377**
Percent	**0.8%**	**85.5%**	**10.6%**	**0.0%**	**2.4%**	**0.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Tuesday, May 23, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	2	0	0	0	0	0	0	0	0	0	0	6
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	3
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	1	12	2	0	1	1	0	0	0	0	0	0	0	17
6:00 AM	1	41	11	0	4	1	0	0	0	0	0	0	0	58
7:00 AM	2	93	20	0	5	2	0	0	0	0	0	0	0	122
8:00 AM	2	109	18	0	10	2	0	0	0	1	0	0	0	142
9:00 AM	0	93	14	0	7	5	0	0	0	0	0	0	0	119
10:00 AM	0	50	14	0	3	3	0	0	0	0	0	0	0	70
11:00 AM	2	73	20	0	8	3	0	0	0	0	0	0	0	106
12:00 PM	0	102	18	0	11	4	0	0	0	0	0	0	0	135
1:00 PM	0	100	26	0	4	4	0	0	0	0	0	0	0	134
2:00 PM	1	81	16	0	5	1	0	0	0	0	0	0	0	104
3:00 PM	1	103	17	0	6	2	0	0	1	0	0	0	0	130
4:00 PM	2	84	14	0	9	1	0	0	0	0	0	0	0	110
5:00 PM	0	79	18	0	1	3	0	0	0	0	0	0	0	101
6:00 PM	1	52	11	0	5	2	0	0	0	0	0	0	0	71
7:00 PM	0	42	12	0	2	2	0	0	0	0	0	0	0	58
8:00 PM	0	37	9	0	3	1	0	0	0	0	0	0	0	50
9:00 PM	0	27	3	0	1	0	0	0	0	0	0	0	0	31
10:00 PM	1	15	3	0	0	0	0	0	0	0	0	0	0	19
11:00 PM	0	6	1	0	0	1	0	0	0	0	0	0	0	8
Total	**14**	**1,207**	**250**	**0**	**86**	**38**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1,597**
Percent	**0.9%**	**75.6%**	**15.7%**	**0.0%**	**5.4%**	**2.4%**	**0.0%**	**0.0%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Wednesday, May 24, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	12	1	0	0	0	0	0	0	0	0	0	0	13
1:00 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	9
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	0	15	5	0	0	0	0	0	0	0	0	0	0	20
6:00 AM	0	28	5	0	3	0	0	0	0	0	0	0	0	36
7:00 AM	1	107	20	0	4	2	0	0	1	0	0	0	0	135
8:00 AM	1	112	19	0	5	1	0	0	1	0	0	0	0	139
9:00 AM	1	98	21	0	3	0	0	0	0	0	0	0	0	123
10:00 AM	3	119	20	0	2	1	0	0	0	0	0	0	0	145
11:00 AM	1	130	24	0	4	1	0	0	0	0	0	0	0	160
12:00 PM	2	153	19	0	8	1	0	0	0	0	0	0	0	183
1:00 PM	1	155	18	0	0	0	0	1	0	0	0	0	0	175
2:00 PM	0	139	13	0	7	0	0	0	1	0	0	0	0	160
3:00 PM	2	181	25	0	3	0	0	0	0	0	0	0	0	211
4:00 PM	0	201	23	1	6	0	0	0	0	0	0	0	0	231
5:00 PM	3	194	20	0	5	0	0	0	0	0	0	0	0	222
6:00 PM	0	155	18	0	4	0	0	0	0	0	0	0	0	177
7:00 PM	0	97	18	0	2	0	0	0	0	0	0	0	0	117
8:00 PM	0	70	11	0	0	1	0	0	0	0	0	0	0	82
9:00 PM	0	36	3	0	0	1	0	0	0	0	0	0	0	40
10:00 PM	0	25	3	0	0	0	0	0	0	0	0	0	0	28
11:00 PM	0	17	1	0	1	0	0	0	0	0	0	0	0	19
Total	**15**	**2,058**	**288**	**1**	**57**	**8**	**0**	**1**	**3**	**0**	**0**	**0**	**0**	**2,431**
Percent	**0.6%**	**84.7%**	**11.8%**	**0.0%**	**2.3%**	**0.3%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Wednesday, May 24, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	7
1:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
2:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	1	17	4	0	1	0	0	0	0	0	0	0	0	23
6:00 AM	0	36	13	0	4	2	0	0	0	0	0	0	0	55
7:00 AM	0	111	28	0	1	2	0	0	0	0	0	0	0	142
8:00 AM	1	118	15	0	7	4	0	0	0	0	0	0	0	145
9:00 AM	3	69	23	0	6	2	0	0	0	0	0	0	0	103
10:00 AM	0	69	14	0	5	4	0	0	0	0	0	0	0	92
11:00 AM	0	87	9	0	7	2	0	0	0	0	0	0	0	105
12:00 PM	1	95	20	0	8	1	0	0	0	0	0	0	0	125
1:00 PM	1	85	22	0	4	1	0	1	0	0	0	0	0	114
2:00 PM	1	101	26	0	8	5	0	0	0	0	0	0	0	141
3:00 PM	0	81	19	0	7	1	0	0	0	0	0	0	0	108
4:00 PM	1	65	21	0	3	5	0	0	0	0	0	0	0	95
5:00 PM	0	74	17	0	5	2	0	0	0	0	0	0	0	98
6:00 PM	0	50	19	0	5	1	0	0	0	0	0	0	0	75
7:00 PM	0	46	5	0	1	0	0	0	0	0	0	0	0	52
8:00 PM	0	39	3	0	0	3	0	0	0	0	0	0	0	45
9:00 PM	0	21	4	0	1	0	0	0	0	1	0	0	0	27
10:00 PM	0	21	2	0	0	0	0	0	0	0	0	0	0	23
11:00 PM	0	10	3	0	0	0	0	0	0	0	0	0	0	13
Total	**9**	**1,208**	**270**	**0**	**73**	**35**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**1,597**
Percent	**0.6%**	**75.6%**	**16.9%**	**0.0%**	**4.6%**	**2.2%**	**0.0%**	**0.1%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Thursday, May 25, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	7	0	0	0	0	0	0	0	0	0	0	0	7
1:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	6
2:00 AM	0	7	0	0	0	0	0	0	0	0	0	0	0	7
3:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
4:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
5:00 AM	0	18	2	0	1	1	0	0	0	0	0	0	0	22
6:00 AM	0	28	5	0	3	0	0	0	1	0	0	0	0	37
7:00 AM	0	102	18	0	2	0	0	0	1	0	0	0	0	123
8:00 AM	0	98	16	0	9	1	0	0	0	1	0	0	0	125
9:00 AM	1	111	18	0	0	0	0	0	0	0	0	0	0	130
10:00 AM	1	117	22	0	5	1	0	0	0	0	0	0	0	146
11:00 AM	1	148	17	0	7	0	0	0	0	0	0	0	0	173
12:00 PM	2	191	17	0	6	3	0	0	0	0	0	0	0	219
1:00 PM	1	147	17	0	2	2	0	0	0	1	0	0	0	170
2:00 PM	2	150	17	0	4	1	0	0	0	0	0	0	0	174
3:00 PM	4	173	36	1	6	2	0	1	0	0	0	0	0	223
4:00 PM	2	239	38	0	6	1	0	0	0	0	0	0	0	286
5:00 PM	2	230	23	0	4	0	0	0	0	0	0	0	0	259
6:00 PM	2	143	10	0	3	0	0	0	0	0	0	0	0	158
7:00 PM	0	118	12	0	1	0	0	0	0	0	0	0	0	131
8:00 PM	0	87	7	0	1	0	0	0	0	0	0	0	0	95
9:00 PM	1	75	7	0	3	0	0	0	0	0	0	0	0	86
10:00 PM	0	62	2	0	4	0	0	0	0	0	0	0	0	68
11:00 PM	0	25	1	0	2	1	0	0	0	0	0	0	0	29
Total	**19**	**2,291**	**286**	**1**	**69**	**13**	**0**	**1**	**2**	**2**	**0**	**0**	**0**	**2,684**
Percent	**0.7%**	**85.4%**	**10.7%**	**0.0%**	**2.6%**	**0.5%**	**0.0%**	**0.0%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Thursday, May 25, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	1	7	7	0	0	0	0	0	0	0	0	0	0	15
1:00 AM	0	4	1	0	1	0	0	0	0	0	0	0	0	6
2:00 AM	0	3	3	0	1	0	0	0	0	0	0	0	0	7
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	0	9	3	0	2	2	0	0	1	0	0	0	0	17
6:00 AM	1	40	8	0	2	1	0	0	0	0	0	0	0	52
7:00 AM	1	106	24	0	7	1	0	0	0	0	0	0	0	139
8:00 AM	2	88	31	0	7	4	0	0	0	0	0	0	0	132
9:00 AM	0	79	16	0	10	2	0	0	1	0	0	0	0	108
10:00 AM	2	73	14	0	7	1	0	0	0	0	0	0	0	97
11:00 AM	0	79	24	0	14	3	0	0	0	0	0	0	0	120
12:00 PM	1	113	24	0	4	2	0	0	0	0	0	0	0	144
1:00 PM	1	87	19	0	5	4	0	0	0	0	0	0	0	116
2:00 PM	0	86	22	0	8	7	0	0	0	0	0	0	0	123
3:00 PM	3	111	15	2	15	3	0	0	0	0	0	0	0	149
4:00 PM	1	108	18	0	6	5	0	0	0	0	0	0	0	138
5:00 PM	1	102	27	1	5	1	0	0	0	0	0	0	1	138
6:00 PM	1	70	19	0	3	5	0	0	0	0	0	0	0	98
7:00 PM	1	57	16	0	2	3	0	0	0	0	0	0	0	79
8:00 PM	1	52	6	0	5	3	0	0	0	0	0	0	0	67
9:00 PM	0	30	5	0	4	0	0	0	0	0	0	0	0	39
10:00 PM	0	35	1	0	2	1	0	0	0	0	0	0	0	39
11:00 PM	0	9	6	0	2	0	0	0	0	0	0	0	0	17
Total	**17**	**1,351**	**311**	**3**	**112**	**48**	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**1,845**
Percent	**0.9%**	**73.2%**	**16.9%**	**0.2%**	**6.1%**	**2.6%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Friday, May 26, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	13	3	0	0	0	0	0	0	0	0	0	0	16
1:00 AM	0	11	1	0	0	0	0	0	0	0	0	0	0	12
2:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	0	8
3:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	0	10	2	0	2	0	0	0	0	0	0	0	0	14
6:00 AM	2	31	13	0	6	0	0	0	0	0	0	0	0	52
7:00 AM	1	120	20	0	5	2	0	0	1	0	0	0	0	149
8:00 AM	2	153	16	0	5	5	0	0	0	0	0	0	0	181
9:00 AM	1	184	25	0	5	2	0	0	0	0	0	0	0	217
10:00 AM	2	183	30	0	10	0	0	0	1	0	0	0	0	226
11:00 AM	3	287	21	1	5	1	0	0	0	1	0	0	0	319
12:00 PM	3	232	26	1	8	1	0	0	0	0	0	0	0	271
1:00 PM	4	268	21	0	5	1	0	1	0	0	0	0	0	300
2:00 PM	3	251	32	1	13	4	0	0	0	0	0	0	0	304
3:00 PM	3	252	28	1	8	1	0	1	2	1	0	0	0	297
4:00 PM	2	245	21	3	11	2	0	0	0	0	0	0	0	284
5:00 PM	3	217	30	1	4	0	0	2	0	0	0	0	0	257
6:00 PM	3	177	19	3	5	0	0	0	0	0	0	0	0	207
7:00 PM	2	182	14	2	3	1	0	0	0	0	0	0	0	204
8:00 PM	1	142	12	2	1	1	0	0	0	0	0	0	0	159
9:00 PM	2	138	5	2	6	0	0	1	0	0	0	0	0	154
10:00 PM	0	227	18	3	0	1	0	0	0	0	0	0	0	249
11:00 PM	4	208	21	5	4	1	0	0	0	1	0	0	0	244
Total	**41**	**3,545**	**378**	**25**	**106**	**23**	**0**	**5**	**4**	**3**	**0**	**0**	**0**	**4,130**
Percent	**1.0%**	**85.8%**	**9.2%**	**0.6%**	**2.6%**	**0.6%**	**0.0%**	**0.1%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Friday, May 26, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	18	3	0	1	0	0	0	0	0	0	0	0	22
1:00 AM	0	8	1	0	0	0	0	0	0	0	0	0	0	9
2:00 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	7
3:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	1	5	1	0	0	0	0	0	0	0	0	0	0	7
5:00 AM	1	8	1	0	3	0	0	0	0	0	0	0	0	13
6:00 AM	0	36	15	0	2	2	0	0	0	0	0	0	0	55
7:00 AM	2	84	26	0	8	2	0	0	0	0	0	0	0	122
8:00 AM	2	129	29	0	9	1	0	0	1	0	0	0	0	171
9:00 AM	1	134	21	0	7	3	0	0	0	0	0	0	0	166
10:00 AM	3	133	20	0	15	0	0	0	0	1	0	0	0	172
11:00 AM	2	190	22	0	5	6	0	0	0	0	0	0	0	225
12:00 PM	4	173	16	0	7	5	0	0	1	0	0	0	0	206
1:00 PM	4	204	29	0	11	1	0	0	0	0	0	0	0	249
2:00 PM	6	196	34	0	7	0	0	0	0	0	0	0	0	243
3:00 PM	5	189	30	0	4	3	0	0	0	0	0	0	1	232
4:00 PM	3	181	37	0	8	1	0	0	1	0	0	0	0	231
5:00 PM	2	155	30	0	3	4	0	0	0	0	0	0	0	194
6:00 PM	3	129	27	0	3	0	0	0	0	0	0	0	0	162
7:00 PM	4	124	27	1	2	0	0	0	0	0	0	0	0	158
8:00 PM	1	91	11	0	3	1	0	0	0	0	0	0	0	107
9:00 PM	1	85	9	1	3	1	0	0	0	0	0	0	0	100
10:00 PM	0	94	13	0	4	0	0	0	0	0	0	0	0	111
11:00 PM	2	86	6	0	2	1	0	0	0	0	0	0	0	97
Total	**47**	**2,459**	**410**	**2**	**107**	**31**	**0**	**0**	**3**	**1**	**0**	**0**	**1**	**3,061**
Percent	**1.5%**	**80.3%**	**13.4%**	**0.1%**	**3.5%**	**1.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Total Study Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	11	1	0	0	0	0	0	0	0	0	0	0	12
1:00 AM	0	7	1	0	0	0	0	0	0	0	0	0	0	8
2:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
3:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
4:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	0	10	3	0	1	0	0	0	0	0	0	0	0	14
6:00 AM	0	28	5	0	4	0	0	0	0	0	0	0	0	37
7:00 AM	1	88	13	0	3	1	0	0	1	0	0	0	0	107
8:00 AM	1	108	14	0	4	1	0	0	0	0	0	0	0	128
9:00 AM	1	119	17	0	2	1	0	0	0	0	0	0	0	140
10:00 AM	1	124	17	0	4	1	0	0	0	0	0	0	0	147
11:00 AM	1	160	17	0	4	1	0	0	0	0	0	0	0	183
12:00 PM	2	167	18	0	5	1	0	0	0	0	0	0	0	193
1:00 PM	1	154	16	0	3	1	0	1	0	0	0	0	0	176
2:00 PM	1	152	16	0	5	2	0	0	0	0	0	0	0	176
3:00 PM	2	174	21	0	5	1	0	0	0	0	0	0	0	203
4:00 PM	1	201	22	1	5	1	0	0	0	0	0	0	0	231
5:00 PM	2	189	18	0	3	1	0	0	0	0	0	0	0	213
6:00 PM	1	129	13	0	3	0	0	0	0	0	0	0	0	146
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	81	8	0	1	0	0	0	0	0	0	0	0	90
9:00 PM	0	62	4	0	1	0	0	0	0	0	0	0	0	67
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	1	46	4	1	1	0	0	0	0	0	0	0	0	53
Total	**16**	**2,023**	**229**	**2**	**54**	**12**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**2,338**
Percent	**0.7%**	**86.5%**	**9.8%**	**0.1%**	**2.3%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Total Study Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	9	3	0	0	0	0	0	0	0	0	0	0	12
1:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	5
2:00 AM	0	4	1	0	1	0	0	0	0	0	0	0	0	6
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	1	10	2	0	1	1	0	0	0	0	0	0	0	15
6:00 AM	0	30	8	0	2	1	0	0	0	0	0	0	0	41
7:00 AM	1	77	19	0	4	2	0	0	0	0	0	0	0	103
8:00 AM	1	91	20	0	5	2	0	0	0	0	0	0	0	119
9:00 AM	1	79	16	0	6	3	0	0	0	0	0	0	0	105
10:00 AM	1	69	13	0	6	2	0	0	0	0	0	0	0	91
11:00 AM	1	89	17	0	7	4	0	0	0	0	0	0	0	118
12:00 PM	2	101	17	0	7	3	0	0	0	0	0	0	0	130
1:00 PM	1	98	21	0	5	2	0	0	0	0	0	0	0	127
2:00 PM	2	93	19	0	6	2	0	0	0	0	0	0	0	122
3:00 PM	2	101	19	0	6	3	0	0	0	0	0	0	0	131
4:00 PM	1	94	19	0	6	2	0	0	0	0	0	0	0	122
5:00 PM	1	87	17	0	3	2	0	0	0	0	0	0	0	110
6:00 PM	2	63	15	0	3	2	0	0	0	0	0	0	0	85
7:00 PM	1	57	11	0	1	1	0	0	0	0	0	0	0	71
8:00 PM	0	46	7	0	2	2	0	0	0	0	0	0	0	57
9:00 PM	0	33	5	0	2	1	0	0	0	0	0	0	0	41
10:00 PM	0	32	4	0	1	0	0	0	0	0	0	0	0	37
11:00 PM	1	23	3	0	1	0	0	0	0	0	0	0	0	28
Total	**19**	**1,293**	**258**	**0**	**75**	**35**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,680**
Percent	**1.1%**	**77.0%**	**15.4%**	**0.0%**	**4.5%**	**2.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

3-Day (Tuesday - Thursday) Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	8	1	0	0	0	0	0	0	0	0	0	0	8
1:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
2:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	0	15	4	0	1	0	0	0	0	0	0	0	0	20
6:00 AM	0	30	5	0	4	0	0	0	0	0	0	0	0	39
7:00 AM	1	100	17	0	5	1	0	0	1	0	0	0	0	124
8:00 AM	1	109	18	0	6	1	0	0	0	0	0	0	0	135
9:00 AM	1	106	19	0	1	1	0	0	0	0	0	0	0	128
10:00 AM	2	115	20	0	3	1	0	0	0	0	0	0	0	141
11:00 AM	1	144	22	0	5	1	0	0	0	0	0	0	0	172
12:00 PM	2	169	18	0	5	2	0	0	0	0	0	0	0	196
1:00 PM	1	142	17	0	2	1	0	0	0	0	0	0	0	163
2:00 PM	1	145	17	0	5	1	0	0	0	0	0	0	0	171
3:00 PM	2	178	27	0	5	1	0	0	0	0	0	0	0	214
4:00 PM	2	221	27	0	5	1	0	0	0	0	0	0	0	256
5:00 PM	3	210	19	0	3	1	0	0	0	0	0	0	0	236
6:00 PM	1	145	15	0	4	0	0	0	0	0	0	0	0	164
7:00 PM	0	96	13	0	2	0	0	0	0	0	0	0	0	110
8:00 PM	0	72	8	0	1	0	0	0	0	0	0	0	0	81
9:00 PM	0	51	4	0	1	0	0	0	0	0	0	0	0	57
10:00 PM	0	39	3	0	2	0	0	0	0	0	0	0	0	44
11:00 PM	0	20	1	0	1	0	0	0	0	0	0	0	0	22
Total	**18**	**2,127**	**275**	**1**	**61**	**12**	**0**	**1**	**2**	**1**	**0**	**0**	**0**	**2,497**
Percent	**0.7%**	**85.2%**	**11.0%**	**0.0%**	**2.4%**	**0.5%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

3-Day (Tuesday - Thursday) Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	6	3	0	0	0	0	0	0	0	0	0	0	9
1:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	3
2:00 AM	0	3	1	0	1	0	0	0	0	0	0	0	0	4
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	1	13	3	0	1	1	0	0	0	0	0	0	0	19
6:00 AM	1	39	11	0	3	1	0	0	0	0	0	0	0	55
7:00 AM	1	103	24	0	4	2	0	0	0	0	0	0	0	134
8:00 AM	2	105	21	0	8	3	0	0	0	0	0	0	0	140
9:00 AM	1	80	18	0	8	3	0	0	0	0	0	0	0	110
10:00 AM	1	64	14	0	5	3	0	0	0	0	0	0	0	86
11:00 AM	1	80	18	0	10	3	0	0	0	0	0	0	0	110
12:00 PM	1	103	21	0	8	2	0	0	0	0	0	0	0	135
1:00 PM	1	91	22	0	4	3	0	0	0	0	0	0	0	121
2:00 PM	1	89	21	0	7	4	0	0	0	0	0	0	0	123
3:00 PM	1	98	17	1	9	2	0	0	0	0	0	0	0	129
4:00 PM	1	86	18	0	6	4	0	0	0	0	0	0	0	114
5:00 PM	0	85	21	0	4	2	0	0	0	0	0	0	0	112
6:00 PM	1	57	16	0	4	3	0	0	0	0	0	0	0	81
7:00 PM	0	48	11	0	2	2	0	0	0	0	0	0	0	63
8:00 PM	0	43	6	0	3	2	0	0	0	0	0	0	0	54
9:00 PM	0	26	4	0	2	0	0	0	0	0	0	0	0	32
10:00 PM	0	24	2	0	1	0	0	0	0	0	0	0	0	27
11:00 PM	0	8	3	0	1	0	0	0	0	0	0	0	0	13
Total	**13**	**1,255**	**277**	**1**	**90**	**40**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1,680**
Percent	**0.8%**	**74.7%**	**16.5%**	**0.1%**	**5.4%**	**2.4%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Vehicle Speed Report Summary

Location: Airport Rd N/O Bruce Ln
Count Direction: Northbound / Southbound
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

	Speed Range (mph)																	Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
	Study Total																	
Northbound	1,244	3,280	5,806	6,356	954	88	7	1	0	0	0	0	0	0	0	0	0	17,736
Percent	7.0%	18.5%	32.7%	35.8%	5.4%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	585	1,733	3,304	5,066	1,033	45	3	3	6	2	0	0	0	0	0	0	0	11,780
Percent	5.0%	14.7%	28.0%	43.0%	8.8%	0.4%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	1,829	5,013	9,110	11,422	1,987	133	10	4	6	2	0	0	0	0	0	0	0	29,516
Percent	6.2%	17.0%	30.9%	38.7%	6.7%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Northbound			**Northbound**		
50th Percentile (Median)	19.0	mph	Mean (Average) Speed	18.3	mph
85th Percentile	22.9	mph	10 mph Pace	13.6 - 23.6	mph
95th Percentile	25.2	mph	Percent in Pace	69.1	%
Southbound			**Southbound**		
50th Percentile (Median)	20.1	mph	Mean (Average) Speed	19.4	mph
85th Percentile	24.0	mph	10 mph Pace	15.3 - 25.3	mph
95th Percentile	26.1	mph	Percent in Pace	71.1	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Saturday, May 20, 2017
Northbound

	Speed Range (mph)																	Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	**16**
1:00 AM	0	0	4	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**10**
2:00 AM	0	0	6	10	0	0	0	0	0	0	0	0	0	0	0	0	0	**16**
3:00 AM	0	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
4:00 AM	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	1	3	5	14	5	0	0	0	0	0	0	0	0	0	0	0	0	**28**
7:00 AM	0	2	18	37	5	1	0	0	0	0	0	0	0	0	0	0	0	**63**
8:00 AM	2	4	22	43	7	1	0	0	0	0	0	0	0	0	0	0	0	**79**
9:00 AM	1	9	48	68	10	0	0	0	0	0	0	0	0	0	0	0	0	**136**
10:00 AM	4	8	23	55	25	1	0	0	0	0	0	0	0	0	0	0	0	**116**
11:00 AM	8	7	46	75	7	0	0	0	0	0	0	0	0	0	0	0	0	**143**
12:00 PM	12	30	43	64	5	0	0	0	0	0	0	0	0	0	0	0	0	**154**
1:00 PM	5	21	48	72	10	1	0	0	0	0	0	0	0	0	0	0	0	**157**
2:00 PM	6	14	42	55	13	1	0	0	0	0	0	0	0	0	0	0	0	**131**
3:00 PM	11	35	41	63	15	0	0	0	0	0	0	0	0	0	0	0	0	**165**
4:00 PM	5	40	53	90	6	1	0	0	0	0	0	0	0	0	0	0	0	**195**
5:00 PM	3	8	63	69	4	0	0	0	0	0	0	0	0	0	0	0	0	**147**
6:00 PM	4	9	28	58	5	3	0	0	0	0	0	0	0	0	0	0	0	**107**
7:00 PM	8	17	36	54	7	0	0	0	0	0	0	0	0	0	0	0	0	**122**
8:00 PM	2	9	32	35	0	1	0	0	0	0	0	0	0	0	0	0	0	**79**
9:00 PM	5	14	21	17	3	0	0	0	0	0	0	0	0	0	0	0	0	**60**
10:00 PM	1	6	26	17	2	0	0	0	0	0	0	0	0	0	0	0	0	**52**
11:00 PM	0	0	5	24	1	0	0	0	0	0	0	0	0	0	0	0	0	**30**
Total	**79**	**238**	**611**	**949**	**131**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,018**
Percent	**3.9%**	**11.8%**	**30.3%**	**47.0%**	**6.5%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	20.2	mph	Mean (Average) Speed	19.5	mph
85th Percentile	23.3	mph	10 mph Pace	15.4 - 25.4	mph
95th Percentile	25.4	mph	Percent in Pace	77.7	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Saturday, May 20, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	12	1	0	0	0	0	0	0	0	0	0	0	0	0	**14**
1:00 AM	0	2	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**10**
2:00 AM	1	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
3:00 AM	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	0	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	**9**
6:00 AM	0	2	5	4	1	0	0	0	0	0	0	0	0	0	0	0	0	**12**
7:00 AM	0	3	9	22	6	0	0	0	0	0	0	0	0	0	0	0	0	**40**
8:00 AM	0	5	20	27	9	1	0	0	0	0	0	0	0	0	0	0	0	**62**
9:00 AM	0	8	17	32	7	1	0	0	0	0	0	0	0	0	0	0	0	**65**
10:00 AM	0	7	10	31	14	0	0	0	0	0	0	0	0	0	0	0	0	**62**
11:00 AM	1	11	26	41	10	0	0	0	0	0	0	0	0	0	0	0	0	**89**
12:00 PM	4	3	20	50	8	0	0	0	0	0	0	0	0	0	0	0	0	**85**
1:00 PM	0	11	13	51	8	0	0	0	0	0	0	0	0	0	0	0	0	**83**
2:00 PM	2	5	14	59	7	3	0	0	0	0	0	0	0	0	0	0	0	**90**
3:00 PM	2	12	18	49	6	2	0	0	0	0	0	0	0	0	0	0	0	**89**
4:00 PM	1	11	27	45	8	0	0	0	0	0	0	0	0	0	0	0	0	**92**
5:00 PM	1	7	13	33	5	0	0	0	0	0	0	0	0	0	0	0	0	**59**
6:00 PM	2	9	19	36	9	1	0	0	0	0	0	0	0	0	0	0	0	**76**
7:00 PM	3	2	12	36	5	0	0	0	0	0	0	0	0	0	0	0	0	**58**
8:00 PM	0	6	10	19	10	0	0	0	0	0	0	0	0	0	0	0	0	**45**
9:00 PM	0	4	11	24	3	0	0	0	0	0	0	0	0	0	0	0	0	**42**
10:00 PM	1	3	5	16	2	0	0	0	0	0	0	0	0	0	0	0	0	**27**
11:00 PM	0	0	8	12	5	0	0	0	0	0	0	0	0	0	0	0	0	**25**
Total	**18**	**112**	**267**	**613**	**129**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,147**
Percent	**1.6%**	**9.8%**	**23.3%**	**53.4%**	**11.2%**	**0.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	21.0	mph	Mean (Average) Speed	20.7	mph
85th Percentile	24.5	mph	10 mph Pace	16.6 - 26.6	mph
95th Percentile	26.4	mph	Percent in Pace	79.3	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Sunday, May 21, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	4	6	1	0	0	0	0	0	0	0	0	0	0	0	0	**12**
1:00 AM	1	0	8	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
2:00 AM	0	1	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
3:00 AM	0	0	7	4	1	0	0	0	0	0	0	0	0	0	0	0	0	**12**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	**4**
6:00 AM	0	3	6	6	5	0	0	0	0	0	0	0	0	0	0	0	0	**20**
7:00 AM	4	1	12	19	5	1	0	0	0	0	0	0	0	0	0	0	0	**42**
8:00 AM	0	2	11	41	5	0	1	0	0	0	0	0	0	0	0	0	0	**60**
9:00 AM	1	4	31	51	14	1	0	0	0	0	0	0	0	0	0	0	0	**102**
10:00 AM	4	5	32	84	9	3	0	0	0	0	0	0	0	0	0	0	0	**137**
11:00 AM	6	7	37	71	10	0	0	0	0	0	0	0	0	0	0	0	0	**131**
12:00 PM	5	8	67	68	11	0	0	0	0	0	0	0	0	0	0	0	0	**159**
1:00 PM	5	18	51	47	3	0	0	0	0	0	0	0	0	0	0	0	0	**124**
2:00 PM	3	7	28	64	9	1	0	0	0	0	0	0	0	0	0	0	0	**112**
3:00 PM	4	10	29	70	7	3	0	0	0	0	0	0	0	0	0	0	0	**123**
4:00 PM	4	5	17	76	10	1	0	0	0	0	0	0	0	0	0	0	0	**113**
5:00 PM	5	9	40	56	6	0	0	0	0	0	0	0	0	0	0	0	0	**116**
6:00 PM	2	3	33	46	5	0	0	0	0	0	0	0	0	0	0	0	0	**89**
7:00 PM	5	20	32	23	3	2	0	0	0	0	0	0	0	0	0	0	0	**85**
8:00 PM	1	4	20	43	1	0	0	0	0	0	0	0	0	0	0	0	0	**69**
9:00 PM	1	1	19	27	1	0	0	0	0	0	0	0	0	0	0	0	0	**49**
10:00 PM	0	1	11	15	0	0	0	0	0	0	0	0	0	0	0	0	0	**27**
11:00 PM	0	2	4	10	1	0	0	0	0	0	0	0	0	0	0	0	0	**17**
Total	**51**	**112**	**502**	**836**	**107**	**13**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,622**
Percent	**3.1%**	**6.9%**	**30.9%**	**51.5%**	**6.6%**	**0.8%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	20.5	mph	Mean (Average) Speed	20.1	mph
85th Percentile	23.3	mph	10 mph Pace	15.4 - 25.4	mph
95th Percentile	25.9	mph	Percent in Pace	83.1	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Sunday, May 21, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	0	9	1	0	0	0	0	0	0	0	0	0	0	0	0	11
1:00 AM	0	0	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	7
2:00 AM	1	0	2	5	1	0	0	0	0	0	0	0	0	0	0	0	0	9
3:00 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	2	0	3	6	0	0	0	0	0	0	0	0	0	0	0	0	0	11
6:00 AM	1	2	7	4	2	0	0	0	0	0	0	0	0	0	0	0	0	16
7:00 AM	0	5	2	8	2	1	0	0	0	0	0	0	0	0	0	0	0	18
8:00 AM	0	1	9	28	13	0	0	0	0	0	0	0	0	0	0	0	0	51
9:00 AM	0	3	8	42	4	1	0	0	0	0	0	0	0	0	0	0	0	58
10:00 AM	2	5	13	32	4	0	0	0	0	0	0	0	0	0	0	0	0	56
11:00 AM	1	7	6	26	12	0	0	0	0	0	0	0	0	0	0	0	0	52
12:00 PM	1	12	14	34	7	0	0	0	0	0	0	0	0	0	0	0	0	68
1:00 PM	2	6	20	38	7	0	0	0	0	0	0	0	0	0	0	0	0	73
2:00 PM	0	6	18	23	4	1	0	0	0	0	0	0	0	0	0	0	0	52
3:00 PM	1	8	16	36	12	1	0	0	0	2	0	0	0	0	0	0	0	76
4:00 PM	0	3	12	67	5	0	0	0	0	0	0	0	0	0	0	0	0	87
5:00 PM	3	9	12	29	5	0	0	0	0	0	0	0	0	0	0	0	0	58
6:00 PM	2	8	7	22	4	1	0	0	0	0	0	0	0	0	0	0	0	44
7:00 PM	0	1	7	20	6	0	0	0	0	0	0	0	0	0	0	0	0	34
8:00 PM	0	5	9	26	3	1	0	0	0	0	0	0	0	0	0	0	0	44
9:00 PM	1	1	5	15	4	0	0	0	0	0	0	0	0	0	0	0	0	26
10:00 PM	0	0	8	10	5	0	0	0	0	0	0	0	0	0	0	0	0	23
11:00 PM	1	2	7	13	3	0	0	0	0	0	0	0	0	0	0	0	0	26
Total	**18**	**85**	**186**	**501**	**106**	**6**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**905**
Percent	**2.0%**	**9.4%**	**20.6%**	**55.4%**	**11.7%**	**0.7%**	**0.1%**	**0.0%**	**0.0%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	21.6	mph	Mean (Average) Speed	20.9	mph
85th Percentile	24.5	mph	10 mph Pace	16.3 - 26.3	mph
95th Percentile	26.7	mph	Percent in Pace	79.2	%

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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Monday, May 22, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	1	8	5	0	0	0	0	0	0	0	0	0	0	0	0	0	15
1:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2:00 AM	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	6
3:00 AM	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	1	4	2	2	0	0	0	0	0	0	0	0	0	0	0	0	9
5:00 AM	2	3	3	9	0	0	0	0	0	0	0	0	0	0	0	0	0	17
6:00 AM	1	1	7	18	15	1	0	0	0	0	0	0	0	0	0	0	0	43
7:00 AM	1	7	33	69	11	1	0	0	0	0	0	0	0	0	0	0	0	122
8:00 AM	2	6	26	120	18	2	0	0	0	0	0	0	0	0	0	0	0	174
9:00 AM	3	15	45	65	9	1	0	0	0	0	0	0	0	0	0	0	0	138
10:00 AM	6	26	33	57	10	1	0	0	0	0	0	0	0	0	0	0	0	133
11:00 AM	5	21	61	69	17	3	0	0	0	0	0	0	0	0	0	0	0	176
12:00 PM	11	19	57	82	11	0	0	0	0	0	0	0	0	0	0	0	0	180
1:00 PM	7	24	45	81	8	1	0	0	0	0	0	0	0	0	0	0	0	166
2:00 PM	6	31	65	64	10	0	0	0	0	0	0	0	0	0	0	0	0	176
3:00 PM	16	22	55	91	18	2	0	0	0	0	0	0	0	0	0	0	0	204
4:00 PM	3	35	89	102	21	2	0	0	0	0	0	0	0	0	0	0	0	252
5:00 PM	9	31	140	77	9	1	0	0	0	0	0	0	0	0	0	0	0	267
6:00 PM	6	24	42	57	5	0	0	0	0	0	0	0	0	0	0	0	0	134
7:00 PM	4	6	37	33	7	1	0	0	0	0	0	0	0	0	0	0	0	88
8:00 PM	7	10	30	29	5	0	0	0	0	0	0	0	0	0	0	0	0	81
9:00 PM	1	6	24	15	3	0	0	0	0	0	0	0	0	0	0	0	0	49
10:00 PM	1	2	9	10	1	0	0	0	0	0	0	0	0	0	0	0	0	23
11:00 PM	0	2	5	7	2	0	0	0	0	0	0	0	0	0	0	0	0	16
Total	**93**	**296**	**819**	**1,067**	**183**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,474**
Percent	**3.8%**	**12.0%**	**33.1%**	**43.1%**	**7.4%**	**0.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	20.0	mph	Mean (Average) Speed	19.5	mph
85th Percentile	23.5	mph	10 mph Pace	15.8 - 25.8	mph
95th Percentile	25.8	mph	Percent in Pace	76.8	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Monday, May 22, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
1:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	**5**
5:00 AM	0	1	1	12	4	0	0	0	0	0	0	0	0	0	0	0	0	**18**
6:00 AM	3	0	4	29	8	0	0	0	0	0	0	0	0	0	0	0	0	**44**
7:00 AM	1	5	15	90	25	1	0	0	0	0	0	0	0	0	0	0	0	**137**
8:00 AM	2	8	24	82	22	4	0	0	0	0	0	0	0	0	0	0	0	**142**
9:00 AM	3	12	28	59	12	0	0	0	0	0	0	0	0	0	0	0	0	**114**
10:00 AM	1	6	31	33	11	4	0	0	0	0	0	0	0	0	0	0	0	**86**
11:00 AM	2	19	30	57	15	0	0	0	0	0	0	0	0	0	0	0	0	**123**
12:00 PM	3	14	20	93	13	0	0	0	0	0	0	0	0	0	0	0	0	**143**
1:00 PM	1	9	39	57	17	1	0	0	0	0	0	0	0	0	0	0	0	**124**
2:00 PM	0	14	28	51	6	1	0	0	0	0	0	0	0	0	0	0	0	**100**
3:00 PM	3	16	41	60	11	1	0	0	0	0	0	0	0	0	0	0	0	**132**
4:00 PM	4	7	32	53	12	0	0	0	0	0	0	0	0	0	0	0	0	**108**
5:00 PM	1	20	27	59	8	1	0	3	0	0	0	0	0	0	0	0	0	**119**
6:00 PM	1	18	16	22	5	1	0	0	0	0	0	0	0	0	0	0	0	**63**
7:00 PM	2	8	19	26	3	0	0	0	0	0	0	0	0	0	0	0	0	**58**
8:00 PM	2	7	13	23	6	0	0	0	0	0	0	0	0	0	0	0	0	**51**
9:00 PM	1	1	7	5	5	0	0	0	0	0	0	0	0	0	0	0	0	**19**
10:00 PM	0	1	7	9	3	0	0	0	0	0	0	0	0	0	0	0	0	**20**
11:00 PM	2	1	1	4	2	0	0	0	0	0	0	0	0	0	0	0	0	**10**
Total	**32**	**167**	**390**	**832**	**190**	**14**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,628**
Percent	**2.0%**	**10.3%**	**24.0%**	**51.1%**	**11.7%**	**0.9%**	**0.0%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	21.2	mph	Mean (Average) Speed	20.7	mph
85th Percentile	24.6	mph	10 mph Pace	16.6 - 26.6	mph
95th Percentile	26.7	mph	Percent in Pace	78.3	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Tuesday, May 23, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
1:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
5:00 AM	1	2	4	5	4	1	0	0	0	0	0	0	0	0	0	0	0	**17**
6:00 AM	0	2	12	20	11	0	0	0	0	0	0	0	0	0	0	0	0	**45**
7:00 AM	7	12	31	50	12	2	0	0	0	0	0	0	0	0	0	0	0	**114**
8:00 AM	4	19	38	65	15	1	0	0	0	0	0	0	0	0	0	0	0	**142**
9:00 AM	7	12	23	76	12	1	0	1	0	0	0	0	0	0	0	0	0	**132**
10:00 AM	12	45	55	18	1	0	0	0	0	0	0	0	0	0	0	0	0	**131**
11:00 AM	4	15	59	93	12	0	1	0	0	0	0	0	0	0	0	0	0	**184**
12:00 PM	6	13	65	92	10	0	0	0	0	0	0	0	0	0	0	0	0	**186**
1:00 PM	2	25	70	34	13	0	0	0	0	0	0	0	0	0	0	0	0	**144**
2:00 PM	15	22	68	66	7	0	0	0	0	0	0	0	0	0	0	0	0	**178**
3:00 PM	17	38	51	92	8	1	0	0	0	0	0	0	0	0	0	0	0	**207**
4:00 PM	8	43	100	91	8	1	0	0	0	0	0	0	0	0	0	0	0	**251**
5:00 PM	6	19	68	117	16	1	0	0	0	0	0	0	0	0	0	0	0	**227**
6:00 PM	9	17	45	72	12	1	0	0	0	0	0	0	0	0	0	0	0	**156**
7:00 PM	7	13	33	28	2	0	0	0	0	0	0	0	0	0	0	0	0	**83**
8:00 PM	4	9	18	30	5	0	0	0	0	0	0	0	0	0	0	0	0	**66**
9:00 PM	2	5	25	13	0	0	0	0	0	0	0	0	0	0	0	0	0	**45**
10:00 PM	2	4	13	14	3	0	0	0	0	0	0	0	0	0	0	0	0	**36**
11:00 PM	0	2	4	10	2	0	0	0	0	0	0	0	0	0	0	0	0	**18**
Total	**113**	**320**	**787**	**992**	**154**	**9**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,377**
Percent	**4.8%**	**13.5%**	**33.1%**	**41.7%**	**6.5%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.8	mph	Mean (Average) Speed	19.2	mph
85th Percentile	23.4	mph	10 mph Pace	15.2 - 25.2	mph
95th Percentile	25.3	mph	Percent in Pace	74.9	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Tuesday, May 23, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	1	2	11	2	1	0	0	0	0	0	0	0	0	0	0	0	**17**
6:00 AM	0	1	5	42	10	0	0	0	0	0	0	0	0	0	0	0	0	**58**
7:00 AM	0	3	17	83	19	0	0	0	0	0	0	0	0	0	0	0	0	**122**
8:00 AM	1	6	42	71	21	1	0	0	0	0	0	0	0	0	0	0	0	**142**
9:00 AM	0	11	34	63	11	0	0	0	0	0	0	0	0	0	0	0	0	**119**
10:00 AM	4	15	23	21	7	0	0	0	0	0	0	0	0	0	0	0	0	**70**
11:00 AM	1	14	25	53	13	0	0	0	0	0	0	0	0	0	0	0	0	**106**
12:00 PM	0	11	34	68	20	2	0	0	0	0	0	0	0	0	0	0	0	**135**
1:00 PM	2	9	32	80	11	0	0	0	0	0	0	0	0	0	0	0	0	**134**
2:00 PM	1	10	23	55	15	0	0	0	0	0	0	0	0	0	0	0	0	**104**
3:00 PM	2	15	32	67	11	0	0	0	3	0	0	0	0	0	0	0	0	**130**
4:00 PM	5	7	35	55	8	0	0	0	0	0	0	0	0	0	0	0	0	**110**
5:00 PM	5	9	20	54	13	0	0	0	0	0	0	0	0	0	0	0	0	**101**
6:00 PM	0	10	19	36	6	0	0	0	0	0	0	0	0	0	0	0	0	**71**
7:00 PM	2	4	14	34	3	1	0	0	0	0	0	0	0	0	0	0	0	**58**
8:00 PM	0	9	16	19	5	1	0	0	0	0	0	0	0	0	0	0	0	**50**
9:00 PM	0	2	9	17	2	1	0	0	0	0	0	0	0	0	0	0	0	**31**
10:00 PM	0	4	5	6	4	0	0	0	0	0	0	0	0	0	0	0	0	**19**
11:00 PM	0	1	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
Total	**23**	**143**	**394**	**845**	**182**	**7**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,597**
Percent	**1.4%**	**9.0%**	**24.7%**	**52.9%**	**11.4%**	**0.4%**	**0.0%**	**0.0%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	21.3	mph	Mean (Average) Speed	20.8	mph
85th Percentile	24.5	mph	10 mph Pace	16.4 - 26.4	mph
95th Percentile	26.4	mph	Percent in Pace	80.5	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Wednesday, May 24, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	2	2	7	1	0	0	0	0	0	0	0	0	0	0	0	0	**13**
1:00 AM	1	2	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
2:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	1	5	10	4	0	0	0	0	0	0	0	0	0	0	0	0	**20**
6:00 AM	1	4	7	21	3	0	0	0	0	0	0	0	0	0	0	0	0	**36**
7:00 AM	4	6	26	83	14	2	0	0	0	0	0	0	0	0	0	0	0	**135**
8:00 AM	3	8	43	73	11	1	0	0	0	0	0	0	0	0	0	0	0	**139**
9:00 AM	3	7	39	69	5	0	0	0	0	0	0	0	0	0	0	0	0	**123**
10:00 AM	10	11	50	58	13	2	1	0	0	0	0	0	0	0	0	0	0	**145**
11:00 AM	6	17	61	65	11	0	0	0	0	0	0	0	0	0	0	0	0	**160**
12:00 PM	11	29	56	71	15	1	0	0	0	0	0	0	0	0	0	0	0	**183**
1:00 PM	2	11	78	77	7	0	0	0	0	0	0	0	0	0	0	0	0	**175**
2:00 PM	5	18	65	61	10	0	1	0	0	0	0	0	0	0	0	0	0	**160**
3:00 PM	9	35	66	94	7	0	0	0	0	0	0	0	0	0	0	0	0	**211**
4:00 PM	6	38	84	87	14	2	0	0	0	0	0	0	0	0	0	0	0	**231**
5:00 PM	6	30	66	99	20	1	0	0	0	0	0	0	0	0	0	0	0	**222**
6:00 PM	19	37	51	59	10	1	0	0	0	0	0	0	0	0	0	0	0	**177**
7:00 PM	7	13	45	44	8	0	0	0	0	0	0	0	0	0	0	0	0	**117**
8:00 PM	2	10	35	29	5	0	1	0	0	0	0	0	0	0	0	0	0	**82**
9:00 PM	1	2	16	20	1	0	0	0	0	0	0	0	0	0	0	0	0	**40**
10:00 PM	2	6	12	7	0	1	0	0	0	0	0	0	0	0	0	0	0	**28**
11:00 PM	0	4	7	7	1	0	0	0	0	0	0	0	0	0	0	0	0	**19**
Total	**99**	**291**	**822**	**1,044**	**161**	**11**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,431**
Percent	**4.1%**	**12.0%**	**33.8%**	**42.9%**	**6.6%**	**0.5%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.8	mph	Mean (Average) Speed	19.3	mph
85th Percentile	23.2	mph	10 mph Pace	15.1 - 25.1	mph
95th Percentile	25.7	mph	Percent in Pace	76.8	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Wednesday, May 24, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
1:00 AM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	2	5	14	2	0	0	0	0	0	0	0	0	0	0	0	0	**23**
6:00 AM	0	3	6	33	12	1	0	0	0	0	0	0	0	0	0	0	0	**55**
7:00 AM	0	4	27	95	15	1	0	0	0	0	0	0	0	0	0	0	0	**142**
8:00 AM	1	9	30	86	18	1	0	0	0	0	0	0	0	0	0	0	0	**145**
9:00 AM	1	10	25	54	13	0	0	0	0	0	0	0	0	0	0	0	0	**103**
10:00 AM	1	7	32	45	6	1	0	0	0	0	0	0	0	0	0	0	0	**92**
11:00 AM	5	6	36	42	16	0	0	0	0	0	0	0	0	0	0	0	0	**105**
12:00 PM	4	11	32	65	13	0	0	0	0	0	0	0	0	0	0	0	0	**125**
1:00 PM	3	10	33	56	12	0	0	0	0	0	0	0	0	0	0	0	0	**114**
2:00 PM	3	15	48	66	9	0	0	0	0	0	0	0	0	0	0	0	0	**141**
3:00 PM	3	9	29	52	14	1	0	0	0	0	0	0	0	0	0	0	0	**108**
4:00 PM	3	15	23	46	8	0	0	0	0	0	0	0	0	0	0	0	0	**95**
5:00 PM	2	11	18	54	13	0	0	0	0	0	0	0	0	0	0	0	0	**98**
6:00 PM	4	16	31	22	2	0	0	0	0	0	0	0	0	0	0	0	0	**75**
7:00 PM	2	10	16	20	4	0	0	0	0	0	0	0	0	0	0	0	0	**52**
8:00 PM	0	3	16	25	1	0	0	0	0	0	0	0	0	0	0	0	0	**45**
9:00 PM	0	3	9	12	3	0	0	0	0	0	0	0	0	0	0	0	0	**27**
10:00 PM	0	0	5	14	4	0	0	0	0	0	0	0	0	0	0	0	0	**23**
11:00 PM	0	2	5	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**13**
Total	**32**	**146**	**430**	**817**	**167**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,597**
Percent	**2.0%**	**9.1%**	**26.9%**	**51.2%**	**10.5%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	21.0	mph	Mean (Average) Speed	20.6	mph
85th Percentile	24.3	mph	10 mph Pace	16.3 - 26.3	mph
95th Percentile	26.3	mph	Percent in Pace	80	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Thursday, May 25, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
1:00 AM	0	1	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
2:00 AM	0	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
3:00 AM	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
5:00 AM	1	7	7	5	2	0	0	0	0	0	0	0	0	0	0	0	0	**22**
6:00 AM	0	2	8	20	6	1	0	0	0	0	0	0	0	0	0	0	0	**37**
7:00 AM	1	17	40	56	8	1	0	0	0	0	0	0	0	0	0	0	0	**123**
8:00 AM	2	14	35	60	14	0	0	0	0	0	0	0	0	0	0	0	0	**125**
9:00 AM	6	15	43	58	7	1	0	0	0	0	0	0	0	0	0	0	0	**130**
10:00 AM	11	20	62	45	8	0	0	0	0	0	0	0	0	0	0	0	0	**146**
11:00 AM	9	14	62	75	12	1	0	0	0	0	0	0	0	0	0	0	0	**173**
12:00 PM	7	24	86	86	14	2	0	0	0	0	0	0	0	0	0	0	0	**219**
1:00 PM	10	36	62	57	5	0	0	0	0	0	0	0	0	0	0	0	0	**170**
2:00 PM	12	19	42	82	18	1	0	0	0	0	0	0	0	0	0	0	0	**174**
3:00 PM	17	35	86	72	9	4	0	0	0	0	0	0	0	0	0	0	0	**223**
4:00 PM	5	47	110	105	17	2	0	0	0	0	0	0	0	0	0	0	0	**286**
5:00 PM	7	38	105	91	16	2	0	0	0	0	0	0	0	0	0	0	0	**259**
6:00 PM	6	26	65	53	6	2	0	0	0	0	0	0	0	0	0	0	0	**158**
7:00 PM	4	27	67	23	7	2	1	0	0	0	0	0	0	0	0	0	0	**131**
8:00 PM	3	6	47	38	1	0	0	0	0	0	0	0	0	0	0	0	0	**95**
9:00 PM	3	25	37	19	2	0	0	0	0	0	0	0	0	0	0	0	0	**86**
10:00 PM	2	20	34	11	1	0	0	0	0	0	0	0	0	0	0	0	0	**68**
11:00 PM	0	3	15	6	4	1	0	0	0	0	0	0	0	0	0	0	0	**29**
Total	**106**	**399**	**1,028**	**973**	**157**	**20**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,684**
Percent	**3.9%**	**14.9%**	**38.3%**	**36.3%**	**5.8%**	**0.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.3	mph	Mean (Average) Speed	18.9	mph
85th Percentile	22.8	mph	10 mph Pace	13.4 - 23.4	mph
95th Percentile	25.6	mph	Percent in Pace	75.9	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Thursday, May 25, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	2	0	5	4	4	0	0	0	0	0	0	0	0	0	0	0	0	**15**
1:00 AM	0	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**6**
2:00 AM	0	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
3:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	1	1	5	8	2	0	0	0	0	0	0	0	0	0	0	0	0	**17**
6:00 AM	3	4	10	29	6	0	0	0	0	0	0	0	0	0	0	0	0	**52**
7:00 AM	0	2	28	84	25	0	0	0	0	0	0	0	0	0	0	0	0	**139**
8:00 AM	4	10	23	78	16	1	0	0	0	0	0	0	0	0	0	0	0	**132**
9:00 AM	2	6	25	60	15	0	0	0	0	0	0	0	0	0	0	0	0	**108**
10:00 AM	2	12	34	43	6	0	0	0	0	0	0	0	0	0	0	0	0	**97**
11:00 AM	4	14	26	61	15	0	0	0	0	0	0	0	0	0	0	0	0	**120**
12:00 PM	0	6	42	80	16	0	0	0	0	0	0	0	0	0	0	0	0	**144**
1:00 PM	2	8	29	62	15	0	0	0	0	0	0	0	0	0	0	0	0	**116**
2:00 PM	3	14	35	58	13	0	0	0	0	0	0	0	0	0	0	0	0	**123**
3:00 PM	8	17	43	64	17	0	0	0	0	0	0	0	0	0	0	0	0	**149**
4:00 PM	2	17	35	69	15	0	0	0	0	0	0	0	0	0	0	0	0	**138**
5:00 PM	5	15	41	68	9	0	0	0	0	0	0	0	0	0	0	0	0	**138**
6:00 PM	5	15	27	45	6	0	0	0	0	0	0	0	0	0	0	0	0	**98**
7:00 PM	4	9	27	35	4	0	0	0	0	0	0	0	0	0	0	0	0	**79**
8:00 PM	2	7	22	30	6	0	0	0	0	0	0	0	0	0	0	0	0	**67**
9:00 PM	2	3	10	21	3	0	0	0	0	0	0	0	0	0	0	0	0	**39**
10:00 PM	1	6	16	13	3	0	0	0	0	0	0	0	0	0	0	0	0	**39**
11:00 PM	0	0	7	8	2	0	0	0	0	0	0	0	0	0	0	0	0	**17**
Total	**52**	**168**	**498**	**927**	**199**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,845**
Percent	**2.8%**	**9.1%**	**27.0%**	**50.2%**	**10.8%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	20.8	mph	Mean (Average) Speed	20.4	mph
85th Percentile	24.3	mph	10 mph Pace	16.4 - 26.4	mph
95th Percentile	26.0	mph	Percent in Pace	80.1	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Friday, May 26, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	9	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**16**
1:00 AM	0	2	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
2:00 AM	2	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
3:00 AM	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	0	4	9	1	0	0	0	0	0	0	0	0	0	0	0	0	**14**
6:00 AM	2	6	24	19	1	0	0	0	0	0	0	0	0	0	0	0	0	**52**
7:00 AM	4	5	26	95	17	2	0	0	0	0	0	0	0	0	0	0	0	**149**
8:00 AM	11	36	70	59	4	1	0	0	0	0	0	0	0	0	0	0	0	**181**
9:00 AM	18	86	73	35	4	1	0	0	0	0	0	0	0	0	0	0	0	**217**
10:00 AM	42	88	71	23	1	1	0	0	0	0	0	0	0	0	0	0	0	**226**
11:00 AM	70	151	85	12	1	0	0	0	0	0	0	0	0	0	0	0	0	**319**
12:00 PM	65	106	72	27	0	1	0	0	0	0	0	0	0	0	0	0	0	**271**
1:00 PM	46	161	71	20	2	0	0	0	0	0	0	0	0	0	0	0	0	**300**
2:00 PM	70	135	81	15	3	0	0	0	0	0	0	0	0	0	0	0	0	**304**
3:00 PM	70	141	68	16	2	0	0	0	0	0	0	0	0	0	0	0	0	**297**
4:00 PM	41	119	95	23	6	0	0	0	0	0	0	0	0	0	0	0	0	**284**
5:00 PM	51	96	75	28	7	0	0	0	0	0	0	0	0	0	0	0	0	**257**
6:00 PM	21	80	82	19	4	1	0	0	0	0	0	0	0	0	0	0	0	**207**
7:00 PM	43	91	56	12	1	1	0	0	0	0	0	0	0	0	0	0	0	**204**
8:00 PM	11	70	50	23	4	0	1	0	0	0	0	0	0	0	0	0	0	**159**
9:00 PM	16	41	76	20	1	0	0	0	0	0	0	0	0	0	0	0	0	**154**
10:00 PM	35	105	94	15	0	0	0	0	0	0	0	0	0	0	0	0	0	**249**
11:00 PM	85	99	46	13	0	1	0	0	0	0	0	0	0	0	0	0	0	**244**
Total	**703**	**1,624**	**1,237**	**495**	**61**	**9**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4,130**
Percent	**17.0%**	**39.3%**	**30.0%**	**12.0%**	**1.5%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	13.9	mph	Mean (Average) Speed	14.6	mph
85th Percentile	19.5	mph	10 mph Pace	9.3 - 19.3	mph
95th Percentile	22.6	mph	Percent in Pace	69.8	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Friday, May 26, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	0	11	7	3	0	0	0	0	0	0	0	0	0	0	0	0	**22**
1:00 AM	0	1	1	5	2	0	0	0	0	0	0	0	0	0	0	0	0	**9**
2:00 AM	0	1	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
3:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	1	2	3	0	1	0	0	0	0	0	0	0	0	0	0	0	**7**
5:00 AM	1	1	2	9	0	0	0	0	0	0	0	0	0	0	0	0	0	**13**
6:00 AM	0	0	22	29	4	0	0	0	0	0	0	0	0	0	0	0	0	**55**
7:00 AM	0	4	29	72	14	0	0	0	3	0	0	0	0	0	0	0	0	**122**
8:00 AM	4	27	60	68	11	1	0	0	0	0	0	0	0	0	0	0	0	**171**
9:00 AM	10	44	71	37	4	0	0	0	0	0	0	0	0	0	0	0	0	**166**
10:00 AM	12	37	87	33	2	1	0	0	0	0	0	0	0	0	0	0	0	**172**
11:00 AM	31	97	74	20	3	0	0	0	0	0	0	0	0	0	0	0	0	**225**
12:00 PM	29	65	82	29	1	0	0	0	0	0	0	0	0	0	0	0	0	**206**
1:00 PM	55	86	96	12	0	0	0	0	0	0	0	0	0	0	0	0	0	**249**
2:00 PM	61	70	84	25	3	0	0	0	0	0	0	0	0	0	0	0	0	**243**
3:00 PM	55	91	73	12	1	0	0	0	0	0	0	0	0	0	0	0	0	**232**
4:00 PM	36	95	62	32	3	1	2	0	0	0	0	0	0	0	0	0	0	**231**
5:00 PM	17	80	69	25	3	0	0	0	0	0	0	0	0	0	0	0	0	**194**
6:00 PM	31	57	56	18	0	0	0	0	0	0	0	0	0	0	0	0	0	**162**
7:00 PM	34	46	51	25	2	0	0	0	0	0	0	0	0	0	0	0	0	**158**
8:00 PM	9	30	45	22	1	0	0	0	0	0	0	0	0	0	0	0	0	**107**
9:00 PM	12	23	46	19	0	0	0	0	0	0	0	0	0	0	0	0	0	**100**
10:00 PM	2	30	63	16	0	0	0	0	0	0	0	0	0	0	0	0	0	**111**
11:00 PM	10	26	48	10	3	0	0	0	0	0	0	0	0	0	0	0	0	**97**
Total	**410**	**912**	**1,139**	**531**	**60**	**4**	**2**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3,061**
Percent	**13.4%**	**29.8%**	**37.2%**	**17.3%**	**2.0%**	**0.1%**	**0.1%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	15.7	mph	Mean (Average) Speed	15.7	mph
85th Percentile	20.7	mph	10 mph Pace	11.0 - 21.0	mph
95th Percentile	23.4	mph	Percent in Pace	68.4	%

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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Total Study Average
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	4	7	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
1:00 AM	0	1	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
2:00 AM	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
3:00 AM	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**5**
4:00 AM	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	1	2	3	6	2	0	0	0	0	0	0	0	0	0	0	0	0	**14**
6:00 AM	1	3	10	17	7	0	0	0	0	0	0	0	0	0	0	0	0	**38**
7:00 AM	3	7	27	58	10	1	0	0	0	0	0	0	0	0	0	0	0	**106**
8:00 AM	3	13	35	66	11	1	0	0	0	0	0	0	0	0	0	0	0	**129**
9:00 AM	6	21	43	60	9	1	0	0	0	0	0	0	0	0	0	0	0	**140**
10:00 AM	13	29	47	49	10	1	0	0	0	0	0	0	0	0	0	0	0	**149**
11:00 AM	15	33	59	66	10	1	0	0	0	0	0	0	0	0	0	0	0	**184**
12:00 PM	17	33	64	70	9	1	0	0	0	0	0	0	0	0	0	0	0	**194**
1:00 PM	11	42	61	55	7	0	0	0	0	0	0	0	0	0	0	0	0	**176**
2:00 PM	17	35	56	58	10	0	0	0	0	0	0	0	0	0	0	0	0	**176**
3:00 PM	21	45	57	71	9	1	0	0	0	0	0	0	0	0	0	0	0	**204**
4:00 PM	10	47	78	82	12	1	0	0	0	0	0	0	0	0	0	0	0	**230**
5:00 PM	12	33	80	77	11	1	0	0	0	0	0	0	0	0	0	0	0	**214**
6:00 PM	10	28	49	52	7	1	0	0	0	0	0	0	0	0	0	0	0	**147**
7:00 PM	11	27	44	31	5	1	0	0	0	0	0	0	0	0	0	0	0	**119**
8:00 PM	4	17	33	32	3	0	0	0	0	0	0	0	0	0	0	0	0	**89**
9:00 PM	4	13	31	19	2	0	0	0	0	0	0	0	0	0	0	0	0	**69**
10:00 PM	6	21	28	13	1	0	0	0	0	0	0	0	0	0	0	0	0	**69**
11:00 PM	12	16	12	11	2	0	0	0	0	0	0	0	0	0	0	0	0	**53**
Total	**177**	**469**	**830**	**908**	**138**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,533**
Percent	**7.0%**	**18.5%**	**32.8%**	**35.8%**	**5.4%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	19.0	mph	Mean (Average) Speed	18.3	mph
85th Percentile	22.9	mph	10 mph Pace	13.6 - 23.6	mph
95th Percentile	25.2	mph	Percent in Pace	69.1	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 02

Total Study Average
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	3	6	1	0	0	0	0	0	0	0	0	0	0	0	0	**10**
1:00 AM	0	1	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**6**
2:00 AM	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**4**
5:00 AM	1	1	3	10	2	0	0	0	0	0	0	0	0	0	0	0	0	**17**
6:00 AM	1	2	8	24	6	0	0	0	0	0	0	0	0	0	0	0	0	**41**
7:00 AM	0	4	18	65	15	0	0	0	0	0	0	0	0	0	0	0	0	**102**
8:00 AM	2	9	30	63	16	1	0	0	0	0	0	0	0	0	0	0	0	**121**
9:00 AM	2	13	30	50	9	0	0	0	0	0	0	0	0	0	0	0	0	**104**
10:00 AM	3	13	33	34	7	1	0	0	0	0	0	0	0	0	0	0	0	**91**
11:00 AM	6	24	32	43	12	0	0	0	0	0	0	0	0	0	0	0	0	**117**
12:00 PM	6	17	35	60	11	0	0	0	0	0	0	0	0	0	0	0	0	**129**
1:00 PM	9	20	37	51	10	0	0	0	0	0	0	0	0	0	0	0	0	**127**
2:00 PM	10	19	36	48	8	1	0	0	0	0	0	0	0	0	0	0	0	**122**
3:00 PM	11	24	36	49	10	1	0	0	0	0	0	0	0	0	0	0	0	**131**
4:00 PM	7	22	32	52	8	0	0	0	0	0	0	0	0	0	0	0	0	**121**
5:00 PM	5	22	29	46	8	0	0	0	0	0	0	0	0	0	0	0	0	**110**
6:00 PM	6	19	25	29	5	0	0	0	0	0	0	0	0	0	0	0	0	**84**
7:00 PM	7	11	21	28	4	0	0	0	0	0	0	0	0	0	0	0	0	**71**
8:00 PM	2	10	19	23	5	0	0	0	0	0	0	0	0	0	0	0	0	**59**
9:00 PM	2	5	14	16	3	0	0	0	0	0	0	0	0	0	0	0	0	**40**
10:00 PM	1	6	16	12	3	0	0	0	0	0	0	0	0	0	0	0	0	**38**
11:00 PM	2	5	12	8	2	0	0	0	0	0	0	0	0	0	0	0	0	**29**
Total	**83**	**247**	**474**	**725**	**147**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,680**
Percent	**4.9%**	**14.7%**	**28.2%**	**43.2%**	**8.8%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	20.1	mph	Mean (Average) Speed	19.4	mph
85th Percentile	24.0	mph	10 mph Pace	15.3 - 25.3	mph
95th Percentile	26.1	mph	Percent in Pace	71.1	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd N/O Bruce Ln
Date Range: 5/20/2017 - 5/26/2017
Site Code: 02

Time	Saturday 5/20/2017			Sunday 5/21/2017			Monday 5/22/2017			Tuesday 5/23/2017			Wednesday 5/24/2017			Thursday 5/25/2017			Friday 5/26/2017			Mid-Week Average		
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	16	14	30	12	11	23	15	7	22	5	6	11	13	7	20	7	15	22	16	22	38	8	9	18
1:00 AM	10	10	20	12	7	19	2	2	4	3	0	3	9	3	12	6	6	12	12	9	21	6	3	9
2:00 AM	16	6	22	7	9	16	6	2	8	2	3	5	1	3	4	7	7	14	8	7	15	3	4	8
3:00 AM	7	4	11	12	2	14	3	1	4	1	0	1	2	0	2	4	2	6	3	2	5	2	1	3
4:00 AM	3	3	6	0	3	3	9	5	14	4	3	7	3	3	6	6	3	9	3	7	10	4	3	7
5:00 AM	2	9	11	4	11	15	17	18	35	17	17	34	20	23	43	22	17	39	14	13	27	20	19	39
6:00 AM	28	12	40	20	16	36	43	44	87	45	58	103	36	55	91	37	52	89	52	55	107	39	55	94
7:00 AM	63	40	103	42	18	60	122	137	259	114	122	236	135	142	277	123	139	262	149	122	271	124	134	258
8:00 AM	79	62	141	60	51	111	174	142	316	142	142	284	139	145	284	125	132	257	181	171	352	135	140	275
9:00 AM	136	65	201	102	58	160	138	114	252	132	119	251	123	103	226	130	108	238	217	166	383	128	110	238
10:00 AM	116	62	178	137	56	193	133	86	219	131	70	201	145	92	237	146	97	243	226	172	398	141	86	227
11:00 AM	143	89	232	131	52	183	176	123	299	184	106	290	160	105	265	173	120	293	319	225	544	172	110	283
12:00 PM	154	85	239	159	68	227	180	143	323	186	135	321	183	125	308	219	144	363	271	206	477	196	135	331
1:00 PM	157	83	240	124	73	197	166	124	290	144	134	278	175	114	289	170	116	286	300	249	549	163	121	284
2:00 PM	131	90	221	112	52	164	176	100	276	178	104	282	160	141	301	174	123	297	304	243	547	171	123	293
3:00 PM	165	89	254	123	76	199	204	132	336	207	130	337	211	108	319	223	149	372	297	232	529	214	129	343
4:00 PM	195	92	287	113	87	200	252	108	360	251	110	361	231	95	326	286	138	424	284	231	515	256	114	370
5:00 PM	147	59	206	116	58	174	267	119	386	227	101	328	222	98	320	259	138	397	257	194	451	236	112	348
6:00 PM	107	76	183	89	44	133	134	63	197	156	71	227	177	75	252	158	98	256	207	162	369	164	81	245
7:00 PM	122	58	180	85	34	119	88	58	146	83	58	141	117	52	169	131	79	210	204	158	362	110	63	173
8:00 PM	79	45	124	69	44	113	81	51	132	66	50	116	82	45	127	95	67	162	159	107	266	81	54	135
9:00 PM	60	42	102	49	26	75	49	19	68	45	31	76	40	27	67	86	39	125	154	100	254	57	32	89
10:00 PM	52	27	79	27	23	50	23	20	43	36	19	55	28	23	51	68	39	107	249	111	360	44	27	71
11:00 PM	30	25	55	17	26	43	16	10	26	18	8	26	19	13	32	29	17	46	244	97	341	22	13	35
Total	**2,018**	**1,147**	**3,165**	**1,622**	**905**	**2,527**	**2,474**	**1,628**	**4,102**	**2,377**	**1,597**	**3,974**	**2,431**	**1,597**	**4,028**	**2,684**	**1,845**	**4,529**	**4,130**	**3,061**	**7,191**	**2,497**	**1,680**	**4,177**
Percent	**64%**	**36%**	-	**64%**	**36%**	-	**60%**	**40%**	-	**60%**	**40%**	-	**60%**	**40%**	-	**59%**	**41%**	-	**57%**	**43%**	-	**60%**	**40%**	-

1. Mid-week average includes data between Tuesday and Thursday.

Deon Fouche: (415) 757-7714
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Vehicle Classification Report Summary

Location: Airport Rd S/O Fairground Rd
Count Direction: Northbound / Southbound
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

	FHWA Vehicle Classification													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total														
Northbound	122	7,086	1,627	6	654	130	0	4	4	2	0	0	1	9,636
Percent	1.3%	73.5%	16.9%	0.1%	6.8%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	144	7,529	1,907	5	825	126	0	4	3	1	0	0	0	10,544
Percent	1.4%	71.4%	18.1%	0.0%	7.8%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	266	14,615	3,534	11	1,479	256	0	8	7	3	0	0	1	20,180
Percent	1.3%	72.4%	17.5%	0.1%	7.3%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Saturday, May 20, 2017
Southbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	8	1	0	2	0	0	0	0	0	0	0	0	**11**
1:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
2:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	4	4	0	1	1	0	0	0	0	0	0	0	**10**
7:00 AM	0	10	8	0	5	0	0	1	0	0	0	0	0	**24**
8:00 AM	2	28	10	0	4	2	0	0	1	0	0	0	0	**47**
9:00 AM	1	30	25	0	9	2	0	0	0	0	0	0	0	**67**
10:00 AM	2	46	10	0	3	1	0	0	0	0	0	0	0	**62**
11:00 AM	2	43	18	0	9	2	0	1	0	0	0	0	0	**75**
12:00 PM	0	43	13	0	6	2	0	0	0	0	0	0	0	**64**
1:00 PM	0	43	11	0	5	0	0	0	0	0	0	0	0	**59**
2:00 PM	0	50	7	0	4	1	0	0	0	0	0	0	0	**62**
3:00 PM	4	38	15	0	2	0	0	0	0	0	0	0	0	**59**
4:00 PM	0	58	13	0	7	3	0	0	0	0	0	0	0	**81**
5:00 PM	1	59	6	0	0	1	0	0	0	0	0	0	0	**67**
6:00 PM	0	49	9	0	6	1	0	0	0	0	0	0	0	**65**
7:00 PM	0	35	9	0	3	1	0	0	0	0	0	0	0	**48**
8:00 PM	1	41	6	0	2	4	0	0	0	0	0	0	0	**54**
9:00 PM	1	28	3	0	0	0	0	0	0	0	0	0	0	**32**
10:00 PM	0	19	4	0	1	2	0	0	0	0	0	0	0	**26**
11:00 PM	0	14	0	0	1	0	0	0	0	0	0	0	0	**15**
Total	**14**	**657**	**175**	**0**	**71**	**23**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**943**
Percent	**1.5%**	**69.7%**	**18.6%**	**0.0%**	**7.5%**	**2.4%**	**0.0%**	**0.2%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Sunday, May 21, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
1:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
2:00 AM	0	2	1	0	0	1	0	0	0	0	0	0	0	4
3:00 AM	0	3	0	0	1	0	0	0	0	0	0	0	0	4
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
6:00 AM	0	11	2	0	0	0	0	0	0	0	0	0	0	13
7:00 AM	0	15	6	0	0	0	0	0	0	0	0	0	0	21
8:00 AM	0	31	8	0	2	0	0	0	0	0	0	0	0	41
9:00 AM	2	43	6	0	2	0	0	0	0	0	0	0	0	53
10:00 AM	0	55	7	0	3	0	0	0	0	0	0	0	0	65
11:00 AM	1	44	10	0	4	0	0	0	0	0	0	0	0	59
12:00 PM	0	53	10	0	3	0	0	0	0	0	0	0	0	66
1:00 PM	0	31	6	0	5	1	0	0	0	0	0	0	0	43
2:00 PM	1	43	14	0	3	1	0	0	0	0	0	0	0	62
3:00 PM	1	49	6	0	2	0	0	0	0	0	0	0	0	58
4:00 PM	1	40	6	0	0	0	0	0	0	0	0	0	0	47
5:00 PM	1	32	5	0	0	0	0	0	0	0	0	0	0	38
6:00 PM	3	25	6	0	5	0	0	0	0	0	0	0	0	39
7:00 PM	1	26	2	0	0	0	0	0	0	0	0	0	0	29
8:00 PM	0	20	5	0	1	0	0	0	0	0	0	0	0	26
9:00 PM	0	20	3	0	0	0	0	0	0	0	0	0	0	23
10:00 PM	0	9	1	0	0	0	0	0	0	0	0	0	0	10
11:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
Total	**11**	**565**	**105**	**0**	**31**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**715**
Percent	**1.5%**	**79.0%**	**14.7%**	**0.0%**	**4.3%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Sunday, May 21, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	7	0	0	0	1	0	0	0	0	0	0	0	8
1:00 AM	0	2	0	1	0	0	0	0	0	0	0	0	0	3
2:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
3:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
6:00 AM	0	8	0	0	1	0	0	0	0	0	0	0	0	9
7:00 AM	1	4	3	0	0	0	0	0	0	0	0	0	0	8
8:00 AM	0	24	5	0	2	2	0	0	0	0	0	0	0	33
9:00 AM	1	30	11	0	1	3	0	0	0	0	0	0	0	46
10:00 AM	0	33	7	0	2	0	0	0	0	0	0	0	0	42
11:00 AM	4	43	6	0	6	0	0	0	0	0	0	0	0	59
12:00 PM	1	46	5	0	6	0	0	0	0	0	0	0	0	58
1:00 PM	1	54	10	0	6	0	0	0	0	0	0	0	0	71
2:00 PM	2	35	13	0	1	1	0	0	0	0	0	0	0	52
3:00 PM	2	46	14	0	2	3	0	0	0	0	0	0	0	67
4:00 PM	1	43	11	0	8	0	0	1	0	0	0	0	0	64
5:00 PM	1	43	7	0	1	2	0	0	0	0	0	0	0	54
6:00 PM	0	37	8	0	6	0	0	0	0	0	0	0	0	51
7:00 PM	1	33	6	0	0	3	0	0	0	0	0	0	0	43
8:00 PM	0	29	4	0	2	1	0	0	0	0	0	0	0	36
9:00 PM	0	20	2	0	0	0	0	0	0	0	0	0	0	22
10:00 PM	0	15	1	0	1	1	0	0	0	0	0	0	0	18
11:00 PM	0	17	2	0	0	0	0	0	0	0	0	0	0	19
Total	**15**	**576**	**117**	**1**	**45**	**17**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**772**
Percent	**1.9%**	**74.6%**	**15.2%**	**0.1%**	**5.8%**	**2.2%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Monday, May 22, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	3	0	0	1	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	6	2	0	0	0	0	0	0	0	0	0	0	**8**
6:00 AM	0	25	7	0	3	2	0	0	0	0	0	0	0	**37**
7:00 AM	3	84	18	0	7	6	0	0	0	0	0	0	0	**118**
8:00 AM	2	77	28	0	10	1	0	0	0	0	0	0	0	**118**
9:00 AM	3	64	18	0	10	3	0	0	0	0	0	0	0	**98**
10:00 AM	0	54	20	0	8	1	0	0	0	0	0	0	0	**83**
11:00 AM	4	80	17	0	13	3	0	0	0	0	0	0	0	**117**
12:00 PM	3	90	13	0	8	0	0	0	0	0	0	0	0	**114**
1:00 PM	2	74	17	1	6	1	0	0	0	0	0	0	0	**101**
2:00 PM	1	64	16	0	9	0	0	1	0	0	0	0	0	**91**
3:00 PM	2	92	21	0	11	3	0	0	0	0	0	0	0	**129**
4:00 PM	1	92	24	0	12	1	0	0	0	0	0	0	0	**130**
5:00 PM	4	99	19	0	8	1	0	0	0	0	0	0	0	**131**
6:00 PM	0	58	10	0	2	1	0	0	0	0	0	0	0	**71**
7:00 PM	0	42	1	0	1	0	0	0	0	0	0	0	0	**44**
8:00 PM	0	23	4	0	4	0	0	0	0	0	0	0	0	**31**
9:00 PM	0	14	0	1	1	0	0	0	0	0	0	0	0	**16**
10:00 PM	0	8	1	0	2	0	0	0	0	0	0	0	0	**11**
11:00 PM	0	7	2	0	0	0	0	0	0	0	0	0	0	**9**
Total	**25**	**1,066**	**240**	**2**	**116**	**23**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1,473**
Percent	**1.7%**	**72.4%**	**16.3%**	**0.1%**	**7.9%**	**1.6%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Monday, May 22, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	**5**
1:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	0	1	0	2	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	2	1	0	1	0	0	0	0	0	0	0	0	**4**
5:00 AM	1	8	1	0	0	0	0	0	0	0	0	0	0	**10**
6:00 AM	2	42	9	0	7	1	0	0	0	0	0	0	0	**61**
7:00 AM	2	75	30	0	13	0	0	0	0	0	0	0	0	**120**
8:00 AM	3	83	37	0	9	1	0	0	0	0	0	0	0	**133**
9:00 AM	1	76	19	0	11	0	0	0	0	0	0	0	0	**107**
10:00 AM	1	48	25	0	9	1	0	0	0	0	0	0	0	**84**
11:00 AM	1	62	22	0	13	1	0	0	0	0	0	0	0	**99**
12:00 PM	2	104	29	0	13	2	0	0	0	0	0	0	0	**150**
1:00 PM	1	88	18	0	8	3	0	0	0	0	0	0	0	**118**
2:00 PM	1	70	20	0	6	1	0	0	0	0	0	0	0	**98**
3:00 PM	2	97	33	0	7	2	0	0	0	0	0	0	0	**141**
4:00 PM	8	100	30	0	9	0	0	0	0	0	0	0	0	**147**
5:00 PM	1	109	15	0	9	5	0	0	0	0	0	0	0	**139**
6:00 PM	2	56	7	0	5	1	0	0	0	0	0	0	0	**71**
7:00 PM	0	43	10	0	2	2	0	0	0	0	0	0	0	**57**
8:00 PM	1	24	7	1	2	0	0	0	0	0	0	0	0	**35**
9:00 PM	2	30	3	0	0	1	0	0	0	0	0	0	0	**36**
10:00 PM	0	13	2	0	1	0	0	0	0	0	0	0	0	**16**
11:00 PM	0	11	2	0	0	1	0	0	0	0	0	0	0	**14**
Total	**31**	**1,149**	**322**	**1**	**127**	**22**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,652**
Percent	**1.9%**	**69.6%**	**19.5%**	**0.1%**	**7.7%**	**1.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Tuesday, May 23, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	4
3:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	11	2	0	1	0	0	0	0	0	0	0	0	14
6:00 AM	0	35	12	0	3	0	0	0	0	0	0	0	0	50
7:00 AM	1	87	23	0	14	2	0	0	0	0	0	0	0	127
8:00 AM	1	88	30	0	11	2	0	0	0	0	0	0	0	132
9:00 AM	1	69	26	0	6	4	0	0	0	0	0	0	0	106
10:00 AM	1	54	20	0	8	3	0	0	0	0	0	0	0	86
11:00 AM	1	85	22	0	6	1	0	0	0	1	0	0	0	116
12:00 PM	2	91	20	0	9	0	0	0	0	0	0	0	0	122
1:00 PM	1	67	19	0	11	5	0	0	0	0	0	0	0	103
2:00 PM	1	66	23	1	8	0	0	0	0	0	0	0	0	99
3:00 PM	2	88	21	0	16	1	0	0	0	0	0	0	0	128
4:00 PM	1	114	15	0	7	2	0	0	0	0	0	0	0	139
5:00 PM	1	107	15	0	6	2	0	0	0	0	0	0	0	131
6:00 PM	0	59	19	0	3	1	0	0	0	0	0	0	0	82
7:00 PM	0	29	7	0	1	1	0	0	0	0	0	0	0	38
8:00 PM	0	22	6	0	2	0	0	0	0	0	0	0	0	30
9:00 PM	0	13	2	0	0	0	0	0	0	0	0	0	0	15
10:00 PM	0	10	2	0	1	0	0	0	0	0	0	0	0	13
11:00 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
Total	**13**	**1,108**	**286**	**1**	**113**	**24**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1,546**
Percent	**0.8%**	**71.7%**	**18.5%**	**0.1%**	**7.3%**	**1.6%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Tuesday, May 23, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	5
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	3	0	0	1	0	0	0	0	0	0	0	0	4
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	1
5:00 AM	1	7	0	0	1	0	0	0	0	0	0	0	0	9
6:00 AM	2	37	11	0	11	0	0	0	0	0	0	0	0	61
7:00 AM	2	67	23	0	18	0	0	0	0	0	0	0	0	110
8:00 AM	1	93	23	0	12	2	0	0	0	0	0	0	0	131
9:00 AM	0	86	20	0	12	2	0	0	0	0	0	0	0	120
10:00 AM	1	58	16	0	5	0	0	0	0	0	0	0	0	80
11:00 AM	4	82	23	0	6	0	0	0	0	0	0	0	0	115
12:00 PM	1	102	21	0	13	1	0	0	0	0	0	0	0	138
1:00 PM	2	96	31	1	8	0	0	0	0	0	0	0	0	138
2:00 PM	2	82	22	0	6	2	0	1	0	0	0	0	0	115
3:00 PM	3	81	32	0	16	1	0	0	0	0	0	0	0	133
4:00 PM	3	101	31	0	10	4	0	0	0	0	0	0	0	149
5:00 PM	0	92	22	0	4	1	0	0	0	0	0	0	0	119
6:00 PM	0	63	13	0	6	0	0	0	0	0	0	0	0	82
7:00 PM	0	41	10	0	3	2	0	0	0	0	0	0	0	56
8:00 PM	0	36	11	0	1	2	0	0	0	0	0	0	0	50
9:00 PM	0	24	0	0	0	0	0	0	0	0	0	0	0	24
10:00 PM	0	11	5	0	0	0	0	0	0	0	0	0	0	16
11:00 PM	0	7	0	0	0	0	0	0	0	0	0	0	0	7
Total	**22**	**1,175**	**315**	**1**	**133**	**18**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1,665**
Percent	**1.3%**	**70.6%**	**18.9%**	**0.1%**	**8.0%**	**1.1%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Wednesday, May 24, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	13	1	0	2	1	0	0	0	0	0	0	0	17
6:00 AM	2	32	7	0	2	0	0	0	0	0	0	0	0	43
7:00 AM	1	92	22	0	16	1	0	0	0	0	0	0	0	132
8:00 AM	3	69	34	0	11	1	0	0	0	0	0	0	0	118
9:00 AM	2	62	20	0	9	1	0	0	0	0	0	0	0	94
10:00 AM	0	51	18	0	11	0	0	0	0	0	0	0	0	80
11:00 AM	2	72	25	0	5	0	0	0	0	0	0	0	0	104
12:00 PM	1	96	22	0	8	0	0	0	0	0	0	0	0	127
1:00 PM	2	69	24	0	3	0	0	0	0	0	0	0	0	98
2:00 PM	1	67	16	0	5	0	0	0	0	0	0	0	0	89
3:00 PM	1	98	19	1	12	2	0	0	0	0	0	0	0	133
4:00 PM	2	117	24	0	10	0	0	0	0	0	0	0	0	153
5:00 PM	3	93	12	0	9	1	0	0	0	0	0	0	0	118
6:00 PM	0	85	14	0	4	1	0	0	0	0	0	0	0	104
7:00 PM	0	44	5	0	5	1	0	0	0	0	0	0	0	55
8:00 PM	0	17	9	0	0	0	0	0	0	0	0	0	0	26
9:00 PM	0	13	3	0	1	0	0	0	0	0	0	0	0	17
10:00 PM	0	7	3	0	0	0	0	0	0	0	0	0	0	10
11:00 PM	0	10	0	0	0	0	0	0	0	0	0	0	0	10
Total	**20**	**1,116**	**280**	**1**	**113**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,539**
Percent	**1.3%**	**72.5%**	**18.2%**	**0.1%**	**7.3%**	**0.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Wednesday, May 24, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	3
1:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
2:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	2	10	3	0	1	0	0	0	0	0	0	0	0	16
6:00 AM	1	32	9	0	9	1	0	0	0	0	0	0	0	52
7:00 AM	4	87	22	0	11	2	0	0	0	0	0	0	0	126
8:00 AM	0	86	20	0	12	0	0	0	0	0	0	0	0	118
9:00 AM	0	76	22	0	15	1	0	0	0	0	0	0	0	114
10:00 AM	1	53	18	0	8	1	0	0	0	0	0	0	0	81
11:00 AM	1	58	14	0	5	2	0	0	0	0	0	0	0	80
12:00 PM	1	105	23	0	7	1	0	0	0	0	0	0	0	137
1:00 PM	2	85	30	0	16	1	0	0	0	0	0	0	0	134
2:00 PM	1	69	26	0	10	1	0	0	0	0	0	0	0	107
3:00 PM	2	93	28	0	15	1	0	0	0	0	0	0	0	139
4:00 PM	1	81	25	0	4	2	0	0	0	0	0	0	0	113
5:00 PM	2	111	23	0	5	2	0	0	0	0	0	0	0	143
6:00 PM	0	62	17	0	3	1	0	0	0	0	0	0	0	83
7:00 PM	0	41	9	0	0	0	0	0	0	0	0	0	0	50
8:00 PM	1	39	5	0	5	2	0	0	0	0	0	0	0	52
9:00 PM	0	21	5	0	0	0	0	0	0	0	0	0	0	26
10:00 PM	0	18	3	0	1	0	0	0	0	0	0	0	0	22
11:00 PM	0	7	3	0	0	0	0	0	0	0	0	0	0	10
Total	**19**	**1,146**	**305**	**0**	**128**	**18**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,616**
Percent	**1.2%**	**70.9%**	**18.9%**	**0.0%**	**7.9%**	**1.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Thursday, May 25, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	0	12	1	0	3	0	0	0	0	0	0	0	0	16
6:00 AM	1	35	6	0	4	1	0	0	0	0	0	0	0	47
7:00 AM	0	103	28	0	9	5	0	0	0	0	0	0	0	145
8:00 AM	2	69	24	0	12	0	0	0	1	0	0	0	0	108
9:00 AM	0	63	21	0	3	1	0	0	0	0	0	0	0	88
10:00 AM	0	67	23	0	5	0	0	0	0	0	0	0	0	95
11:00 AM	0	82	21	0	7	0	0	0	0	0	0	0	0	110
12:00 PM	0	94	15	0	15	3	0	0	0	0	0	0	0	127
1:00 PM	1	70	10	0	4	3	0	0	0	0	0	0	0	88
2:00 PM	2	85	17	0	8	3	0	0	0	0	0	0	0	115
3:00 PM	4	89	22	1	9	4	0	0	0	0	0	0	0	129
4:00 PM	3	102	20	0	15	2	0	0	0	0	0	0	0	142
5:00 PM	1	116	20	0	10	2	0	0	0	0	0	0	0	149
6:00 PM	0	61	11	0	4	0	0	0	0	0	0	0	0	76
7:00 PM	0	42	4	0	1	2	0	0	0	0	0	0	0	49
8:00 PM	0	32	1	0	2	0	0	0	0	0	0	0	0	35
9:00 PM	2	17	4	0	2	1	0	0	0	0	0	0	0	26
10:00 PM	0	13	2	0	0	0	0	0	0	0	0	0	0	15
11:00 PM	0	10	1	0	1	0	0	0	0	0	0	0	0	12
Total	**16**	**1,170**	**251**	**1**	**114**	**27**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1,580**
Percent	**1.0%**	**74.1%**	**15.9%**	**0.1%**	**7.2%**	**1.7%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Thursday, May 25, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	7
1:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	2
2:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	1	6	1	0	1	1	0	0	0	0	0	0	0	10
6:00 AM	0	37	7	0	9	2	0	0	1	0	0	0	0	56
7:00 AM	1	77	25	0	11	2	0	0	0	0	0	0	0	116
8:00 AM	1	73	28	0	14	2	0	0	0	0	0	0	0	118
9:00 AM	0	74	22	0	10	1	0	0	0	0	0	0	0	107
10:00 AM	1	66	12	0	6	0	0	0	0	0	0	0	0	85
11:00 AM	0	72	23	0	19	0	0	0	0	0	0	0	0	114
12:00 PM	1	104	23	0	11	1	0	0	0	0	0	0	0	140
1:00 PM	3	86	17	0	9	0	0	0	0	1	0	0	0	116
2:00 PM	0	77	22	0	12	1	0	0	0	0	0	0	0	112
3:00 PM	3	101	41	0	19	0	0	0	0	0	0	0	0	164
4:00 PM	1	102	22	0	12	0	0	0	0	0	0	0	0	137
5:00 PM	1	112	18	0	5	0	0	0	0	0	0	0	0	136
6:00 PM	0	67	13	0	3	0	0	0	0	0	0	0	0	83
7:00 PM	2	48	14	0	3	0	0	0	0	0	0	0	0	67
8:00 PM	2	40	5	0	3	0	0	0	0	0	0	0	0	50
9:00 PM	0	34	5	0	4	0	0	0	0	0	0	0	0	43
10:00 PM	0	26	1	0	0	0	0	0	0	0	0	0	0	27
11:00 PM	0	8	4	0	2	0	0	0	0	0	0	0	0	14
Total	**17**	**1,223**	**304**	**0**	**154**	**10**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1,710**
Percent	**1.0%**	**71.5%**	**17.8%**	**0.0%**	**9.0%**	**0.6%**	**0.0%**	**0.0%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Friday, May 26, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
1:00 AM	0	2	1	0	0	1	0	0	0	0	0	0	0	4
2:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	3	0	0	1	1	0	0	0	0	0	0	0	5
4:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	0	9	1	0	1	0	0	0	0	0	0	0	0	11
6:00 AM	0	22	14	0	3	1	0	0	0	0	0	0	0	40
7:00 AM	3	77	26	0	13	3	0	0	0	0	0	0	0	122
8:00 AM	2	90	24	0	8	3	0	0	0	0	0	0	0	127
9:00 AM	0	89	30	0	9	0	0	0	1	0	0	0	0	129
10:00 AM	0	85	22	0	14	2	0	0	1	0	0	0	0	124
11:00 AM	2	108	24	0	8	0	0	0	0	0	0	0	0	142
12:00 PM	1	104	23	0	9	1	0	0	0	0	0	0	0	138
1:00 PM	2	94	18	0	9	1	0	0	0	0	0	0	0	124
2:00 PM	3	107	14	0	7	3	0	0	0	0	0	0	0	134
3:00 PM	2	108	29	0	16	0	0	0	1	0	0	0	0	156
4:00 PM	2	128	22	0	10	1	0	0	0	0	0	0	0	163
5:00 PM	2	99	22	0	4	0	0	0	0	0	0	0	0	127
6:00 PM	1	82	12	0	6	0	0	0	0	0	0	0	0	101
7:00 PM	1	65	9	0	2	1	0	0	0	0	0	0	0	78
8:00 PM	0	46	6	0	1	0	0	0	0	0	0	0	0	53
9:00 PM	0	43	6	0	1	1	0	0	0	0	0	0	0	51
10:00 PM	0	38	2	0	1	1	0	0	0	0	0	0	0	42
11:00 PM	2	39	10	0	0	1	0	0	0	0	0	0	0	52
Total	**23**	**1,447**	**316**	**0**	**123**	**21**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**1,933**
Percent	**1.2%**	**74.9%**	**16.3%**	**0.0%**	**6.4%**	**1.1%**	**0.0%**	**0.0%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Friday, May 26, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	7	2	0	1	0	0	0	0	0	0	0	0	10
1:00 AM	0	10	1	0	0	0	0	0	0	0	0	0	0	11
2:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	1	5	0	0	0	0	0	0	0	0	0	0	0	6
5:00 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	7
6:00 AM	0	25	7	0	9	0	0	0	0	0	0	0	0	41
7:00 AM	1	64	17	0	11	2	0	0	0	0	0	0	0	95
8:00 AM	1	92	20	0	11	0	0	0	1	0	0	0	0	125
9:00 AM	2	121	20	0	8	0	0	0	0	0	0	0	0	151
10:00 AM	1	86	25	0	22	1	0	0	0	0	0	0	0	135
11:00 AM	0	117	29	0	14	1	0	0	0	0	0	0	0	161
12:00 PM	2	125	24	1	15	2	0	0	0	0	0	0	0	169
1:00 PM	0	126	33	0	15	0	0	0	0	0	0	0	0	174
2:00 PM	3	134	25	0	9	1	0	0	0	0	0	0	0	172
3:00 PM	5	122	35	0	11	1	0	0	0	0	0	0	0	174
4:00 PM	1	126	32	0	18	0	0	0	0	0	0	0	0	177
5:00 PM	2	106	32	0	5	2	0	0	0	0	0	0	0	147
6:00 PM	3	94	23	0	5	4	0	0	0	0	0	0	0	129
7:00 PM	1	77	11	0	5	2	0	0	0	0	0	0	0	96
8:00 PM	1	53	8	0	2	1	0	0	0	0	0	0	0	65
9:00 PM	1	48	11	1	4	0	0	0	0	0	0	0	0	65
10:00 PM	0	29	6	0	2	1	0	0	0	0	0	0	0	38
11:00 PM	1	25	7	0	0	0	0	0	0	0	0	0	0	33
Total	**26**	**1,603**	**369**	**2**	**167**	**18**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2,186**
Percent	**1.2%**	**73.3%**	**16.9%**	**0.1%**	**7.6%**	**0.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Total Study Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
1:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	8	1	0	1	0	0	0	0	0	0	0	0	10
6:00 AM	0	25	8	0	2	1	0	0	0	0	0	0	0	36
7:00 AM	1	68	19	0	9	3	0	0	0	0	0	0	0	100
8:00 AM	2	66	23	0	8	1	0	0	0	0	0	0	0	100
9:00 AM	1	64	20	0	7	1	0	0	0	0	0	0	0	93
10:00 AM	0	60	17	0	8	1	0	0	0	0	0	0	0	86
11:00 AM	2	74	19	0	7	1	0	0	0	0	0	0	0	103
12:00 PM	1	81	17	0	8	1	0	0	0	0	0	0	0	108
1:00 PM	1	64	15	0	6	2	0	0	0	0	0	0	0	88
2:00 PM	1	68	15	0	6	1	0	0	0	0	0	0	0	91
3:00 PM	2	82	18	0	10	2	0	0	0	0	0	0	0	114
4:00 PM	2	91	17	0	8	1	0	0	0	0	0	0	0	119
5:00 PM	2	83	14	0	6	1	0	0	0	0	0	0	0	106
6:00 PM	1	57	11	0	4	0	0	0	0	0	0	0	0	73
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	27	5	0	2	0	0	0	0	0	0	0	0	34
9:00 PM	0	19	3	0	1	0	0	0	0	0	0	0	0	23
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	12	2	0	0	0	0	0	0	0	0	0	0	14
Total	**16**	**960**	**226**	**0**	**93**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,311**
Percent	**1.2%**	**73.2%**	**17.2%**	**0.0%**	**7.1%**	**1.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Total Study Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	5	1	0	1	0	0	0	0	0	0	0	0	7
1:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
2:00 AM	0	3	0	0	1	0	0	0	0	0	0	0	0	4
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	1	6	1	0	0	0	0	0	0	0	0	0	0	8
6:00 AM	1	26	7	0	7	1	0	0	0	0	0	0	0	42
7:00 AM	2	55	18	0	10	1	0	0	0	0	0	0	0	86
8:00 AM	1	68	20	0	9	1	0	0	0	0	0	0	0	99
9:00 AM	1	70	20	0	9	1	0	0	0	0	0	0	0	101
10:00 AM	1	56	16	0	8	1	0	0	0	0	0	0	0	82
11:00 AM	2	68	19	0	10	1	0	0	0	0	0	0	0	100
12:00 PM	1	90	20	0	10	1	0	0	0	0	0	0	0	122
1:00 PM	1	83	21	0	10	1	0	0	0	0	0	0	0	116
2:00 PM	1	74	19	0	7	1	0	0	0	0	0	0	0	102
3:00 PM	3	83	28	0	10	1	0	0	0	0	0	0	0	125
4:00 PM	2	87	23	0	10	1	0	0	0	0	0	0	0	123
5:00 PM	1	90	18	0	4	2	0	0	0	0	0	0	0	115
6:00 PM	1	61	13	0	5	1	0	0	0	0	0	0	0	81
7:00 PM	1	45	10	0	2	1	0	0	0	0	0	0	0	59
8:00 PM	1	37	7	0	2	1	0	0	0	0	0	0	0	48
9:00 PM	1	29	4	0	1	0	0	0	0	0	0	0	0	35
10:00 PM	0	19	3	0	1	1	0	0	0	0	0	0	0	24
11:00 PM	0	13	3	0	0	0	0	0	0	0	0	0	0	16
Total	**22**	**1,075**	**271**	**0**	**117**	**17**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,502**
Percent	**1.5%**	**71.6%**	**18.0%**	**0.0%**	**7.8%**	**1.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

3-Day (Tuesday - Thursday) Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	12	1	0	2	0	0	0	0	0	0	0	0	16
6:00 AM	1	34	8	0	3	0	0	0	0	0	0	0	0	47
7:00 AM	1	94	24	0	13	3	0	0	0	0	0	0	0	135
8:00 AM	2	75	29	0	11	1	0	0	0	0	0	0	0	119
9:00 AM	1	65	22	0	6	2	0	0	0	0	0	0	0	96
10:00 AM	0	57	20	0	8	1	0	0	0	0	0	0	0	87
11:00 AM	1	80	23	0	6	0	0	0	0	0	0	0	0	110
12:00 PM	1	94	19	0	11	1	0	0	0	0	0	0	0	125
1:00 PM	1	69	18	0	6	3	0	0	0	0	0	0	0	96
2:00 PM	1	73	19	0	7	1	0	0	0	0	0	0	0	101
3:00 PM	2	92	21	1	12	2	0	0	0	0	0	0	0	130
4:00 PM	2	111	20	0	11	1	0	0	0	0	0	0	0	145
5:00 PM	2	105	16	0	8	2	0	0	0	0	0	0	0	133
6:00 PM	0	68	15	0	4	1	0	0	0	0	0	0	0	87
7:00 PM	0	38	5	0	2	1	0	0	0	0	0	0	0	47
8:00 PM	0	24	5	0	1	0	0	0	0	0	0	0	0	30
9:00 PM	1	14	3	0	1	0	0	0	0	0	0	0	0	19
10:00 PM	0	10	2	0	0	0	0	0	0	0	0	0	0	13
11:00 PM	0	8	0	0	0	0	0	0	0	0	0	0	0	9
Total	**16**	**1,131**	**272**	**1**	**113**	**20**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,555**
Percent	**1.1%**	**72.8%**	**17.5%**	**0.1%**	**7.3%**	**1.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

3-Day (Tuesday - Thursday) Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	5
1:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	4
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	1	8	1	0	1	0	0	0	0	0	0	0	0	12
6:00 AM	1	35	9	0	10	1	0	0	0	0	0	0	0	56
7:00 AM	2	77	23	0	13	1	0	0	0	0	0	0	0	117
8:00 AM	1	84	24	0	13	1	0	0	0	0	0	0	0	122
9:00 AM	0	79	21	0	12	1	0	0	0	0	0	0	0	114
10:00 AM	1	59	15	0	6	0	0	0	0	0	0	0	0	82
11:00 AM	2	71	20	0	10	1	0	0	0	0	0	0	0	103
12:00 PM	1	104	22	0	10	1	0	0	0	0	0	0	0	138
1:00 PM	2	89	26	0	11	0	0	0	0	0	0	0	0	129
2:00 PM	1	76	23	0	9	1	0	0	0	0	0	0	0	111
3:00 PM	3	92	34	0	17	1	0	0	0	0	0	0	0	145
4:00 PM	2	95	26	0	9	2	0	0	0	0	0	0	0	133
5:00 PM	1	105	21	0	5	1	0	0	0	0	0	0	0	133
6:00 PM	0	64	14	0	4	0	0	0	0	0	0	0	0	83
7:00 PM	1	43	11	0	2	1	0	0	0	0	0	0	0	58
8:00 PM	1	38	7	0	3	1	0	0	0	0	0	0	0	51
9:00 PM	0	26	3	0	1	0	0	0	0	0	0	0	0	31
10:00 PM	0	18	3	0	0	0	0	0	0	0	0	0	0	22
11:00 PM	0	7	2	0	1	0	0	0	0	0	0	0	0	10
Total	**19**	**1,181**	**308**	**0**	**138**	**15**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,664**
Percent	**1.2%**	**71.0%**	**18.5%**	**0.0%**	**8.3%**	**0.9%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Vehicle Speed Report Summary

Location: Airport Rd S/O Fairground Rd
Count Direction: Northbound / Southbound
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

	Speed Range (mph)																	Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
	Study Total																	
Northbound	282	1,682	3,471	2,598	1,412	176	15	0	0	0	0	0	0	0	0	0	0	9,636
Percent	2.9%	17.5%	36.0%	27.0%	14.7%	1.8%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	285	2,843	3,097	1,945	1,890	439	38	7	0	0	0	0	0	0	0	0	0	10,544
Percent	2.7%	27.0%	29.4%	18.4%	17.9%	4.2%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	567	4,525	6,568	4,543	3,302	615	53	7	0	0	0	0	0	0	0	0	0	20,180
Percent	2.8%	22.4%	32.5%	22.5%	16.4%	3.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Northbound			**Northbound**		
50th Percentile (Median)	18.8	mph	Mean (Average) Speed	19.4	mph
85th Percentile	25.2	mph	10 mph Pace	14.3 - 24.3	mph
95th Percentile	28.0	mph	Percent in Pace	63.1	%
Southbound			**Southbound**		
50th Percentile (Median)	17.5	mph	Mean (Average) Speed	19.3	mph
85th Percentile	26.5	mph	10 mph Pace	11.7 - 21.7	mph
95th Percentile	29.7	mph	Percent in Pace	57.1	%

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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Saturday, May 20, 2017
Northbound

	Speed Range (mph)																	Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
1:00 AM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
2:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
6:00 AM	0	2	3	11	6	0	0	0	0	0	0	0	0	0	0	0	0	**22**
7:00 AM	0	6	6	13	6	2	0	0	0	0	0	0	0	0	0	0	0	**33**
8:00 AM	0	8	20	16	10	1	0	0	0	0	0	0	0	0	0	0	0	**55**
9:00 AM	2	13	34	13	17	3	0	0	0	0	0	0	0	0	0	0	0	**82**
10:00 AM	3	5	20	24	16	4	0	0	0	0	0	0	0	0	0	0	0	**72**
11:00 AM	1	11	23	21	12	2	0	0	0	0	0	0	0	0	0	0	0	**70**
12:00 PM	0	9	23	17	11	2	0	0	0	0	0	0	0	0	0	0	0	**62**
1:00 PM	2	7	19	14	14	4	0	0	0	0	0	0	0	0	0	0	0	**60**
2:00 PM	1	7	17	14	10	3	1	0	0	0	0	0	0	0	0	0	0	**53**
3:00 PM	0	11	30	14	13	0	0	0	0	0	0	0	0	0	0	0	0	**68**
4:00 PM	0	7	13	18	13	3	0	0	0	0	0	0	0	0	0	0	0	**54**
5:00 PM	1	4	18	22	4	0	0	0	0	0	0	0	0	0	0	0	0	**49**
6:00 PM	0	3	15	13	7	4	0	0	0	0	0	0	0	0	0	0	0	**42**
7:00 PM	1	5	15	13	8	0	0	0	0	0	0	0	0	0	0	0	0	**42**
8:00 PM	0	10	8	11	4	0	0	0	0	0	0	0	0	0	0	0	0	**33**
9:00 PM	0	2	1	7	2	0	0	0	0	0	0	0	0	0	0	0	0	**12**
10:00 PM	0	2	4	3	2	0	0	0	0	0	0	0	0	0	0	0	0	**11**
11:00 PM	0	1	2	6	1	1	0	0	0	0	0	0	0	0	0	0	0	**11**
Total	**11**	**115**	**284**	**254**	**156**	**29**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**850**
Percent	**1.3%**	**13.5%**	**33.4%**	**29.9%**	**18.4%**	**3.4%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	20.1	mph	Mean (Average) Speed	20.5	mph
85th Percentile	26.1	mph	10 mph Pace	15.4 - 25.4	mph
95th Percentile	29.1	mph	Percent in Pace	63.6	%

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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Saturday, May 20, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	2	1	3	4	1	0	0	0	0	0	0	0	0	0	0	0	**11**
1:00 AM	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
2:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	5	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	**10**
7:00 AM	0	7	3	6	3	4	1	0	0	0	0	0	0	0	0	0	0	**24**
8:00 AM	0	15	16	2	10	4	0	0	0	0	0	0	0	0	0	0	0	**47**
9:00 AM	1	13	27	8	15	3	0	0	0	0	0	0	0	0	0	0	0	**67**
10:00 AM	0	15	11	14	13	7	1	1	0	0	0	0	0	0	0	0	0	**62**
11:00 AM	0	18	24	12	15	6	0	0	0	0	0	0	0	0	0	0	0	**75**
12:00 PM	0	12	25	11	14	2	0	0	0	0	0	0	0	0	0	0	0	**64**
1:00 PM	0	13	13	15	14	4	0	0	0	0	0	0	0	0	0	0	0	**59**
2:00 PM	2	12	12	14	14	5	3	0	0	0	0	0	0	0	0	0	0	**62**
3:00 PM	1	12	17	15	9	4	1	0	0	0	0	0	0	0	0	0	0	**59**
4:00 PM	0	17	25	19	16	3	1	0	0	0	0	0	0	0	0	0	0	**81**
5:00 PM	0	18	25	5	15	4	0	0	0	0	0	0	0	0	0	0	0	**67**
6:00 PM	0	8	23	12	19	3	0	0	0	0	0	0	0	0	0	0	0	**65**
7:00 PM	0	17	10	10	8	2	1	0	0	0	0	0	0	0	0	0	0	**48**
8:00 PM	0	16	17	12	6	2	1	0	0	0	0	0	0	0	0	0	0	**54**
9:00 PM	2	7	11	3	9	0	0	0	0	0	0	0	0	0	0	0	0	**32**
10:00 PM	0	9	7	5	4	1	0	0	0	0	0	0	0	0	0	0	0	**26**
11:00 PM	0	5	1	3	5	1	0	0	0	0	0	0	0	0	0	0	0	**15**
Total	**6**	**222**	**275**	**176**	**196**	**57**	**10**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**943**
Percent	**0.6%**	**23.5%**	**29.2%**	**18.7%**	**20.8%**	**6.0%**	**1.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.8	mph	Mean (Average) Speed	20.5	mph
85th Percentile	27.9	mph	10 mph Pace	11.4 - 21.4	mph
95th Percentile	30.8	mph	Percent in Pace	54.3	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Sunday, May 21, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
2:00 AM	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	1	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**4**
6:00 AM	0	2	4	2	5	0	0	0	0	0	0	0	0	0	0	0	0	**13**
7:00 AM	1	2	6	6	5	1	0	0	0	0	0	0	0	0	0	0	0	**21**
8:00 AM	1	3	15	15	6	1	0	0	0	0	0	0	0	0	0	0	0	**41**
9:00 AM	2	6	15	19	9	2	0	0	0	0	0	0	0	0	0	0	0	**53**
10:00 AM	2	7	18	21	14	3	0	0	0	0	0	0	0	0	0	0	0	**65**
11:00 AM	0	9	23	21	3	3	0	0	0	0	0	0	0	0	0	0	0	**59**
12:00 PM	0	10	22	21	10	3	0	0	0	0	0	0	0	0	0	0	0	**66**
1:00 PM	0	5	18	14	6	0	0	0	0	0	0	0	0	0	0	0	0	**43**
2:00 PM	0	8	18	23	10	3	0	0	0	0	0	0	0	0	0	0	0	**62**
3:00 PM	1	9	20	16	12	0	0	0	0	0	0	0	0	0	0	0	0	**58**
4:00 PM	0	7	11	23	5	1	0	0	0	0	0	0	0	0	0	0	0	**47**
5:00 PM	1	4	19	8	5	1	0	0	0	0	0	0	0	0	0	0	0	**38**
6:00 PM	0	5	12	13	8	1	0	0	0	0	0	0	0	0	0	0	0	**39**
7:00 PM	2	3	9	8	6	1	0	0	0	0	0	0	0	0	0	0	0	**29**
8:00 PM	0	2	11	11	2	0	0	0	0	0	0	0	0	0	0	0	0	**26**
9:00 PM	1	5	9	6	1	1	0	0	0	0	0	0	0	0	0	0	0	**23**
10:00 PM	0	2	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	**10**
11:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
Total	**11**	**95**	**244**	**233**	**110**	**22**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**715**
Percent	**1.5%**	**13.3%**	**34.1%**	**32.6%**	**15.4%**	**3.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	20.0	mph	Mean (Average) Speed	20.3	mph
85th Percentile	25.5	mph	10 mph Pace	15.3 - 25.3	mph
95th Percentile	28.7	mph	Percent in Pace	67.3	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Sunday, May 21, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	3	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**8**
1:00 AM	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
6:00 AM	0	2	3	1	1	2	0	0	0	0	0	0	0	0	0	0	0	**9**
7:00 AM	0	1	2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	**8**
8:00 AM	0	5	8	5	13	2	0	0	0	0	0	0	0	0	0	0	0	**33**
9:00 AM	0	11	15	3	14	2	0	1	0	0	0	0	0	0	0	0	0	**46**
10:00 AM	0	5	15	7	14	1	0	0	0	0	0	0	0	0	0	0	0	**42**
11:00 AM	1	13	20	7	11	6	0	1	0	0	0	0	0	0	0	0	0	**59**
12:00 PM	1	17	16	12	8	3	1	0	0	0	0	0	0	0	0	0	0	**58**
1:00 PM	1	17	17	18	11	7	0	0	0	0	0	0	0	0	0	0	0	**71**
2:00 PM	2	18	12	11	7	2	0	0	0	0	0	0	0	0	0	0	0	**52**
3:00 PM	1	15	13	14	18	4	2	0	0	0	0	0	0	0	0	0	0	**67**
4:00 PM	0	11	19	10	20	4	0	0	0	0	0	0	0	0	0	0	0	**64**
5:00 PM	0	15	21	6	8	4	0	0	0	0	0	0	0	0	0	0	0	**54**
6:00 PM	0	12	19	10	8	2	0	0	0	0	0	0	0	0	0	0	0	**51**
7:00 PM	0	14	19	4	6	0	0	0	0	0	0	0	0	0	0	0	0	**43**
8:00 PM	0	7	11	7	10	0	1	0	0	0	0	0	0	0	0	0	0	**36**
9:00 PM	1	4	7	3	7	0	0	0	0	0	0	0	0	0	0	0	0	**22**
10:00 PM	0	6	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	**18**
11:00 PM	0	5	4	3	6	1	0	0	0	0	0	0	0	0	0	0	0	**19**
Total	**7**	**187**	**231**	**126**	**174**	**41**	**4**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**772**
Percent	**0.9%**	**24.2%**	**29.9%**	**16.3%**	**22.5%**	**5.3%**	**0.5%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.0	mph	Mean (Average) Speed	20.1	mph
85th Percentile	27.6	mph	10 mph Pace	11.9 - 21.9	mph
95th Percentile	30.8	mph	Percent in Pace	56.6	%

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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Monday, May 22, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
1:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	1	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**8**
6:00 AM	0	12	12	5	7	1	0	0	0	0	0	0	0	0	0	0	0	**37**
7:00 AM	3	15	46	29	24	1	0	0	0	0	0	0	0	0	0	0	0	**118**
8:00 AM	1	11	41	29	31	5	0	0	0	0	0	0	0	0	0	0	0	**118**
9:00 AM	3	12	35	25	20	3	0	0	0	0	0	0	0	0	0	0	0	**98**
10:00 AM	2	4	36	29	10	2	0	0	0	0	0	0	0	0	0	0	0	**83**
11:00 AM	2	17	49	27	18	4	0	0	0	0	0	0	0	0	0	0	0	**117**
12:00 PM	2	22	41	29	19	1	0	0	0	0	0	0	0	0	0	0	0	**114**
1:00 PM	0	10	48	30	13	0	0	0	0	0	0	0	0	0	0	0	0	**101**
2:00 PM	2	12	40	26	9	2	0	0	0	0	0	0	0	0	0	0	0	**91**
3:00 PM	2	17	43	36	28	3	0	0	0	0	0	0	0	0	0	0	0	**129**
4:00 PM	0	20	40	36	33	1	0	0	0	0	0	0	0	0	0	0	0	**130**
5:00 PM	2	11	38	54	26	0	0	0	0	0	0	0	0	0	0	0	0	**131**
6:00 PM	0	11	27	25	8	0	0	0	0	0	0	0	0	0	0	0	0	**71**
7:00 PM	0	10	11	10	12	1	0	0	0	0	0	0	0	0	0	0	0	**44**
8:00 PM	0	4	8	11	6	2	0	0	0	0	0	0	0	0	0	0	0	**31**
9:00 PM	1	1	4	5	4	1	0	0	0	0	0	0	0	0	0	0	0	**16**
10:00 PM	0	1	6	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**11**
11:00 PM	1	2	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	**9**
Total	**21**	**195**	**538**	**419**	**272**	**28**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,473**
Percent	**1.4%**	**13.2%**	**36.5%**	**28.4%**	**18.5%**	**1.9%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.7	mph	Mean (Average) Speed	20.2	mph
85th Percentile	25.7	mph	10 mph Pace	16.2 - 26.2	mph
95th Percentile	28.1	mph	Percent in Pace	66.3	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Monday, May 22, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	2	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	5
1:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
2:00 AM	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	0	1	1	1	5	2	0	0	0	0	0	0	0	0	0	0	0	10
6:00 AM	0	15	12	14	14	6	0	0	0	0	0	0	0	0	0	0	0	61
7:00 AM	1	17	22	23	41	13	3	0	0	0	0	0	0	0	0	0	0	120
8:00 AM	1	22	27	18	52	13	0	0	0	0	0	0	0	0	0	0	0	133
9:00 AM	1	24	28	24	24	6	0	0	0	0	0	0	0	0	0	0	0	107
10:00 AM	1	18	30	15	16	2	1	1	0	0	0	0	0	0	0	0	0	84
11:00 AM	2	21	20	22	28	5	1	0	0	0	0	0	0	0	0	0	0	99
12:00 PM	7	30	56	19	32	5	1	0	0	0	0	0	0	0	0	0	0	150
1:00 PM	2	23	46	24	18	5	0	0	0	0	0	0	0	0	0	0	0	118
2:00 PM	0	18	39	22	12	6	0	1	0	0	0	0	0	0	0	0	0	98
3:00 PM	1	39	37	31	24	8	0	1	0	0	0	0	0	0	0	0	0	141
4:00 PM	2	42	55	17	24	6	1	0	0	0	0	0	0	0	0	0	0	147
5:00 PM	2	34	61	19	20	2	1	0	0	0	0	0	0	0	0	0	0	139
6:00 PM	0	25	23	12	8	2	1	0	0	0	0	0	0	0	0	0	0	71
7:00 PM	1	16	19	9	11	1	0	0	0	0	0	0	0	0	0	0	0	57
8:00 PM	1	9	9	6	6	4	0	0	0	0	0	0	0	0	0	0	0	35
9:00 PM	0	12	12	7	4	1	0	0	0	0	0	0	0	0	0	0	0	36
10:00 PM	0	2	6	2	5	1	0	0	0	0	0	0	0	0	0	0	0	16
11:00 PM	1	2	7	3	0	1	0	0	0	0	0	0	0	0	0	0	0	14
Total	**24**	**375**	**515**	**289**	**348**	**89**	**9**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,652**
Percent	**1.5%**	**22.7%**	**31.2%**	**17.5%**	**21.1%**	**5.4%**	**0.5%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.5	mph	Mean (Average) Speed	20.2	mph
85th Percentile	27.5	mph	10 mph Pace	12.3 - 22.3	mph
95th Percentile	30.6	mph	Percent in Pace	56.5	%

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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Tuesday, May 23, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	4
3:00 AM	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	1	6	3	2	2	0	0	0	0	0	0	0	0	0	0	0	14
6:00 AM	0	9	15	12	11	3	0	0	0	0	0	0	0	0	0	0	0	50
7:00 AM	5	12	38	39	26	7	0	0	0	0	0	0	0	0	0	0	0	127
8:00 AM	2	15	52	40	22	1	0	0	0	0	0	0	0	0	0	0	0	132
9:00 AM	0	22	44	22	15	3	0	0	0	0	0	0	0	0	0	0	0	106
10:00 AM	5	22	39	12	7	1	0	0	0	0	0	0	0	0	0	0	0	86
11:00 AM	2	16	40	34	22	2	0	0	0	0	0	0	0	0	0	0	0	116
12:00 PM	2	16	45	41	15	1	2	0	0	0	0	0	0	0	0	0	0	122
1:00 PM	0	22	44	26	10	1	0	0	0	0	0	0	0	0	0	0	0	103
2:00 PM	0	12	47	24	16	0	0	0	0	0	0	0	0	0	0	0	0	99
3:00 PM	2	17	45	46	17	1	0	0	0	0	0	0	0	0	0	0	0	128
4:00 PM	0	11	48	57	23	0	0	0	0	0	0	0	0	0	0	0	0	139
5:00 PM	0	12	51	41	24	2	1	0	0	0	0	0	0	0	0	0	0	131
6:00 PM	0	4	35	26	14	3	0	0	0	0	0	0	0	0	0	0	0	82
7:00 PM	0	9	9	13	7	0	0	0	0	0	0	0	0	0	0	0	0	38
8:00 PM	0	1	13	12	1	3	0	0	0	0	0	0	0	0	0	0	0	30
9:00 PM	1	2	7	2	3	0	0	0	0	0	0	0	0	0	0	0	0	15
10:00 PM	0	2	5	3	3	0	0	0	0	0	0	0	0	0	0	0	0	13
11:00 PM	0	0	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	4
Total	**19**	**207**	**588**	**457**	**240**	**31**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,546**
Percent	**1.2%**	**13.4%**	**38.0%**	**29.6%**	**15.5%**	**2.0%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.4	mph	Mean (Average) Speed	20.0	mph
85th Percentile	25.4	mph	10 mph Pace	14.9 - 24.9	mph
95th Percentile	28.3	mph	Percent in Pace	67.5	%

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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Tuesday, May 23, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	5
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	4
3:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	1	1	1	6	0	0	0	0	0	0	0	0	0	0	0	0	9
6:00 AM	0	12	10	8	23	8	0	0	0	0	0	0	0	0	0	0	0	61
7:00 AM	0	21	17	24	38	8	2	0	0	0	0	0	0	0	0	0	0	110
8:00 AM	2	24	30	32	32	9	2	0	0	0	0	0	0	0	0	0	0	131
9:00 AM	2	22	32	33	25	6	0	0	0	0	0	0	0	0	0	0	0	120
10:00 AM	3	21	22	22	9	2	1	0	0	0	0	0	0	0	0	0	0	80
11:00 AM	1	21	38	18	29	8	0	0	0	0	0	0	0	0	0	0	0	115
12:00 PM	1	35	45	17	31	8	1	0	0	0	0	0	0	0	0	0	0	138
1:00 PM	1	32	50	28	23	4	0	0	0	0	0	0	0	0	0	0	0	138
2:00 PM	1	35	39	16	19	5	0	0	0	0	0	0	0	0	0	0	0	115
3:00 PM	0	37	42	22	25	5	2	0	0	0	0	0	0	0	0	0	0	133
4:00 PM	1	38	52	27	26	5	0	0	0	0	0	0	0	0	0	0	0	149
5:00 PM	0	31	46	13	24	4	1	0	0	0	0	0	0	0	0	0	0	119
6:00 PM	1	13	28	15	21	4	0	0	0	0	0	0	0	0	0	0	0	82
7:00 PM	1	13	19	8	13	2	0	0	0	0	0	0	0	0	0	0	0	56
8:00 PM	0	17	13	8	11	1	0	0	0	0	0	0	0	0	0	0	0	50
9:00 PM	0	7	4	9	4	0	0	0	0	0	0	0	0	0	0	0	0	24
10:00 PM	0	4	6	1	5	0	0	0	0	0	0	0	0	0	0	0	0	16
11:00 PM	0	2	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Total	**14**	**389**	**498**	**310**	**366**	**79**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,665**
Percent	**0.8%**	**23.4%**	**29.9%**	**18.6%**	**22.0%**	**4.7%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.5	mph	Mean (Average) Speed	20.2	mph
85th Percentile	27.3	mph	10 mph Pace	12.5 - 22.5	mph
95th Percentile	30.1	mph	Percent in Pace	55.1	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Wednesday, May 24, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	4
1:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	2	8	5	2	0	0	0	0	0	0	0	0	0	0	0	0	17
6:00 AM	2	12	16	4	7	1	1	0	0	0	0	0	0	0	0	0	0	43
7:00 AM	3	15	45	42	22	5	0	0	0	0	0	0	0	0	0	0	0	132
8:00 AM	1	18	42	37	16	2	2	0	0	0	0	0	0	0	0	0	0	118
9:00 AM	3	6	40	26	18	1	0	0	0	0	0	0	0	0	0	0	0	94
10:00 AM	1	14	37	17	9	2	0	0	0	0	0	0	0	0	0	0	0	80
11:00 AM	1	7	39	31	25	1	0	0	0	0	0	0	0	0	0	0	0	104
12:00 PM	0	8	49	51	19	0	0	0	0	0	0	0	0	0	0	0	0	127
1:00 PM	1	17	49	25	5	0	1	0	0	0	0	0	0	0	0	0	0	98
2:00 PM	3	14	34	20	15	3	0	0	0	0	0	0	0	0	0	0	0	89
3:00 PM	3	18	46	33	30	3	0	0	0	0	0	0	0	0	0	0	0	133
4:00 PM	2	15	55	45	34	2	0	0	0	0	0	0	0	0	0	0	0	153
5:00 PM	3	18	37	37	20	2	1	0	0	0	0	0	0	0	0	0	0	118
6:00 PM	1	16	28	38	20	1	0	0	0	0	0	0	0	0	0	0	0	104
7:00 PM	0	13	20	13	6	3	0	0	0	0	0	0	0	0	0	0	0	55
8:00 PM	0	3	14	7	1	0	1	0	0	0	0	0	0	0	0	0	0	26
9:00 PM	0	2	8	4	3	0	0	0	0	0	0	0	0	0	0	0	0	17
10:00 PM	0	2	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	10
11:00 PM	1	2	3	1	2	1	0	0	0	0	0	0	0	0	0	0	0	10
Total	**26**	**202**	**578**	**441**	**257**	**28**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,539**
Percent	**1.7%**	**13.1%**	**37.6%**	**28.7%**	**16.7%**	**1.8%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.5	mph	Mean (Average) Speed	20.2	mph
85th Percentile	25.7	mph	10 mph Pace	14.8 - 24.8	mph
95th Percentile	28.4	mph	Percent in Pace	66.3	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Wednesday, May 24, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
1:00 AM	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
2:00 AM	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	0	1	4	5	6	0	0	0	0	0	0	0	0	0	0	0	0	16
6:00 AM	1	9	8	11	17	6	0	0	0	0	0	0	0	0	0	0	0	52
7:00 AM	0	19	27	36	33	10	1	0	0	0	0	0	0	0	0	0	0	126
8:00 AM	0	15	22	34	36	11	0	0	0	0	0	0	0	0	0	0	0	118
9:00 AM	2	24	31	23	29	5	0	0	0	0	0	0	0	0	0	0	0	114
10:00 AM	0	22	29	9	19	2	0	0	0	0	0	0	0	0	0	0	0	81
11:00 AM	1	17	24	26	9	2	1	0	0	0	0	0	0	0	0	0	0	80
12:00 PM	0	43	35	27	28	4	0	0	0	0	0	0	0	0	0	0	0	137
1:00 PM	2	34	41	29	27	1	0	0	0	0	0	0	0	0	0	0	0	134
2:00 PM	1	23	31	24	23	4	1	0	0	0	0	0	0	0	0	0	0	107
3:00 PM	3	39	48	28	17	4	0	0	0	0	0	0	0	0	0	0	0	139
4:00 PM	0	39	35	16	21	2	0	0	0	0	0	0	0	0	0	0	0	113
5:00 PM	0	41	52	23	18	8	1	0	0	0	0	0	0	0	0	0	0	143
6:00 PM	0	26	26	17	14	0	0	0	0	0	0	0	0	0	0	0	0	83
7:00 PM	1	15	16	12	3	3	0	0	0	0	0	0	0	0	0	0	0	50
8:00 PM	3	17	13	9	9	1	0	0	0	0	0	0	0	0	0	0	0	52
9:00 PM	0	11	4	3	8	0	0	0	0	0	0	0	0	0	0	0	0	26
10:00 PM	1	5	7	2	5	2	0	0	0	0	0	0	0	0	0	0	0	22
11:00 PM	2	4	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	10
Total	**17**	**407**	**459**	**338**	**324**	**67**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,616**
Percent	**1.1%**	**25.2%**	**28.4%**	**20.9%**	**20.0%**	**4.1%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.6	mph	Mean (Average) Speed	19.9	mph
85th Percentile	26.7	mph	10 mph Pace	12.3 - 22.3	mph
95th Percentile	29.4	mph	Percent in Pace	57	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Thursday, May 25, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00 AM	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	1	2	10	1	2	0	0	0	0	0	0	0	0	0	0	0	0	16
6:00 AM	2	13	8	10	11	2	1	0	0	0	0	0	0	0	0	0	0	47
7:00 AM	2	17	56	42	26	2	0	0	0	0	0	0	0	0	0	0	0	145
8:00 AM	2	7	40	38	19	1	1	0	0	0	0	0	0	0	0	0	0	108
9:00 AM	3	21	25	21	14	3	1	0	0	0	0	0	0	0	0	0	0	88
10:00 AM	2	16	36	20	19	2	0	0	0	0	0	0	0	0	0	0	0	95
11:00 AM	1	17	34	42	15	1	0	0	0	0	0	0	0	0	0	0	0	110
12:00 PM	4	19	41	42	20	1	0	0	0	0	0	0	0	0	0	0	0	127
1:00 PM	3	11	39	23	12	0	0	0	0	0	0	0	0	0	0	0	0	88
2:00 PM	4	15	47	32	15	2	0	0	0	0	0	0	0	0	0	0	0	115
3:00 PM	1	14	56	33	24	1	0	0	0	0	0	0	0	0	0	0	0	129
4:00 PM	1	14	42	50	31	4	0	0	0	0	0	0	0	0	0	0	0	142
5:00 PM	2	23	59	40	23	2	0	0	0	0	0	0	0	0	0	0	0	149
6:00 PM	2	14	19	22	15	4	0	0	0	0	0	0	0	0	0	0	0	76
7:00 PM	0	10	19	13	6	1	0	0	0	0	0	0	0	0	0	0	0	49
8:00 PM	1	8	17	7	2	0	0	0	0	0	0	0	0	0	0	0	0	35
9:00 PM	2	3	12	8	1	0	0	0	0	0	0	0	0	0	0	0	0	26
10:00 PM	0	5	5	3	2	0	0	0	0	0	0	0	0	0	0	0	0	15
11:00 PM	2	0	6	1	3	0	0	0	0	0	0	0	0	0	0	0	0	12
Total	**36**	**229**	**576**	**450**	**260**	**26**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,580**
Percent	**2.3%**	**14.5%**	**36.5%**	**28.5%**	**16.5%**	**1.6%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.3	mph	Mean (Average) Speed	19.9	mph
85th Percentile	25.4	mph	10 mph Pace	15.5 - 25.5	mph
95th Percentile	28.2	mph	Percent in Pace	64.9	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Thursday, May 25, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	2	2	0	2	1	0	0	0	0	0	0	0	0	0	0	0	**7**
1:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	2	2	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	**10**
6:00 AM	0	11	16	11	14	4	0	0	0	0	0	0	0	0	0	0	0	**56**
7:00 AM	1	12	22	27	43	9	1	1	0	0	0	0	0	0	0	0	0	**116**
8:00 AM	4	18	29	26	35	6	0	0	0	0	0	0	0	0	0	0	0	**118**
9:00 AM	1	16	25	34	21	10	0	0	0	0	0	0	0	0	0	0	0	**107**
10:00 AM	1	23	34	10	15	2	0	0	0	0	0	0	0	0	0	0	0	**85**
11:00 AM	2	29	24	26	23	10	0	0	0	0	0	0	0	0	0	0	0	**114**
12:00 PM	0	37	36	31	29	7	0	0	0	0	0	0	0	0	0	0	0	**140**
1:00 PM	3	36	34	14	23	6	0	0	0	0	0	0	0	0	0	0	0	**116**
2:00 PM	2	29	33	19	26	3	0	0	0	0	0	0	0	0	0	0	0	**112**
3:00 PM	3	30	60	35	29	7	0	0	0	0	0	0	0	0	0	0	0	**164**
4:00 PM	0	33	43	31	22	8	0	0	0	0	0	0	0	0	0	0	0	**137**
5:00 PM	4	35	51	20	23	3	0	0	0	0	0	0	0	0	0	0	0	**136**
6:00 PM	1	23	30	18	8	3	0	0	0	0	0	0	0	0	0	0	0	**83**
7:00 PM	0	20	22	15	7	3	0	0	0	0	0	0	0	0	0	0	0	**67**
8:00 PM	1	20	12	14	2	1	0	0	0	0	0	0	0	0	0	0	0	**50**
9:00 PM	1	13	14	9	6	0	0	0	0	0	0	0	0	0	0	0	0	**43**
10:00 PM	0	7	9	5	5	1	0	0	0	0	0	0	0	0	0	0	0	**27**
11:00 PM	1	11	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**14**
Total	**28**	**409**	**501**	**348**	**338**	**84**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,710**
Percent	**1.6%**	**23.9%**	**29.3%**	**20.4%**	**19.8%**	**4.9%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.5	mph	Mean (Average) Speed	19.9	mph
85th Percentile	27.0	mph	10 mph Pace	12.1 - 22.1	mph
95th Percentile	30.0	mph	Percent in Pace	56.7	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Friday, May 26, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**4**
1:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
2:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	1	1	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**5**
4:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	0	7	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**11**
6:00 AM	0	10	6	12	11	1	0	0	0	0	0	0	0	0	0	0	0	**40**
7:00 AM	3	13	44	33	25	4	0	0	0	0	0	0	0	0	0	0	0	**122**
8:00 AM	2	26	45	33	20	1	0	0	0	0	0	0	0	0	0	0	0	**127**
9:00 AM	7	36	47	28	9	2	0	0	0	0	0	0	0	0	0	0	0	**129**
10:00 AM	8	43	46	21	6	0	0	0	0	0	0	0	0	0	0	0	0	**124**
11:00 AM	9	48	45	37	3	0	0	0	0	0	0	0	0	0	0	0	0	**142**
12:00 PM	7	37	64	24	6	0	0	0	0	0	0	0	0	0	0	0	0	**138**
1:00 PM	12	45	45	20	1	1	0	0	0	0	0	0	0	0	0	0	0	**124**
2:00 PM	15	57	38	17	6	1	0	0	0	0	0	0	0	0	0	0	0	**134**
3:00 PM	20	69	51	14	2	0	0	0	0	0	0	0	0	0	0	0	0	**156**
4:00 PM	7	52	64	32	7	1	0	0	0	0	0	0	0	0	0	0	0	**163**
5:00 PM	9	45	43	22	8	0	0	0	0	0	0	0	0	0	0	0	0	**127**
6:00 PM	9	34	33	18	7	0	0	0	0	0	0	0	0	0	0	0	0	**101**
7:00 PM	5	33	29	10	1	0	0	0	0	0	0	0	0	0	0	0	0	**78**
8:00 PM	6	24	16	4	3	0	0	0	0	0	0	0	0	0	0	0	0	**53**
9:00 PM	8	22	14	7	0	0	0	0	0	0	0	0	0	0	0	0	0	**51**
10:00 PM	8	20	11	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**42**
11:00 PM	22	20	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**52**
Total	**158**	**639**	**663**	**344**	**117**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,933**
Percent	**8.2%**	**33.1%**	**34.3%**	**17.8%**	**6.1%**	**0.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	15.9	mph	Mean (Average) Speed	16.5	mph
85th Percentile	22.1	mph	10 mph Pace	10.3 - 20.3	mph
95th Percentile	25.6	mph	Percent in Pace	68.1	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Friday, May 26, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	4	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**10**
1:00 AM	2	3	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
2:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	1	3	0	1	1	0	0	0	0	0	0	0	0	0	0	0	**6**
5:00 AM	0	1	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**7**
6:00 AM	0	12	1	12	12	4	0	0	0	0	0	0	0	0	0	0	0	**41**
7:00 AM	0	16	21	27	27	4	0	0	0	0	0	0	0	0	0	0	0	**95**
8:00 AM	3	46	23	34	15	3	1	0	0	0	0	0	0	0	0	0	0	**125**
9:00 AM	3	58	55	24	7	4	0	0	0	0	0	0	0	0	0	0	0	**151**
10:00 AM	9	54	44	19	9	0	0	0	0	0	0	0	0	0	0	0	0	**135**
11:00 AM	9	63	52	28	9	0	0	0	0	0	0	0	0	0	0	0	0	**161**
12:00 PM	16	74	44	28	6	1	0	0	0	0	0	0	0	0	0	0	0	**169**
1:00 PM	9	71	53	34	7	0	0	0	0	0	0	0	0	0	0	0	0	**174**
2:00 PM	14	62	60	26	10	0	0	0	0	0	0	0	0	0	0	0	0	**172**
3:00 PM	17	79	49	21	8	0	0	0	0	0	0	0	0	0	0	0	0	**174**
4:00 PM	12	59	59	34	10	3	0	0	0	0	0	0	0	0	0	0	0	**177**
5:00 PM	20	52	49	21	5	0	0	0	0	0	0	0	0	0	0	0	0	**147**
6:00 PM	22	62	30	12	3	0	0	0	0	0	0	0	0	0	0	0	0	**129**
7:00 PM	13	55	19	5	3	1	0	0	0	0	0	0	0	0	0	0	0	**96**
8:00 PM	15	25	14	6	5	0	0	0	0	0	0	0	0	0	0	0	0	**65**
9:00 PM	11	28	15	9	2	0	0	0	0	0	0	0	0	0	0	0	0	**65**
10:00 PM	7	8	12	8	3	0	0	0	0	0	0	0	0	0	0	0	0	**38**
11:00 PM	6	18	5	3	0	1	0	0	0	0	0	0	0	0	0	0	0	**33**
Total	**189**	**854**	**618**	**358**	**144**	**22**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,186**
Percent	**8.6%**	**39.1%**	**28.3%**	**16.4%**	**6.6%**	**1.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	15.2	mph	Mean (Average) Speed	16.3	mph
85th Percentile	22.5	mph	10 mph Pace	10.1 - 20.1	mph
95th Percentile	26.2	mph	Percent in Pace	67.2	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Total Study Average
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	1	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**9**
6:00 AM	1	9	9	8	8	1	0	0	0	0	0	0	0	0	0	0	0	**36**
7:00 AM	2	11	34	29	19	3	0	0	0	0	0	0	0	0	0	0	0	**98**
8:00 AM	1	13	36	30	18	2	0	0	0	0	0	0	0	0	0	0	0	**100**
9:00 AM	3	17	34	22	15	2	0	0	0	0	0	0	0	0	0	0	0	**93**
10:00 AM	3	16	33	21	12	2	0	0	0	0	0	0	0	0	0	0	0	**87**
11:00 AM	2	18	36	30	14	2	0	0	0	0	0	0	0	0	0	0	0	**102**
12:00 PM	2	17	41	32	14	1	0	0	0	0	0	0	0	0	0	0	0	**107**
1:00 PM	3	17	37	22	9	1	0	0	0	0	0	0	0	0	0	0	0	**89**
2:00 PM	4	18	34	22	12	2	0	0	0	0	0	0	0	0	0	0	0	**92**
3:00 PM	4	22	42	27	18	1	0	0	0	0	0	0	0	0	0	0	0	**114**
4:00 PM	1	18	39	37	21	2	0	0	0	0	0	0	0	0	0	0	0	**118**
5:00 PM	3	17	38	32	16	1	0	0	0	0	0	0	0	0	0	0	0	**107**
6:00 PM	2	12	24	22	11	2	0	0	0	0	0	0	0	0	0	0	0	**73**
7:00 PM	1	12	16	11	7	1	0	0	0	0	0	0	0	0	0	0	0	**48**
8:00 PM	1	7	12	9	3	1	0	0	0	0	0	0	0	0	0	0	0	**33**
9:00 PM	2	5	8	6	2	0	0	0	0	0	0	0	0	0	0	0	0	**23**
10:00 PM	1	5	5	3	2	0	0	0	0	0	0	0	0	0	0	0	0	**16**
11:00 PM	4	4	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	**15**
Total	**40**	**240**	**494**	**371**	**203**	**25**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,373**
Percent	**2.9%**	**17.5%**	**36.0%**	**27.0%**	**14.8%**	**1.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	18.8	mph	Mean (Average) Speed	19.4	mph
85th Percentile	25.2	mph	10 mph Pace	14.3 - 24.3	mph
95th Percentile	28.0	mph	Percent in Pace	63.1	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 to 5/26/2017
Site Code: 03

Total Study Average
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	2	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	**7**
1:00 AM	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	1	2	2	3	0	0	0	0	0	0	0	0	0	0	0	0	**8**
6:00 AM	0	9	7	8	12	4	0	0	0	0	0	0	0	0	0	0	0	**40**
7:00 AM	0	13	16	20	27	7	1	0	0	0	0	0	0	0	0	0	0	**84**
8:00 AM	1	21	22	22	28	7	0	0	0	0	0	0	0	0	0	0	0	**101**
9:00 AM	1	24	30	21	19	5	0	0	0	0	0	0	0	0	0	0	0	**100**
10:00 AM	2	23	26	14	14	2	0	0	0	0	0	0	0	0	0	0	0	**81**
11:00 AM	2	26	29	20	18	5	0	0	0	0	0	0	0	0	0	0	0	**100**
12:00 PM	4	35	37	21	21	4	0	0	0	0	0	0	0	0	0	0	0	**122**
1:00 PM	3	32	36	23	18	4	0	0	0	0	0	0	0	0	0	0	0	**116**
2:00 PM	3	28	32	19	16	4	1	0	0	0	0	0	0	0	0	0	0	**103**
3:00 PM	4	36	38	24	19	5	1	0	0	0	0	0	0	0	0	0	0	**127**
4:00 PM	2	34	41	22	20	4	0	0	0	0	0	0	0	0	0	0	0	**123**
5:00 PM	4	32	44	15	16	4	0	0	0	0	0	0	0	0	0	0	0	**115**
6:00 PM	3	24	26	14	12	2	0	0	0	0	0	0	0	0	0	0	0	**81**
7:00 PM	2	21	18	9	7	2	0	0	0	0	0	0	0	0	0	0	0	**59**
8:00 PM	3	16	13	9	7	1	0	0	0	0	0	0	0	0	0	0	0	**49**
9:00 PM	2	12	10	6	6	0	0	0	0	0	0	0	0	0	0	0	0	**36**
10:00 PM	1	6	7	4	4	1	0	0	0	0	0	0	0	0	0	0	0	**23**
11:00 PM	1	7	3	2	2	1	0	0	0	0	0	0	0	0	0	0	0	**16**
Total	**38**	**406**	**442**	**279**	**271**	**62**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,501**
Percent	**2.5%**	**27.0%**	**29.4%**	**18.6%**	**18.1%**	**4.1%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	17.5	mph	Mean (Average) Speed	19.3	mph
85th Percentile	26.5	mph	10 mph Pace	11.7 - 21.7	mph
95th Percentile	29.7	mph	Percent in Pace	57.1	%

Deon Fouche: (415) 757-7714
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Location: Airport Rd S/O Fairground Rd
Date Range: 5/20/2017 - 5/26/2017
Site Code: 03

Time	Saturday 5/20/2017			Sunday 5/21/2017			Monday 5/22/2017			Tuesday 5/23/2017			Wednesday 5/24/2017			Thursday 5/25/2017			Friday 5/26/2017			Mid-Week Average		
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	6	11	17	3	8	11	6	5	11	1	5	6	4	3	7	1	7	8	4	10	14	2	5	7
1:00 AM	5	5	10	4	3	7	1	3	4	1	1	2	1	3	4	1	2	3	4	11	15	1	2	3
2:00 AM	3	2	5	4	4	8	4	3	7	4	4	8	2	3	5	1	4	5	3	3	6	2	4	6
3:00 AM	3	3	6	4	3	7	2	1	3	3	1	4	2	1	3	2	2	4	5	2	7	2	1	4
4:00 AM	0	2	2	1	1	2	3	4	7	2	1	3	2	3	5	3	0	3	3	6	9	2	1	4
5:00 AM	2	3	5	4	1	5	8	10	18	14	9	23	17	16	33	16	10	26	11	7	18	16	12	27
6:00 AM	22	10	32	13	9	22	37	61	98	50	61	111	43	52	95	47	56	103	40	41	81	47	56	103
7:00 AM	33	24	57	21	8	29	118	120	238	127	110	237	132	126	258	145	116	261	122	95	217	135	117	252
8:00 AM	55	47	102	41	33	74	118	133	251	132	131	263	118	118	236	108	118	226	127	125	252	119	122	242
9:00 AM	82	67	149	53	46	99	98	107	205	106	120	226	94	114	208	88	107	195	129	151	280	96	114	210
10:00 AM	72	62	134	65	42	107	83	84	167	86	80	166	80	81	161	95	85	180	124	135	259	87	82	169
11:00 AM	70	75	145	59	59	118	117	99	216	116	115	231	104	80	184	110	114	224	142	161	303	110	103	213
12:00 PM	62	64	126	66	58	124	114	150	264	122	138	260	127	137	264	127	140	267	138	169	307	125	138	264
1:00 PM	60	59	119	43	71	114	101	118	219	103	138	241	98	134	232	88	116	204	124	174	298	96	129	226
2:00 PM	53	62	115	62	52	114	91	98	189	99	115	214	89	107	196	115	112	227	134	172	306	101	111	212
3:00 PM	68	59	127	58	67	125	129	141	270	128	133	261	133	139	272	129	164	293	156	174	330	130	145	275
4:00 PM	54	81	135	47	64	111	130	147	277	139	149	288	153	113	266	142	137	279	163	177	340	145	133	278
5:00 PM	49	67	116	38	54	92	131	139	270	131	119	250	118	143	261	149	136	285	127	147	274	133	133	265
6:00 PM	42	65	107	39	51	90	71	71	142	82	82	164	104	83	187	76	83	159	101	129	230	87	83	170
7:00 PM	42	48	90	29	43	72	44	57	101	38	56	94	55	50	105	49	67	116	78	96	174	47	58	105
8:00 PM	33	54	87	26	36	62	31	35	66	30	50	80	26	52	78	35	50	85	53	65	118	30	51	81
9:00 PM	12	32	44	23	22	45	16	36	52	15	24	39	17	26	43	26	43	69	51	65	116	19	31	50
10:00 PM	11	26	37	10	18	28	11	16	27	13	16	29	10	22	32	15	27	42	42	38	80	13	22	34
11:00 PM	11	15	26	2	19	21	9	14	23	4	7	11	10	10	20	12	14	26	52	33	85	9	10	19
Total	**850**	**943**	**1,793**	**715**	**772**	**1,487**	**1,473**	**1,652**	**3,125**	**1,546**	**1,665**	**3,211**	**1,539**	**1,616**	**3,155**	**1,580**	**1,710**	**3,290**	**1,933**	**2,186**	**4,119**	**1,555**	**1,664**	**3,219**
Percent	**47%**	**53%**	-	**48%**	**52%**	-	**47%**	**53%**	-	**48%**	**52%**	-	**49%**	**51%**	-	**48%**	**52%**	-	**47%**	**53%**	-	**48%**	**52%**	-

1. Mid-week average includes data between Tuesday and Thursday.

Deon Fouche: (415) 757-7714
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Vehicle Classification Report Summary

Location: Ramonda Ave N/O Bruce Ln
Count Direction: Northbound / Southbound
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

	FHWA Vehicle Classification													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total														
Northbound	147	4,842	3,011	2	126	544	0	2	4	5	0	0	13	8,696
Percent	1.7%	55.7%	34.6%	0.0%	1.4%	6.3%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	100%
Southbound	94	5,511	1,487	1	377	174	0	3	1	7	0	0	1	7,656
Percent	1.2%	72.0%	19.4%	0.0%	4.9%	2.3%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	100%
Total	241	10,353	4,498	3	503	718	0	5	5	12	0	0	14	16,352
Percent	1.5%	63.3%	27.5%	0.0%	3.1%	4.4%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

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Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Saturday, May 20, 2017
Southbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
5:00 AM	1	2	0	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	17	8	0	3	0	0	0	0	0	0	0	0	**28**
7:00 AM	0	39	9	0	1	1	0	0	0	0	0	0	0	**50**
8:00 AM	1	39	7	0	3	1	0	0	0	0	0	0	0	**51**
9:00 AM	0	44	11	0	3	2	0	0	0	0	0	0	0	**60**
10:00 AM	1	60	14	0	2	2	0	0	0	0	0	0	0	**79**
11:00 AM	0	47	13	0	2	0	0	0	0	0	0	0	0	**62**
12:00 PM	1	57	20	0	6	1	0	0	0	0	0	0	0	**85**
1:00 PM	2	61	11	0	6	1	0	0	0	0	0	0	0	**81**
2:00 PM	1	58	15	0	2	1	0	0	0	0	0	0	0	**77**
3:00 PM	1	37	14	0	3	0	0	0	0	0	0	0	0	**55**
4:00 PM	0	28	9	0	3	0	0	0	0	0	0	0	0	**40**
5:00 PM	0	28	10	0	3	0	0	0	0	0	0	0	0	**41**
6:00 PM	0	29	8	0	1	1	0	0	0	0	0	0	0	**39**
7:00 PM	0	28	9	0	2	0	0	0	0	0	0	0	0	**39**
8:00 PM	0	21	4	0	1	0	0	0	0	0	0	0	0	**26**
9:00 PM	0	21	4	0	3	0	0	0	0	0	0	0	0	**28**
10:00 PM	0	5	3	0	0	0	0	0	0	0	0	0	0	**8**
11:00 PM	0	7	1	0	1	0	0	0	0	0	0	0	0	**9**
Total	**8**	**637**	**171**	**0**	**45**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**871**
Percent	**0.9%**	**73.1%**	**19.6%**	**0.0%**	**5.2%**	**1.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Sunday, May 21, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
1:00 AM	0	6	0	0	0	1	0	0	0	0	0	0	0	7
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	5	2	0	0	1	0	0	0	0	0	0	0	8
6:00 AM	1	7	4	0	0	0	0	0	0	0	0	0	0	12
7:00 AM	0	8	6	0	0	1	0	0	0	0	0	0	0	15
8:00 AM	0	14	19	0	0	1	0	0	0	0	0	0	0	34
9:00 AM	2	39	22	0	1	3	0	1	0	0	0	0	0	68
10:00 AM	0	41	21	0	0	3	0	0	0	0	0	0	0	65
11:00 AM	1	32	29	0	1	7	0	0	0	0	0	0	1	71
12:00 PM	0	35	25	0	0	4	0	0	0	0	0	0	0	64
1:00 PM	1	41	10	0	0	3	0	0	0	0	0	0	0	55
2:00 PM	1	28	12	0	0	1	0	0	0	0	0	0	0	42
3:00 PM	0	52	17	0	0	3	0	0	0	0	0	0	0	72
4:00 PM	0	43	19	0	0	1	0	0	0	0	0	0	0	63
5:00 PM	0	39	19	0	0	1	0	0	0	0	0	0	0	59
6:00 PM	2	42	15	0	0	3	0	0	0	0	0	0	1	63
7:00 PM	0	25	9	0	0	1	0	0	0	0	0	0	0	35
8:00 PM	0	29	4	0	0	0	0	0	0	0	0	0	0	33
9:00 PM	0	17	1	0	0	0	0	0	0	0	0	0	0	18
10:00 PM	0	10	4	0	0	0	0	0	0	0	0	0	0	14
11:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
Total	**8**	**516**	**241**	**0**	**2**	**34**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	**804**
Percent	**1.0%**	**64.2%**	**30.0%**	**0.0%**	**0.2%**	**4.2%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.2%**	

Deon Fouche: (415) 757-7714
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Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Sunday, May 21, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	5	0	0	1	0	0	0	0	0	0	0	0	6
1:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
2:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
6:00 AM	0	6	2	0	1	0	0	0	0	0	0	0	0	9
7:00 AM	0	14	6	0	2	0	0	0	0	0	0	0	0	22
8:00 AM	0	21	6	0	1	1	0	0	0	0	0	0	0	29
9:00 AM	0	33	10	0	3	0	0	0	0	0	0	0	0	46
10:00 AM	1	61	10	0	1	4	0	0	0	0	0	0	0	77
11:00 AM	0	42	13	0	2	3	0	0	0	0	0	0	0	60
12:00 PM	0	37	14	0	4	2	0	0	0	0	0	0	0	57
1:00 PM	0	43	14	0	4	0	0	0	0	0	0	0	0	61
2:00 PM	0	34	13	0	1	1	0	0	0	0	0	0	0	49
3:00 PM	0	42	10	0	1	1	0	0	0	0	0	0	0	54
4:00 PM	0	32	11	0	0	0	0	0	0	0	0	0	0	43
5:00 PM	3	34	7	0	1	0	0	0	0	0	0	0	0	45
6:00 PM	1	30	8	0	0	1	0	0	0	0	0	0	0	40
7:00 PM	0	25	8	0	3	0	0	0	0	0	0	0	0	36
8:00 PM	0	17	10	0	0	1	0	0	0	0	0	0	0	28
9:00 PM	0	18	1	0	1	0	0	0	0	0	0	0	0	20
10:00 PM	0	9	4	0	0	0	0	0	0	0	0	0	0	13
11:00 PM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
Total	**5**	**517**	**151**	**0**	**26**	**14**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**713**
Percent	**0.7%**	**72.5%**	**21.2%**	**0.0%**	**3.6%**	**2.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Monday, May 22, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	4	0	0	0	0	0	0	0	0	0	0	**5**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	4	11	0	1	2	0	0	0	0	0	0	0	**18**
6:00 AM	0	9	17	0	0	5	0	0	0	0	0	0	1	**32**
7:00 AM	0	32	19	0	2	1	0	0	0	0	0	0	0	**54**
8:00 AM	0	36	19	0	0	2	0	0	0	0	0	0	0	**57**
9:00 AM	1	50	18	1	2	7	0	0	0	0	0	0	0	**79**
10:00 AM	0	40	36	0	4	5	0	0	0	0	0	0	0	**85**
11:00 AM	0	35	32	0	1	7	0	0	0	0	0	0	0	**75**
12:00 PM	1	66	24	0	2	6	0	0	0	0	0	0	0	**99**
1:00 PM	1	52	17	0	2	3	0	0	0	0	0	0	0	**75**
2:00 PM	0	48	16	0	0	5	0	0	0	0	0	0	0	**69**
3:00 PM	2	67	28	0	3	4	0	0	0	0	0	0	0	**104**
4:00 PM	2	102	43	0	2	5	0	0	0	0	0	0	0	**154**
5:00 PM	6	84	50	0	7	4	0	0	0	0	0	0	0	**151**
6:00 PM	1	43	24	0	2	12	0	0	0	0	0	0	0	**82**
7:00 PM	1	41	25	0	1	5	0	0	0	0	0	0	0	**73**
8:00 PM	0	21	10	0	0	2	0	0	0	0	0	0	0	**33**
9:00 PM	0	20	4	0	0	0	0	0	0	0	0	0	0	**24**
10:00 PM	0	11	2	0	0	0	0	0	0	0	0	0	0	**13**
11:00 PM	0	8	1	0	0	0	0	0	0	0	0	0	0	**9**
Total	**15**	**775**	**401**	**1**	**29**	**75**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1,297**
Percent	**1.2%**	**59.8%**	**30.9%**	**0.1%**	**2.2%**	**5.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	

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Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Monday, May 22, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	4	3	0	0	0	0	0	0	0	0	0	0	**7**
5:00 AM	0	12	2	0	0	0	0	0	0	0	0	0	0	**14**
6:00 AM	1	17	8	0	2	1	0	0	0	0	0	0	0	**29**
7:00 AM	1	35	12	0	4	1	0	0	0	0	0	0	0	**53**
8:00 AM	0	53	10	0	6	1	0	0	0	0	0	0	0	**70**
9:00 AM	0	40	14	0	5	0	0	0	0	0	0	0	0	**59**
10:00 AM	0	31	17	0	5	0	0	0	0	0	0	0	0	**53**
11:00 AM	0	43	13	0	5	3	0	0	0	0	0	0	0	**64**
12:00 PM	1	67	17	0	4	1	0	0	0	0	0	0	0	**90**
1:00 PM	0	84	16	0	3	4	0	0	0	0	0	0	0	**107**
2:00 PM	2	84	16	0	3	0	0	0	0	0	0	0	0	**105**
3:00 PM	1	64	14	0	7	4	0	0	0	0	0	0	0	**90**
4:00 PM	1	59	19	0	6	1	0	0	0	0	0	0	0	**86**
5:00 PM	0	66	12	0	1	0	0	0	0	0	0	0	0	**79**
6:00 PM	2	54	14	0	2	1	0	0	0	0	0	0	0	**73**
7:00 PM	0	37	4	0	0	1	0	0	0	0	0	0	0	**42**
8:00 PM	0	23	4	0	3	0	0	0	0	0	0	0	0	**30**
9:00 PM	0	18	5	0	2	0	0	0	0	0	0	0	0	**25**
10:00 PM	0	7	2	0	1	0	0	0	0	0	0	0	0	**10**
11:00 PM	0	8	0	0	0	0	0	0	0	0	0	0	0	**8**
Total	**9**	**811**	**204**	**0**	**59**	**18**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,101**
Percent	**0.8%**	**73.7%**	**18.5%**	**0.0%**	**5.4%**	**1.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Tuesday, May 23, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	1	13	7	0	0	2	0	0	0	0	0	0	0	**23**
6:00 AM	0	22	15	0	0	3	0	0	0	0	0	0	0	**40**
7:00 AM	0	44	23	0	2	4	0	0	0	0	0	0	0	**73**
8:00 AM	1	56	15	0	1	3	0	0	0	0	0	0	0	**76**
9:00 AM	1	49	20	0	1	4	0	0	0	0	0	0	0	**75**
10:00 AM	5	50	39	0	0	8	0	0	0	0	0	0	1	**103**
11:00 AM	2	30	30	0	4	5	0	0	0	0	0	0	0	**71**
12:00 PM	1	52	25	0	2	7	0	0	0	1	0	0	0	**88**
1:00 PM	3	49	37	0	1	5	0	0	0	0	0	0	0	**95**
2:00 PM	1	38	40	0	3	2	0	0	0	0	0	0	0	**84**
3:00 PM	2	45	24	0	0	4	0	0	0	0	0	0	0	**75**
4:00 PM	6	70	40	0	1	12	0	1	0	0	0	0	1	**131**
5:00 PM	3	73	28	0	4	14	0	0	0	0	0	0	0	**122**
6:00 PM	2	49	34	0	0	7	0	0	0	1	0	0	0	**93**
7:00 PM	1	46	22	0	2	8	0	0	0	0	0	0	0	**79**
8:00 PM	0	18	14	0	0	1	0	0	0	0	0	0	0	**33**
9:00 PM	0	23	3	0	0	0	0	0	0	0	0	0	0	**26**
10:00 PM	1	8	0	0	0	0	0	0	0	0	0	0	0	**9**
11:00 PM	0	5	2	0	0	0	0	0	0	0	0	0	0	**7**
Total	**30**	**743**	**422**	**0**	**21**	**89**	**0**	**1**	**0**	**2**	**0**	**0**	**2**	**1,310**
Percent	**2.3%**	**56.7%**	**32.2%**	**0.0%**	**1.6%**	**6.8%**	**0.0%**	**0.1%**	**0.0%**	**0.2%**	**0.0%**	**0.0%**	**0.2%**	

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Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Tuesday, May 23, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	4	5	0	0	0	0	0	0	0	0	0	0	**9**
5:00 AM	1	14	0	0	0	1	0	0	0	0	0	0	0	**16**
6:00 AM	1	14	2	0	2	0	0	0	0	0	0	0	0	**19**
7:00 AM	3	37	14	0	4	2	0	0	0	0	0	0	0	**60**
8:00 AM	2	61	13	0	5	1	0	0	0	0	0	0	0	**82**
9:00 AM	1	43	16	0	6	1	0	0	0	1	0	0	0	**68**
10:00 AM	2	61	16	0	1	1	0	0	0	0	0	0	0	**81**
11:00 AM	0	38	11	0	5	1	0	0	0	0	0	0	0	**55**
12:00 PM	0	58	17	0	4	3	0	0	0	1	0	0	0	**83**
1:00 PM	0	53	17	0	5	4	0	0	0	0	0	0	0	**79**
2:00 PM	2	45	19	0	6	1	0	0	0	0	0	0	0	**73**
3:00 PM	0	65	21	0	4	6	0	1	0	0	0	0	0	**97**
4:00 PM	1	63	18	0	7	2	0	0	0	0	0	0	0	**91**
5:00 PM	0	67	9	0	2	0	0	0	0	1	0	0	0	**79**
6:00 PM	0	59	9	0	3	2	0	0	0	0	0	0	0	**73**
7:00 PM	0	36	5	0	1	0	0	0	0	0	0	0	0	**42**
8:00 PM	0	20	5	0	2	2	0	0	0	0	0	0	0	**29**
9:00 PM	0	24	3	0	0	0	0	0	0	0	0	0	0	**27**
10:00 PM	0	12	2	0	1	0	0	0	0	0	0	0	0	**15**
11:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
Total	**13**	**781**	**202**	**0**	**58**	**27**	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**1,085**
Percent	**1.2%**	**72.0%**	**18.6%**	**0.0%**	**5.3%**	**2.5%**	**0.0%**	**0.1%**	**0.0%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Wednesday, May 24, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	3	3	0	1	0	0	0	0	0	0	0	0	**7**
5:00 AM	0	14	13	0	0	0	0	0	0	0	0	0	0	**27**
6:00 AM	1	23	21	0	0	3	0	0	0	0	0	0	1	**49**
7:00 AM	0	41	16	0	0	3	0	0	0	0	0	0	0	**60**
8:00 AM	2	41	26	0	1	6	0	0	0	0	0	0	0	**76**
9:00 AM	4	46	28	0	0	7	0	0	0	0	0	0	0	**85**
10:00 AM	2	42	30	0	1	8	0	0	0	0	0	0	0	**83**
11:00 AM	3	56	20	0	1	3	0	0	0	1	0	0	0	**84**
12:00 PM	0	48	26	0	4	4	0	0	0	0	0	0	0	**82**
1:00 PM	1	50	31	0	0	1	0	0	0	0	0	0	0	**83**
2:00 PM	2	37	34	0	3	2	0	0	0	0	0	0	0	**78**
3:00 PM	6	50	44	0	1	6	0	0	0	0	0	0	0	**107**
4:00 PM	5	54	51	0	2	9	0	0	0	0	0	0	0	**121**
5:00 PM	0	53	48	0	1	13	0	0	0	0	0	0	0	**115**
6:00 PM	0	59	36	0	1	9	0	0	0	0	0	0	0	**105**
7:00 PM	0	34	35	0	0	5	0	0	0	0	0	0	0	**74**
8:00 PM	1	21	14	0	0	6	0	0	0	0	0	0	0	**42**
9:00 PM	0	14	4	0	0	0	0	0	0	0	0	0	0	**18**
10:00 PM	0	8	2	0	0	3	0	0	0	0	0	0	0	**13**
11:00 PM	0	1	2	0	0	0	0	0	0	0	0	0	0	**3**
Total	**27**	**696**	**484**	**0**	**16**	**88**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**1,313**
Percent	**2.1%**	**53.0%**	**36.9%**	**0.0%**	**1.2%**	**6.7%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.1%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Wednesday, May 24, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	2	0	0	0	1	0	0	0	0	0	0	0	**3**
4:00 AM	0	4	3	0	1	1	0	0	0	0	0	0	0	**9**
5:00 AM	0	14	3	0	1	0	0	0	0	0	0	0	0	**18**
6:00 AM	2	17	4	0	2	1	0	0	0	0	0	0	0	**26**
7:00 AM	1	52	20	0	1	0	0	0	0	0	0	0	0	**74**
8:00 AM	0	62	15	0	5	1	0	0	0	0	0	0	0	**83**
9:00 AM	0	59	11	0	5	2	0	0	0	0	0	0	0	**77**
10:00 AM	1	47	16	0	3	3	0	0	0	0	0	0	0	**70**
11:00 AM	0	44	15	0	5	4	0	0	0	0	0	0	0	**68**
12:00 PM	2	61	13	0	4	5	0	0	0	0	0	0	0	**85**
1:00 PM	1	43	21	0	4	1	0	0	0	0	0	0	0	**70**
2:00 PM	0	38	10	0	1	2	0	0	0	0	0	0	0	**51**
3:00 PM	1	49	18	0	4	1	0	0	0	0	0	0	0	**73**
4:00 PM	2	65	23	0	5	3	0	0	0	0	0	0	0	**98**
5:00 PM	0	79	14	0	3	1	0	0	0	0	0	0	0	**97**
6:00 PM	2	87	15	0	7	3	0	0	0	0	0	0	0	**114**
7:00 PM	0	40	7	0	2	0	0	0	0	0	0	0	0	**49**
8:00 PM	1	28	2	0	3	0	0	0	0	0	0	0	0	**34**
9:00 PM	0	12	3	0	0	0	0	0	0	0	0	0	0	**15**
10:00 PM	0	16	0	0	0	0	0	0	0	0	0	0	0	**16**
11:00 PM	1	3	0	0	0	0	0	0	0	0	0	0	0	**4**
Total	**14**	**823**	**214**	**0**	**56**	**29**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,136**
Percent	**1.2%**	**72.4%**	**18.8%**	**0.0%**	**4.9%**	**2.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Thursday, May 25, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
1:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	1	13	10	0	0	3	0	0	0	0	0	0	0	27
6:00 AM	0	25	17	0	0	5	0	0	0	0	0	0	0	47
7:00 AM	1	36	31	0	0	6	0	0	0	0	0	0	1	75
8:00 AM	0	30	27	0	1	4	0	0	0	0	0	0	0	62
9:00 AM	0	33	25	0	1	6	0	0	0	0	0	0	0	65
10:00 AM	4	36	31	0	2	11	0	0	1	0	0	0	0	85
11:00 AM	0	30	30	0	2	10	0	0	0	0	0	0	0	72
12:00 PM	0	50	46	0	3	9	0	0	0	0	0	0	0	108
1:00 PM	0	37	37	0	1	10	0	0	1	0	0	0	0	86
2:00 PM	1	44	40	1	2	5	0	0	0	1	0	0	1	95
3:00 PM	1	63	31	0	3	4	0	0	0	0	0	0	0	102
4:00 PM	0	83	40	0	3	5	0	0	0	0	0	0	0	131
5:00 PM	1	58	40	0	1	7	0	0	0	0	0	0	0	107
6:00 PM	1	46	22	0	3	6	0	0	0	0	0	0	0	78
7:00 PM	0	45	24	0	0	6	0	0	0	0	0	0	0	75
8:00 PM	0	19	13	0	1	1	0	0	0	0	0	0	0	34
9:00 PM	0	10	5	0	0	0	0	0	0	0	0	0	0	15
10:00 PM	0	3	4	0	0	1	0	0	0	0	0	0	0	8
11:00 PM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
Total	**10**	**675**	**474**	**1**	**23**	**99**	**0**	**0**	**2**	**1**	**0**	**0**	**2**	**1,287**
Percent	**0.8%**	**52.4%**	**36.8%**	**0.1%**	**1.8%**	**7.7%**	**0.0%**	**0.0%**	**0.2%**	**0.1%**	**0.0%**	**0.0%**	**0.2%**	

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Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Thursday, May 25, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	3	0	0	0	1	0	0	0	0	0	0	0	4
4:00 AM	0	11	2	0	0	0	0	0	0	0	0	0	1	14
5:00 AM	1	18	3	0	1	1	0	0	0	0	0	0	0	24
6:00 AM	2	15	5	0	1	0	0	0	0	0	0	0	0	23
7:00 AM	1	47	19	0	8	3	0	0	0	0	0	0	0	78
8:00 AM	0	48	17	0	7	2	0	0	0	0	0	0	0	74
9:00 AM	2	42	24	0	1	2	0	0	0	0	0	0	0	71
10:00 AM	1	58	15	0	2	1	0	0	0	0	0	0	0	77
11:00 AM	2	41	11	0	8	1	0	0	0	0	0	0	0	63
12:00 PM	0	65	14	0	4	2	0	0	0	0	0	0	0	85
1:00 PM	1	53	17	0	5	2	0	0	0	0	0	0	0	78
2:00 PM	0	38	17	0	5	1	0	0	0	0	0	0	0	61
3:00 PM	0	59	14	0	4	4	0	0	0	1	0	0	0	82
4:00 PM	1	63	15	0	2	3	0	0	0	0	0	0	0	84
5:00 PM	0	54	11	0	3	3	0	0	0	0	0	0	0	71
6:00 PM	0	50	12	0	2	2	0	0	0	0	0	0	0	66
7:00 PM	1	32	8	0	2	0	0	0	0	0	0	0	0	43
8:00 PM	1	18	8	0	1	1	0	0	0	0	0	0	0	29
9:00 PM	1	18	4	0	3	1	0	0	0	0	0	0	0	27
10:00 PM	0	13	3	0	0	0	0	0	0	0	0	0	0	16
11:00 PM	0	11	0	0	1	0	0	0	0	0	0	0	0	12
Total	**14**	**761**	**220**	**0**	**60**	**30**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**1,087**
Percent	**1.3%**	**70.0%**	**20.2%**	**0.0%**	**5.5%**	**2.8%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.1%**	

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Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Friday, May 26, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	1	0	0	1	0	0	0	0	0	0	0	**5**
1:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	6	9	0	0	0	0	0	0	0	0	0	0	**15**
6:00 AM	1	19	17	0	2	4	0	0	0	0	0	0	0	**43**
7:00 AM	0	24	28	0	0	7	0	0	0	0	0	0	0	**59**
8:00 AM	2	44	25	0	0	3	0	0	0	0	0	0	0	**74**
9:00 AM	5	42	26	0	2	5	0	0	0	0	0	0	0	**80**
10:00 AM	4	50	61	0	3	9	0	0	0	0	0	0	1	**128**
11:00 AM	2	64	53	0	1	10	0	0	0	0	0	0	1	**131**
12:00 PM	4	80	54	0	1	9	0	0	0	0	0	0	0	**148**
1:00 PM	3	58	60	0	1	4	0	0	0	0	0	0	0	**126**
2:00 PM	1	79	63	0	5	5	0	0	0	0	0	0	0	**153**
3:00 PM	4	55	39	0	3	8	0	0	0	0	0	0	1	**110**
4:00 PM	6	101	36	0	3	5	0	0	0	0	0	0	0	**151**
5:00 PM	0	56	55	0	1	4	0	0	1	0	0	0	0	**117**
6:00 PM	4	39	37	0	2	11	0	0	0	0	0	0	0	**93**
7:00 PM	1	27	31	0	0	4	0	0	0	0	0	0	0	**63**
8:00 PM	3	25	23	0	0	2	0	0	0	0	0	0	0	**53**
9:00 PM	1	20	14	0	0	2	0	0	0	0	0	0	0	**37**
10:00 PM	0	21	16	0	3	0	0	0	0	0	0	0	0	**40**
11:00 PM	1	47	20	0	0	8	0	0	0	0	0	0	0	**76**
Total	**42**	**865**	**669**	**0**	**27**	**101**	**0**	**0**	**1**	**0**	**0**	**0**	**3**	**1,708**
Percent	**2.5%**	**50.6%**	**39.2%**	**0.0%**	**1.6%**	**5.9%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.2%**	

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Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Friday, May 26, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	1	4	3	0	0	1	0	0	0	0	0	0	0	**9**
5:00 AM	0	18	3	0	1	2	0	0	0	0	0	0	0	**24**
6:00 AM	0	19	5	0	1	0	0	0	0	0	0	0	0	**25**
7:00 AM	1	50	14	0	3	0	0	0	0	0	0	0	0	**68**
8:00 AM	1	59	28	0	5	1	0	0	0	0	0	0	0	**94**
9:00 AM	1	78	21	0	8	1	0	0	0	1	0	0	0	**110**
10:00 AM	4	50	22	0	4	4	0	0	0	0	0	0	0	**84**
11:00 AM	1	87	27	0	5	4	0	0	0	0	0	0	0	**124**
12:00 PM	3	99	15	1	7	2	0	0	0	0	0	0	0	**127**
1:00 PM	4	80	26	0	6	6	0	0	0	0	0	0	0	**122**
2:00 PM	4	85	16	0	4	4	0	1	0	1	0	0	0	**115**
3:00 PM	2	114	25	0	8	2	0	0	0	0	0	0	0	**151**
4:00 PM	4	100	23	0	8	7	0	0	1	0	0	0	0	**143**
5:00 PM	1	98	28	0	3	5	0	0	0	1	0	0	0	**136**
6:00 PM	1	71	24	0	5	3	0	0	0	0	0	0	0	**104**
7:00 PM	1	59	14	0	2	3	0	0	0	0	0	0	0	**79**
8:00 PM	2	42	7	0	2	1	0	0	0	0	0	0	0	**54**
9:00 PM	0	31	9	0	0	0	0	0	0	0	0	0	0	**40**
10:00 PM	0	21	7	0	0	0	0	1	0	0	0	0	0	**29**
11:00 PM	0	15	8	0	1	0	0	0	0	0	0	0	0	**24**
Total	**31**	**1,181**	**325**	**1**	**73**	**46**	**0**	**2**	**1**	**3**	**0**	**0**	**0**	**1,663**
Percent	**1.9%**	**71.0%**	**19.5%**	**0.1%**	**4.4%**	**2.8%**	**0.0%**	**0.1%**	**0.1%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Total Study Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
1:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	8	8	0	0	1	0	0	0	0	0	0	0	17
6:00 AM	0	16	14	0	0	3	0	0	0	0	0	0	0	33
7:00 AM	0	29	21	0	1	4	0	0	0	0	0	0	0	55
8:00 AM	1	35	22	0	1	3	0	0	0	0	0	0	0	62
9:00 AM	2	44	24	0	1	5	0	0	0	0	0	0	0	76
10:00 AM	2	43	35	0	1	7	0	0	0	0	0	0	0	88
11:00 AM	1	44	33	0	1	7	0	0	0	0	0	0	0	86
12:00 PM	1	55	33	0	2	6	0	0	0	0	0	0	0	97
1:00 PM	1	46	29	0	1	4	0	0	0	0	0	0	0	81
2:00 PM	1	45	32	0	2	4	0	0	0	0	0	0	0	84
3:00 PM	2	52	29	0	1	5	0	0	0	0	0	0	0	89
4:00 PM	3	71	36	0	2	6	0	0	0	0	0	0	0	118
5:00 PM	1	58	36	0	2	6	0	0	0	0	0	0	0	103
6:00 PM	2	44	26	0	1	7	0	0	0	0	0	0	0	80
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	1	21	13	0	0	2	0	0	0	0	0	0	0	37
9:00 PM	0	17	6	0	0	0	0	0	0	0	0	0	0	23
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	10	4	0	0	1	0	0	0	0	0	0	0	15
Total	**18**	**644**	**404**	**0**	**16**	**71**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,153**
Percent	**1.6%**	**55.9%**	**35.0%**	**0.0%**	**1.4%**	**6.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Deon Fouche: (415) 757-7714
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Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Total Study Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	5	2	0	0	0	0	0	0	0	0	0	0	7
5:00 AM	0	12	2	0	0	1	0	0	0	0	0	0	0	15
6:00 AM	1	15	5	0	2	0	0	0	0	0	0	0	0	23
7:00 AM	1	39	13	0	3	1	0	0	0	0	0	0	0	57
8:00 AM	1	49	14	0	5	1	0	0	0	0	0	0	0	70
9:00 AM	1	48	15	0	4	1	0	0	0	0	0	0	0	69
10:00 AM	1	53	16	0	3	2	0	0	0	0	0	0	0	75
11:00 AM	0	49	15	0	5	2	0	0	0	0	0	0	0	71
12:00 PM	1	63	16	0	5	2	0	0	0	0	0	0	0	87
1:00 PM	1	60	17	0	5	3	0	0	0	0	0	0	0	86
2:00 PM	1	55	15	0	3	1	0	0	0	0	0	0	0	75
3:00 PM	1	61	17	0	4	3	0	0	0	0	0	0	0	86
4:00 PM	1	59	17	0	4	2	0	0	0	0	0	0	0	83
5:00 PM	1	61	13	0	2	1	0	0	0	0	0	0	0	78
6:00 PM	1	54	13	0	3	2	0	0	0	0	0	0	0	73
7:00 PM	0	37	8	0	2	1	0	0	0	0	0	0	0	48
8:00 PM	1	24	6	0	2	1	0	0	0	0	0	0	0	34
9:00 PM	0	20	4	0	1	0	0	0	0	0	0	0	0	25
10:00 PM	0	12	3	0	0	0	0	0	0	0	0	0	0	15
11:00 PM	0	7	1	0	0	0	0	0	0	0	0	0	0	8
Total	**13**	**788**	**212**	**0**	**53**	**24**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,090**
Percent	**1.2%**	**72.3%**	**19.4%**	**0.0%**	**4.9%**	**2.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

3-Day (Tuesday - Thursday) Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	3
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	1	13	10	0	0	2	0	0	0	0	0	0	0	26
6:00 AM	0	23	18	0	0	4	0	0	0	0	0	0	0	45
7:00 AM	0	40	23	0	1	4	0	0	0	0	0	0	0	69
8:00 AM	1	42	23	0	1	4	0	0	0	0	0	0	0	71
9:00 AM	2	43	24	0	1	6	0	0	0	0	0	0	0	75
10:00 AM	4	43	33	0	1	9	0	0	0	0	0	0	0	90
11:00 AM	2	39	27	0	2	6	0	0	0	0	0	0	0	76
12:00 PM	0	50	32	0	3	7	0	0	0	0	0	0	0	93
1:00 PM	1	45	35	0	1	5	0	0	0	0	0	0	0	88
2:00 PM	1	40	38	0	3	3	0	0	0	0	0	0	0	86
3:00 PM	3	53	33	0	1	5	0	0	0	0	0	0	0	95
4:00 PM	4	69	44	0	2	9	0	0	0	0	0	0	0	128
5:00 PM	1	61	39	0	2	11	0	0	0	0	0	0	0	115
6:00 PM	1	51	31	0	1	7	0	0	0	0	0	0	0	92
7:00 PM	0	42	27	0	1	6	0	0	0	0	0	0	0	76
8:00 PM	0	19	14	0	0	3	0	0	0	0	0	0	0	36
9:00 PM	0	16	4	0	0	0	0	0	0	0	0	0	0	20
10:00 PM	0	6	2	0	0	1	0	0	0	0	0	0	0	10
11:00 PM	0	4	1	0	0	0	0	0	0	0	0	0	0	5
Total	**22**	**705**	**460**	**0**	**20**	**92**	**0**	**0**	**1**	**1**	**0**	**0**	**2**	**1,303**
Percent	**1.7%**	**54.1%**	**35.3%**	**0.0%**	**1.5%**	**7.1%**	**0.0%**	**0.0%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.1%**	

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Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

3-Day (Tuesday - Thursday) Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	2	0	0	0	1	0	0	0	0	0	0	0	3
4:00 AM	0	6	3	0	0	0	0	0	0	0	0	0	0	11
5:00 AM	1	15	2	0	1	1	0	0	0	0	0	0	0	19
6:00 AM	2	15	4	0	2	0	0	0	0	0	0	0	0	23
7:00 AM	2	45	18	0	4	2	0	0	0	0	0	0	0	71
8:00 AM	1	57	15	0	6	1	0	0	0	0	0	0	0	80
9:00 AM	1	48	17	0	4	2	0	0	0	0	0	0	0	72
10:00 AM	1	55	16	0	2	2	0	0	0	0	0	0	0	76
11:00 AM	1	41	12	0	6	2	0	0	0	0	0	0	0	62
12:00 PM	1	61	15	0	4	3	0	0	0	0	0	0	0	84
1:00 PM	1	50	18	0	5	2	0	0	0	0	0	0	0	76
2:00 PM	1	40	15	0	4	1	0	0	0	0	0	0	0	62
3:00 PM	0	58	18	0	4	4	0	0	0	0	0	0	0	84
4:00 PM	1	64	19	0	5	3	0	0	0	0	0	0	0	91
5:00 PM	0	67	11	0	3	1	0	0	0	0	0	0	0	82
6:00 PM	1	65	12	0	4	2	0	0	0	0	0	0	0	84
7:00 PM	0	36	7	0	2	0	0	0	0	0	0	0	0	45
8:00 PM	1	22	5	0	2	1	0	0	0	0	0	0	0	31
9:00 PM	0	18	3	0	1	0	0	0	0	0	0	0	0	23
10:00 PM	0	14	2	0	0	0	0	0	0	0	0	0	0	16
11:00 PM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
Total	**14**	**788**	**212**	**0**	**58**	**29**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1,103**
Percent	**1.2%**	**71.5%**	**19.2%**	**0.0%**	**5.3%**	**2.6%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Vehicle Speed Report Summary

Location: Ramonda Ave N/O Bruce Ln
Count Direction: Northbound / Southbound
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

	Speed Range (mph)																	Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
	Study Total																	
Northbound	1,189	2,447	3,884	1,108	66	1	0	0	0	0	0	1	0	0	0	0	0	8,696
Percent	13.7%	28.1%	44.7%	12.7%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	227	1,371	2,696	2,742	565	52	0	1	0	0	0	0	2	0	0	0	0	7,656
Percent	3.0%	17.9%	35.2%	35.8%	7.4%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	1,416	3,818	6,580	3,850	631	53	0	1	0	0	0	1	2	0	0	0	0	16,352
Percent	8.7%	23.3%	40.2%	23.5%	3.9%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Northbound			**Northbound**		
50th Percentile (Median)	15.9	mph	Mean (Average) Speed	15.5	mph
85th Percentile	19.6	mph	10 mph Pace	10.2 - 20.2	mph
95th Percentile	21.8	mph	Percent in Pace	72.8	%
Southbound			**Southbound**		
50th Percentile (Median)	19.2	mph	Mean (Average) Speed	19.0	mph
85th Percentile	23.5	mph	10 mph Pace	14.5 - 24.5	mph
95th Percentile	26.0	mph	Percent in Pace	71.5	%

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Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Saturday, May 20, 2017
Northbound

	Speed Range (mph)																	Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	1	1	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
6:00 AM	0	2	10	6	1	0	0	0	0	0	0	0	0	0	0	0	0	**19**
7:00 AM	10	11	20	8	0	0	0	0	0	0	0	0	0	0	0	0	0	**49**
8:00 AM	15	14	19	8	0	0	0	0	0	0	0	0	0	0	0	0	0	**56**
9:00 AM	17	26	41	6	0	0	0	0	0	0	0	0	0	0	0	0	0	**90**
10:00 AM	9	17	39	10	0	0	0	0	0	0	0	0	0	0	0	0	0	**75**
11:00 AM	17	34	45	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**102**
12:00 PM	8	28	40	14	0	0	0	0	0	0	0	0	0	0	0	0	0	**90**
1:00 PM	7	17	26	9	0	0	0	0	0	0	0	0	0	0	0	0	0	**59**
2:00 PM	8	15	26	17	0	0	0	0	0	0	0	0	0	0	0	0	0	**66**
3:00 PM	6	13	21	8	2	0	0	0	0	0	0	0	0	0	0	0	0	**50**
4:00 PM	3	15	37	12	5	0	0	0	0	0	0	0	0	0	0	0	0	**72**
5:00 PM	0	20	23	15	1	0	0	0	0	0	0	0	0	0	0	0	0	**59**
6:00 PM	5	9	30	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**48**
7:00 PM	5	9	28	4	1	0	0	0	0	0	0	0	0	0	0	0	0	**47**
8:00 PM	1	8	17	6	0	0	0	0	0	0	0	0	0	0	0	0	0	**32**
9:00 PM	5	7	12	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**26**
10:00 PM	0	1	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
11:00 PM	0	2	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
Total	**119**	**250**	**453**	**143**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**977**
Percent	**12.2%**	**25.6%**	**46.4%**	**14.6%**	**1.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	16.2	mph	Mean (Average) Speed	15.9	mph
85th Percentile	20.1	mph	10 mph Pace	10.6 - 20.6	mph
95th Percentile	22.6	mph	Percent in Pace	72.7	%

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Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Saturday, May 20, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0	**4**
5:00 AM	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	**3**
6:00 AM	0	8	14	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**28**
7:00 AM	1	4	27	14	3	1	0	0	0	0	0	0	0	0	0	0	0	**50**
8:00 AM	4	8	23	15	1	0	0	0	0	0	0	0	0	0	0	0	0	**51**
9:00 AM	2	6	17	30	4	1	0	0	0	0	0	0	0	0	0	0	0	**60**
10:00 AM	2	17	30	27	2	1	0	0	0	0	0	0	0	0	0	0	0	**79**
11:00 AM	2	17	26	12	5	0	0	0	0	0	0	0	0	0	0	0	0	**62**
12:00 PM	4	14	30	32	4	1	0	0	0	0	0	0	0	0	0	0	0	**85**
1:00 PM	2	14	25	35	5	0	0	0	0	0	0	0	0	0	0	0	0	**81**
2:00 PM	1	11	29	28	7	1	0	0	0	0	0	0	0	0	0	0	0	**77**
3:00 PM	1	3	11	33	7	0	0	0	0	0	0	0	0	0	0	0	0	**55**
4:00 PM	0	3	15	12	8	2	0	0	0	0	0	0	0	0	0	0	0	**40**
5:00 PM	0	3	14	17	7	0	0	0	0	0	0	0	0	0	0	0	0	**41**
6:00 PM	1	6	13	15	4	0	0	0	0	0	0	0	0	0	0	0	0	**39**
7:00 PM	1	6	14	16	2	0	0	0	0	0	0	0	0	0	0	0	0	**39**
8:00 PM	0	5	10	9	2	0	0	0	0	0	0	0	0	0	0	0	0	**26**
9:00 PM	0	5	9	10	4	0	0	0	0	0	0	0	0	0	0	0	0	**28**
10:00 PM	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	**8**
11:00 PM	0	0	2	5	2	0	0	0	0	0	0	0	0	0	0	0	0	**9**
Total	**21**	**131**	**315**	**321**	**75**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**871**
Percent	**2.4%**	**15.0%**	**36.2%**	**36.9%**	**8.6%**	**0.9%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.6	mph	Mean (Average) Speed	19.3	mph
85th Percentile	23.8	mph	10 mph Pace	15.0 - 25.0	mph
95th Percentile	26.4	mph	Percent in Pace	72.8	%

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Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Sunday, May 21, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
2:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	1	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
6:00 AM	1	3	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
7:00 AM	0	0	5	10	0	0	0	0	0	0	0	0	0	0	0	0	0	**15**
8:00 AM	2	3	20	9	0	0	0	0	0	0	0	0	0	0	0	0	0	**34**
9:00 AM	13	21	22	12	0	0	0	0	0	0	0	0	0	0	0	0	0	**68**
10:00 AM	5	19	28	13	0	0	0	0	0	0	0	0	0	0	0	0	0	**65**
11:00 AM	9	19	30	13	0	0	0	0	0	0	0	0	0	0	0	0	0	**71**
12:00 PM	10	17	28	9	0	0	0	0	0	0	0	0	0	0	0	0	0	**64**
1:00 PM	7	14	25	9	0	0	0	0	0	0	0	0	0	0	0	0	0	**55**
2:00 PM	0	7	23	11	1	0	0	0	0	0	0	0	0	0	0	0	0	**42**
3:00 PM	2	13	39	18	0	0	0	0	0	0	0	0	0	0	0	0	0	**72**
4:00 PM	3	18	32	9	1	0	0	0	0	0	0	0	0	0	0	0	0	**63**
5:00 PM	2	6	41	9	1	0	0	0	0	0	0	0	0	0	0	0	0	**59**
6:00 PM	2	9	42	10	0	0	0	0	0	0	0	0	0	0	0	0	0	**63**
7:00 PM	1	10	20	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**35**
8:00 PM	0	14	14	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**33**
9:00 PM	0	0	14	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**18**
10:00 PM	0	1	6	6	1	0	0	0	0	0	0	0	0	0	0	0	0	**14**
11:00 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
Total	**57**	**175**	**412**	**156**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**804**
Percent	**7.1%**	**21.8%**	**51.2%**	**19.4%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	17.2	mph	Mean (Average) Speed	16.7	mph
85th Percentile	20.5	mph	10 mph Pace	12.6 - 22.6	mph
95th Percentile	22.3	mph	Percent in Pace	80.6	%

Deon Fouche: (415) 757-7714
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Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Sunday, May 21, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**6**
1:00 AM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	**4**
2:00 AM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
6:00 AM	0	0	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
7:00 AM	0	3	12	5	2	0	0	0	0	0	0	0	0	0	0	0	0	**22**
8:00 AM	0	5	15	6	3	0	0	0	0	0	0	0	0	0	0	0	0	**29**
9:00 AM	1	12	18	13	2	0	0	0	0	0	0	0	0	0	0	0	0	**46**
10:00 AM	5	18	32	14	8	0	0	0	0	0	0	0	0	0	0	0	0	**77**
11:00 AM	6	12	32	6	4	0	0	0	0	0	0	0	0	0	0	0	0	**60**
12:00 PM	1	7	14	24	11	0	0	0	0	0	0	0	0	0	0	0	0	**57**
1:00 PM	3	4	18	31	5	0	0	0	0	0	0	0	0	0	0	0	0	**61**
2:00 PM	1	6	17	23	2	0	0	0	0	0	0	0	0	0	0	0	0	**49**
3:00 PM	0	4	13	32	4	1	0	0	0	0	0	0	0	0	0	0	0	**54**
4:00 PM	0	2	12	22	7	0	0	0	0	0	0	0	0	0	0	0	0	**43**
5:00 PM	0	3	14	20	5	3	0	0	0	0	0	0	0	0	0	0	0	**45**
6:00 PM	0	6	8	20	6	0	0	0	0	0	0	0	0	0	0	0	0	**40**
7:00 PM	1	10	10	12	3	0	0	0	0	0	0	0	0	0	0	0	0	**36**
8:00 PM	0	5	8	14	1	0	0	0	0	0	0	0	0	0	0	0	0	**28**
9:00 PM	0	1	5	11	2	1	0	0	0	0	0	0	0	0	0	0	0	**20**
10:00 PM	0	0	2	8	1	2	0	0	0	0	0	0	0	0	0	0	0	**13**
11:00 PM	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
Total	**18**	**99**	**243**	**276**	**70**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**713**
Percent	**2.5%**	**13.9%**	**34.1%**	**38.7%**	**9.8%**	**1.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.8	mph	Mean (Average) Speed	19.6	mph
85th Percentile	23.9	mph	10 mph Pace	14.4 - 24.4	mph
95th Percentile	26.8	mph	Percent in Pace	74.5	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Monday, May 22, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
1:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	7	4	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**18**
6:00 AM	8	4	11	9	0	0	0	0	0	0	0	0	0	0	0	0	0	**32**
7:00 AM	1	1	32	18	2	0	0	0	0	0	0	0	0	0	0	0	0	**54**
8:00 AM	5	4	41	6	1	0	0	0	0	0	0	0	0	0	0	0	0	**57**
9:00 AM	6	33	34	5	0	1	0	0	0	0	0	0	0	0	0	0	0	**79**
10:00 AM	9	19	45	12	0	0	0	0	0	0	0	0	0	0	0	0	0	**85**
11:00 AM	5	22	37	11	0	0	0	0	0	0	0	0	0	0	0	0	0	**75**
12:00 PM	17	31	42	8	1	0	0	0	0	0	0	0	0	0	0	0	0	**99**
1:00 PM	7	25	35	6	2	0	0	0	0	0	0	0	0	0	0	0	0	**75**
2:00 PM	8	20	31	8	2	0	0	0	0	0	0	0	0	0	0	0	0	**69**
3:00 PM	8	23	61	12	0	0	0	0	0	0	0	0	0	0	0	0	0	**104**
4:00 PM	21	34	79	18	2	0	0	0	0	0	0	0	0	0	0	0	0	**154**
5:00 PM	25	41	60	24	1	0	0	0	0	0	0	0	0	0	0	0	0	**151**
6:00 PM	16	17	39	10	0	0	0	0	0	0	0	0	0	0	0	0	0	**82**
7:00 PM	20	26	23	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**73**
8:00 PM	6	9	16	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**33**
9:00 PM	0	11	11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**24**
10:00 PM	0	0	9	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**13**
11:00 PM	0	0	3	2	4	0	0	0	0	0	0	0	0	0	0	0	0	**9**
Total	**169**	**327**	**622**	**162**	**16**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,297**
Percent	**13.0%**	**25.2%**	**48.0%**	**12.5%**	**1.2%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	16.0	mph	Mean (Average) Speed	15.7	mph
85th Percentile	19.6	mph	10 mph Pace	11.1 - 21.1	mph
95th Percentile	22.2	mph	Percent in Pace	74.9	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Monday, May 22, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	5	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**7**
5:00 AM	0	5	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**14**
6:00 AM	1	3	8	11	6	0	0	0	0	0	0	0	0	0	0	0	0	**29**
7:00 AM	2	4	16	29	2	0	0	0	0	0	0	0	0	0	0	0	0	**53**
8:00 AM	1	11	20	36	2	0	0	0	0	0	0	0	0	0	0	0	0	**70**
9:00 AM	1	6	15	29	8	0	0	0	0	0	0	0	0	0	0	0	0	**59**
10:00 AM	0	13	26	10	4	0	0	0	0	0	0	0	0	0	0	0	0	**53**
11:00 AM	1	7	29	21	6	0	0	0	0	0	0	0	0	0	0	0	0	**64**
12:00 PM	1	14	33	30	9	3	0	0	0	0	0	0	0	0	0	0	0	**90**
1:00 PM	0	6	31	60	9	1	0	0	0	0	0	0	0	0	0	0	0	**107**
2:00 PM	3	5	42	41	13	1	0	0	0	0	0	0	0	0	0	0	0	**105**
3:00 PM	1	17	17	45	10	0	0	0	0	0	0	0	0	0	0	0	0	**90**
4:00 PM	3	9	32	39	3	0	0	0	0	0	0	0	0	0	0	0	0	**86**
5:00 PM	1	8	25	34	11	0	0	0	0	0	0	0	0	0	0	0	0	**79**
6:00 PM	3	18	25	21	6	0	0	0	0	0	0	0	0	0	0	0	0	**73**
7:00 PM	1	7	15	18	1	0	0	0	0	0	0	0	0	0	0	0	0	**42**
8:00 PM	1	3	10	9	7	0	0	0	0	0	0	0	0	0	0	0	0	**30**
9:00 PM	0	2	9	11	3	0	0	0	0	0	0	0	0	0	0	0	0	**25**
10:00 PM	0	1	4	4	1	0	0	0	0	0	0	0	0	0	0	0	0	**10**
11:00 PM	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
Total	**20**	**145**	**371**	**457**	**103**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,101**
Percent	**1.8%**	**13.2%**	**33.7%**	**41.5%**	**9.4%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	20.0	mph	Mean (Average) Speed	19.8	mph
85th Percentile	24.0	mph	10 mph Pace	15.3 - 25.3	mph
95th Percentile	26.2	mph	Percent in Pace	75.7	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Tuesday, May 23, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	7	3	12	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**23**
6:00 AM	9	14	11	6	0	0	0	0	0	0	0	0	0	0	0	0	0	**40**
7:00 AM	4	16	39	14	0	0	0	0	0	0	0	0	0	0	0	0	0	**73**
8:00 AM	12	20	38	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**76**
9:00 AM	11	29	32	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**75**
10:00 AM	33	33	30	6	1	0	0	0	0	0	0	0	0	0	0	0	0	**103**
11:00 AM	10	22	30	9	0	0	0	0	0	0	0	0	0	0	0	0	0	**71**
12:00 PM	16	24	39	9	0	0	0	0	0	0	0	0	0	0	0	0	0	**88**
1:00 PM	7	29	50	9	0	0	0	0	0	0	0	0	0	0	0	0	0	**95**
2:00 PM	11	24	44	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**84**
3:00 PM	8	28	28	11	0	0	0	0	0	0	0	0	0	0	0	0	0	**75**
4:00 PM	31	27	60	13	0	0	0	0	0	0	0	0	0	0	0	0	0	**131**
5:00 PM	21	30	51	19	0	0	0	0	0	0	0	1	0	0	0	0	0	**122**
6:00 PM	16	24	43	10	0	0	0	0	0	0	0	0	0	0	0	0	0	**93**
7:00 PM	23	30	22	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**79**
8:00 PM	2	11	18	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**33**
9:00 PM	3	5	16	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**26**
10:00 PM	0	2	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
11:00 PM	0	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
Total	**224**	**373**	**580**	**130**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1,310**
Percent	**17.1%**	**28.5%**	**44.3%**	**9.9%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	15.5	mph	Mean (Average) Speed	15.0	mph
85th Percentile	19.1	mph	10 mph Pace	9.3 - 19.3	mph
95th Percentile	21.2	mph	Percent in Pace	75.0	%

Deon Fouche: (415) 757-7714
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Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Tuesday, May 23, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	7	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**9**
5:00 AM	0	4	1	10	1	0	0	0	0	0	0	0	0	0	0	0	0	**16**
6:00 AM	0	1	1	16	1	0	0	0	0	0	0	0	0	0	0	0	0	**19**
7:00 AM	2	5	20	27	4	2	0	0	0	0	0	0	0	0	0	0	0	**60**
8:00 AM	2	6	17	44	13	0	0	0	0	0	0	0	0	0	0	0	0	**82**
9:00 AM	4	12	19	31	2	0	0	0	0	0	0	0	0	0	0	0	0	**68**
10:00 AM	3	14	32	27	3	2	0	0	0	0	0	0	0	0	0	0	0	**81**
11:00 AM	1	12	21	20	1	0	0	0	0	0	0	0	0	0	0	0	0	**55**
12:00 PM	3	22	33	19	5	1	0	0	0	0	0	0	0	0	0	0	0	**83**
1:00 PM	0	5	27	40	6	1	0	0	0	0	0	0	0	0	0	0	0	**79**
2:00 PM	1	10	26	28	8	0	0	0	0	0	0	0	0	0	0	0	0	**73**
3:00 PM	7	17	31	33	9	0	0	0	0	0	0	0	0	0	0	0	0	**97**
4:00 PM	1	16	37	32	5	0	0	0	0	0	0	0	0	0	0	0	0	**91**
5:00 PM	0	3	15	53	7	1	0	0	0	0	0	0	0	0	0	0	0	**79**
6:00 PM	7	20	24	17	4	1	0	0	0	0	0	0	0	0	0	0	0	**73**
7:00 PM	0	5	18	19	0	0	0	0	0	0	0	0	0	0	0	0	0	**42**
8:00 PM	0	4	11	14	0	0	0	0	0	0	0	0	0	0	0	0	0	**29**
9:00 PM	0	2	9	14	2	0	0	0	0	0	0	0	0	0	0	0	0	**27**
10:00 PM	0	1	4	9	1	0	0	0	0	0	0	0	0	0	0	0	0	**15**
11:00 PM	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
Total	**31**	**166**	**349**	**457**	**74**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,085**
Percent	**2.9%**	**15.3%**	**32.2%**	**42.1%**	**6.8%**	**0.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.8	mph	Mean (Average) Speed	19.4	mph
85th Percentile	23.7	mph	10 mph Pace	14.8 - 24.8	mph
95th Percentile	25.9	mph	Percent in Pace	74.9	%

Deon Fouche: (415) 757-7714
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Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Wednesday, May 24, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	1	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
5:00 AM	10	6	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**27**
6:00 AM	15	18	12	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**49**
7:00 AM	1	12	30	13	4	0	0	0	0	0	0	0	0	0	0	0	0	**60**
8:00 AM	8	26	30	9	3	0	0	0	0	0	0	0	0	0	0	0	0	**76**
9:00 AM	11	37	28	8	1	0	0	0	0	0	0	0	0	0	0	0	0	**85**
10:00 AM	17	29	30	7	0	0	0	0	0	0	0	0	0	0	0	0	0	**83**
11:00 AM	4	19	48	13	0	0	0	0	0	0	0	0	0	0	0	0	0	**84**
12:00 PM	8	21	40	13	0	0	0	0	0	0	0	0	0	0	0	0	0	**82**
1:00 PM	12	28	25	17	1	0	0	0	0	0	0	0	0	0	0	0	0	**83**
2:00 PM	9	25	35	9	0	0	0	0	0	0	0	0	0	0	0	0	0	**78**
3:00 PM	10	35	47	15	0	0	0	0	0	0	0	0	0	0	0	0	0	**107**
4:00 PM	18	27	56	19	1	0	0	0	0	0	0	0	0	0	0	0	0	**121**
5:00 PM	14	39	49	12	1	0	0	0	0	0	0	0	0	0	0	0	0	**115**
6:00 PM	21	54	28	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**105**
7:00 PM	17	25	29	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**74**
8:00 PM	6	11	22	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**42**
9:00 PM	1	3	13	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**18**
10:00 PM	1	3	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**13**
11:00 PM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
Total	**183**	**420**	**550**	**148**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,313**
Percent	**13.9%**	**32.0%**	**41.9%**	**11.3%**	**0.9%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	15.3	mph	Mean (Average) Speed	15.2	mph
85th Percentile	19.5	mph	10 mph Pace	10.1 - 20.1	mph
95th Percentile	21.8	mph	Percent in Pace	73.6	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Wednesday, May 24, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	1	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
5:00 AM	0	3	2	13	0	0	0	0	0	0	0	0	0	0	0	0	0	**18**
6:00 AM	2	3	7	7	7	0	0	0	0	0	0	0	0	0	0	0	0	**26**
7:00 AM	1	8	25	33	6	1	0	0	0	0	0	0	0	0	0	0	0	**74**
8:00 AM	1	15	23	39	5	0	0	0	0	0	0	0	0	0	0	0	0	**83**
9:00 AM	0	15	42	15	5	0	0	0	0	0	0	0	0	0	0	0	0	**77**
10:00 AM	3	24	18	24	0	1	0	0	0	0	0	0	0	0	0	0	0	**70**
11:00 AM	2	9	25	28	4	0	0	0	0	0	0	0	0	0	0	0	0	**68**
12:00 PM	1	19	40	23	2	0	0	0	0	0	0	0	0	0	0	0	0	**85**
1:00 PM	3	12	20	28	7	0	0	0	0	0	0	0	0	0	0	0	0	**70**
2:00 PM	0	9	18	20	4	0	0	0	0	0	0	0	0	0	0	0	0	**51**
3:00 PM	1	9	24	31	6	1	0	1	0	0	0	0	0	0	0	0	0	**73**
4:00 PM	4	17	34	38	5	0	0	0	0	0	0	0	0	0	0	0	0	**98**
5:00 PM	8	12	38	29	8	2	0	0	0	0	0	0	0	0	0	0	0	**97**
6:00 PM	6	14	71	21	1	1	0	0	0	0	0	0	0	0	0	0	0	**114**
7:00 PM	1	6	16	20	6	0	0	0	0	0	0	0	0	0	0	0	0	**49**
8:00 PM	2	5	10	15	2	0	0	0	0	0	0	0	0	0	0	0	0	**34**
9:00 PM	0	2	2	8	2	1	0	0	0	0	0	0	0	0	0	0	0	**15**
10:00 PM	0	0	2	11	3	0	0	0	0	0	0	0	0	0	0	0	0	**16**
11:00 PM	1	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**4**
Total	**37**	**187**	**424**	**406**	**74**	**7**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,136**
Percent	**3.3%**	**16.5%**	**37.3%**	**35.7%**	**6.5%**	**0.6%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.2	mph	Mean (Average) Speed	18.9	mph
85th Percentile	23.3	mph	10 mph Pace	14.1 - 24.1	mph
95th Percentile	25.6	mph	Percent in Pace	73.3	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Thursday, May 25, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
1:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	9	9	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**27**
6:00 AM	7	17	17	6	0	0	0	0	0	0	0	0	0	0	0	0	0	**47**
7:00 AM	5	9	42	19	0	0	0	0	0	0	0	0	0	0	0	0	0	**75**
8:00 AM	2	7	37	16	0	0	0	0	0	0	0	0	0	0	0	0	0	**62**
9:00 AM	6	18	34	7	0	0	0	0	0	0	0	0	0	0	0	0	0	**65**
10:00 AM	12	33	30	10	0	0	0	0	0	0	0	0	0	0	0	0	0	**85**
11:00 AM	17	20	28	7	0	0	0	0	0	0	0	0	0	0	0	0	0	**72**
12:00 PM	12	30	55	11	0	0	0	0	0	0	0	0	0	0	0	0	0	**108**
1:00 PM	11	19	41	14	1	0	0	0	0	0	0	0	0	0	0	0	0	**86**
2:00 PM	14	13	50	17	1	0	0	0	0	0	0	0	0	0	0	0	0	**95**
3:00 PM	9	19	57	15	2	0	0	0	0	0	0	0	0	0	0	0	0	**102**
4:00 PM	7	34	64	25	1	0	0	0	0	0	0	0	0	0	0	0	0	**131**
5:00 PM	17	20	47	22	1	0	0	0	0	0	0	0	0	0	0	0	0	**107**
6:00 PM	15	16	31	14	2	0	0	0	0	0	0	0	0	0	0	0	0	**78**
7:00 PM	14	25	26	10	0	0	0	0	0	0	0	0	0	0	0	0	0	**75**
8:00 PM	1	10	19	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**34**
9:00 PM	1	2	7	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**15**
10:00 PM	1	1	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
11:00 PM	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
Total	**161**	**307**	**603**	**207**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,287**
Percent	**12.5%**	**23.9%**	**46.9%**	**16.1%**	**0.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	16.4	mph	Mean (Average) Speed	16.0	mph
85th Percentile	20.1	mph	10 mph Pace	10.8 - 20.8	mph
95th Percentile	22.4	mph	Percent in Pace	71.7	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Thursday, May 25, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
1:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	4	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**14**
5:00 AM	2	3	7	7	5	0	0	0	0	0	0	0	0	0	0	0	0	**24**
6:00 AM	1	2	13	3	4	0	0	0	0	0	0	0	0	0	0	0	0	**23**
7:00 AM	0	7	34	30	6	1	0	0	0	0	0	0	0	0	0	0	0	**78**
8:00 AM	2	14	32	22	4	0	0	0	0	0	0	0	0	0	0	0	0	**74**
9:00 AM	2	26	17	24	2	0	0	0	0	0	0	0	0	0	0	0	0	**71**
10:00 AM	5	30	16	18	5	3	0	0	0	0	0	0	0	0	0	0	0	**77**
11:00 AM	2	12	28	20	1	0	0	0	0	0	0	0	0	0	0	0	0	**63**
12:00 PM	2	12	20	44	7	0	0	0	0	0	0	0	0	0	0	0	0	**85**
1:00 PM	4	17	17	28	11	1	0	0	0	0	0	0	0	0	0	0	0	**78**
2:00 PM	1	2	18	29	11	0	0	0	0	0	0	0	0	0	0	0	0	**61**
3:00 PM	1	9	29	32	9	2	0	0	0	0	0	0	0	0	0	0	0	**82**
4:00 PM	2	9	19	39	15	0	0	0	0	0	0	0	0	0	0	0	0	**84**
5:00 PM	1	14	24	24	7	1	0	0	0	0	0	0	0	0	0	0	0	**71**
6:00 PM	0	8	19	32	7	0	0	0	0	0	0	0	0	0	0	0	0	**66**
7:00 PM	1	8	15	17	2	0	0	0	0	0	0	0	0	0	0	0	0	**43**
8:00 PM	1	4	5	19	0	0	0	0	0	0	0	0	0	0	0	0	0	**29**
9:00 PM	1	1	5	15	5	0	0	0	0	0	0	0	0	0	0	0	0	**27**
10:00 PM	0	0	3	12	1	0	0	0	0	0	0	0	0	0	0	0	0	**16**
11:00 PM	0	0	2	6	4	0	0	0	0	0	0	0	0	0	0	0	0	**12**
Total	**28**	**184**	**337**	**423**	**107**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,087**
Percent	**2.6%**	**16.9%**	**31.0%**	**38.9%**	**9.8%**	**0.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.8	mph	Mean (Average) Speed	19.4	mph
85th Percentile	23.9	mph	10 mph Pace	14.7 - 24.7	mph
95th Percentile	26.6	mph	Percent in Pace	70.6	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Friday, May 26, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
1:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	6	3	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**15**
6:00 AM	10	13	16	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**43**
7:00 AM	2	8	36	13	0	0	0	0	0	0	0	0	0	0	0	0	0	**59**
8:00 AM	14	24	30	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**74**
9:00 AM	16	31	24	9	0	0	0	0	0	0	0	0	0	0	0	0	0	**80**
10:00 AM	34	37	37	19	1	0	0	0	0	0	0	0	0	0	0	0	0	**128**
11:00 AM	25	47	49	9	1	0	0	0	0	0	0	0	0	0	0	0	0	**131**
12:00 PM	28	54	54	10	2	0	0	0	0	0	0	0	0	0	0	0	0	**148**
1:00 PM	9	51	51	14	1	0	0	0	0	0	0	0	0	0	0	0	0	**126**
2:00 PM	31	48	64	10	0	0	0	0	0	0	0	0	0	0	0	0	0	**153**
3:00 PM	9	41	43	17	0	0	0	0	0	0	0	0	0	0	0	0	0	**110**
4:00 PM	19	61	55	13	3	0	0	0	0	0	0	0	0	0	0	0	0	**151**
5:00 PM	19	43	44	10	1	0	0	0	0	0	0	0	0	0	0	0	0	**117**
6:00 PM	16	32	38	7	0	0	0	0	0	0	0	0	0	0	0	0	0	**93**
7:00 PM	5	17	35	6	0	0	0	0	0	0	0	0	0	0	0	0	0	**63**
8:00 PM	7	20	22	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**53**
9:00 PM	6	15	12	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**37**
10:00 PM	2	19	18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**40**
11:00 PM	18	30	23	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**76**
Total	**276**	**595**	**664**	**162**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,708**
Percent	**16.2%**	**34.8%**	**38.9%**	**9.5%**	**0.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	14.8	mph	Mean (Average) Speed	14.8	mph
85th Percentile	19.1	mph	10 mph Pace	9.8 - 19.8	mph
95th Percentile	21.6	mph	Percent in Pace	73.8	%

Deon Fouche: (415) 757-7714
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Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Friday, May 26, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
5:00 AM	2	10	11	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**24**
6:00 AM	0	3	3	16	3	0	0	0	0	0	0	0	0	0	0	0	0	**25**
7:00 AM	1	9	21	32	5	0	0	0	0	0	0	0	0	0	0	0	0	**68**
8:00 AM	1	11	30	45	7	0	0	0	0	0	0	0	0	0	0	0	0	**94**
9:00 AM	3	38	48	18	3	0	0	0	0	0	0	0	0	0	0	0	0	**110**
10:00 AM	8	36	18	19	3	0	0	0	0	0	0	0	0	0	0	0	0	**84**
11:00 AM	8	47	48	20	1	0	0	0	0	0	0	0	0	0	0	0	0	**124**
12:00 PM	6	25	55	34	6	1	0	0	0	0	0	0	0	0	0	0	0	**127**
1:00 PM	4	38	48	29	2	1	0	0	0	0	0	0	0	0	0	0	0	**122**
2:00 PM	6	27	52	23	7	0	0	0	0	0	0	0	0	0	0	0	0	**115**
3:00 PM	8	39	48	47	4	3	0	0	0	0	0	0	2	0	0	0	0	**151**
4:00 PM	10	40	66	24	3	0	0	0	0	0	0	0	0	0	0	0	0	**143**
5:00 PM	6	39	63	24	3	1	0	0	0	0	0	0	0	0	0	0	0	**136**
6:00 PM	2	30	51	18	3	0	0	0	0	0	0	0	0	0	0	0	0	**104**
7:00 PM	1	25	39	11	2	1	0	0	0	0	0	0	0	0	0	0	0	**79**
8:00 PM	4	18	15	12	4	1	0	0	0	0	0	0	0	0	0	0	0	**54**
9:00 PM	1	8	14	15	2	0	0	0	0	0	0	0	0	0	0	0	0	**40**
10:00 PM	0	3	14	11	1	0	0	0	0	0	0	0	0	0	0	0	0	**29**
11:00 PM	1	5	11	4	2	1	0	0	0	0	0	0	0	0	0	0	0	**24**
Total	**72**	**459**	**657**	**402**	**62**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**1,663**
Percent	**4.3%**	**27.6%**	**39.5%**	**24.2%**	**3.7%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	16.9	mph	Mean (Average) Speed	17.3	mph
85th Percentile	21.7	mph	10 mph Pace	12.5 - 22.5	mph
95th Percentile	24.6	mph	Percent in Pace	74	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Total Study Average
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
1:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	6	4	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**19**
6:00 AM	7	10	12	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**34**
7:00 AM	3	8	29	14	1	0	0	0	0	0	0	0	0	0	0	0	0	**55**
8:00 AM	8	14	31	8	1	0	0	0	0	0	0	0	0	0	0	0	0	**62**
9:00 AM	11	28	31	7	0	0	0	0	0	0	0	0	0	0	0	0	0	**77**
10:00 AM	17	27	34	11	0	0	0	0	0	0	0	0	0	0	0	0	0	**89**
11:00 AM	12	26	38	10	0	0	0	0	0	0	0	0	0	0	0	0	0	**86**
12:00 PM	14	29	43	11	0	0	0	0	0	0	0	0	0	0	0	0	0	**97**
1:00 PM	9	26	36	11	1	0	0	0	0	0	0	0	0	0	0	0	0	**83**
2:00 PM	12	22	39	11	1	0	0	0	0	0	0	0	0	0	0	0	0	**85**
3:00 PM	7	25	42	14	1	0	0	0	0	0	0	0	0	0	0	0	0	**89**
4:00 PM	15	31	55	16	2	0	0	0	0	0	0	0	0	0	0	0	0	**119**
5:00 PM	14	28	45	16	1	0	0	0	0	0	0	0	0	0	0	0	0	**104**
6:00 PM	13	23	36	8	0	0	0	0	0	0	0	0	0	0	0	0	0	**80**
7:00 PM	12	20	26	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**63**
8:00 PM	3	12	18	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**36**
9:00 PM	2	6	12	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**23**
10:00 PM	1	4	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**16**
11:00 PM	3	5	6	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**17**
Total	**169**	**349**	**556**	**158**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,241**
Percent	**13.6%**	**28.1%**	**44.8%**	**12.7%**	**0.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	15.9	mph	Mean (Average) Speed	15.5	mph
85th Percentile	19.6	mph	10 mph Pace	10.2 - 20.2	mph
95th Percentile	21.8	mph	Percent in Pace	72.8	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 to 5/26/2017
Site Code: 04

Total Study Average
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	4	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**8**
5:00 AM	1	4	4	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**15**
6:00 AM	1	3	7	9	3	0	0	0	0	0	0	0	0	0	0	0	0	**23**
7:00 AM	1	6	22	24	4	1	0	0	0	0	0	0	0	0	0	0	0	**58**
8:00 AM	2	10	23	30	5	0	0	0	0	0	0	0	0	0	0	0	0	**70**
9:00 AM	2	16	25	23	4	0	0	0	0	0	0	0	0	0	0	0	0	**70**
10:00 AM	4	22	25	20	4	1	0	0	0	0	0	0	0	0	0	0	0	**76**
11:00 AM	3	17	30	18	3	0	0	0	0	0	0	0	0	0	0	0	0	**71**
12:00 PM	3	16	32	29	6	1	0	0	0	0	0	0	0	0	0	0	0	**87**
1:00 PM	2	14	27	36	6	1	0	0	0	0	0	0	0	0	0	0	0	**86**
2:00 PM	2	10	29	27	7	0	0	0	0	0	0	0	0	0	0	0	0	**75**
3:00 PM	3	14	25	36	7	1	0	0	0	0	0	0	0	0	0	0	0	**86**
4:00 PM	3	14	31	29	7	0	0	0	0	0	0	0	0	0	0	0	0	**84**
5:00 PM	2	12	28	29	7	1	0	0	0	0	0	0	0	0	0	0	0	**79**
6:00 PM	3	15	30	21	4	0	0	0	0	0	0	0	0	0	0	0	0	**73**
7:00 PM	1	10	18	16	2	0	0	0	0	0	0	0	0	0	0	0	0	**47**
8:00 PM	1	6	10	13	2	0	0	0	0	0	0	0	0	0	0	0	0	**32**
9:00 PM	0	3	8	12	3	0	0	0	0	0	0	0	0	0	0	0	0	**26**
10:00 PM	0	1	4	8	2	0	0	0	0	0	0	0	0	0	0	0	0	**15**
11:00 PM	0	1	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**8**
Total	**34**	**198**	**386**	**390**	**79**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,093**
Percent	**3.1%**	**18.1%**	**35.3%**	**35.7%**	**7.2%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	19.2	mph	Mean (Average) Speed	19.0	mph
85th Percentile	23.5	mph	10 mph Pace	14.5 - 24.5	mph
95th Percentile	26.0	mph	Percent in Pace	71.5	%

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Location: Ramonda Ave N/O Bruce Ln
Date Range: 5/20/2017 - 5/26/2017
Site Code: 04

Time	Saturday 5/20/2017			Sunday 5/21/2017			Monday 5/22/2017			Tuesday 5/23/2017			Wednesday 5/24/2017			Thursday 5/25/2017			Friday 5/26/2017			Mid-Week Average		
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	3	2	5	1	6	7	5	2	7	3	2	5	1	1	2	4	4	8	5	1	6	3	2	5
1:00 AM	0	1	1	7	4	11	1	0	1	2	1	3	0	0	0	2	1	3	2	0	2	1	1	2
2:00 AM	3	2	5	1	3	4	2	2	4	0	0	0	0	1	1	1	0	1	2	0	2	0	0	1
3:00 AM	1	1	2	1	1	2	1	3	4	0	1	1	0	3	3	1	4	5	0	0	0	0	3	3
4:00 AM	1	4	5	0	2	2	2	7	9	2	9	11	7	9	16	1	14	15	2	9	11	3	11	14
5:00 AM	9	3	12	8	4	12	18	14	32	23	16	39	27	18	45	27	24	51	15	24	39	26	19	45
6:00 AM	19	28	47	12	9	21	32	29	61	40	19	59	49	26	75	47	23	70	43	25	68	45	23	68
7:00 AM	49	50	99	15	22	37	54	53	107	73	60	133	60	74	134	75	78	153	59	68	127	69	71	140
8:00 AM	56	51	107	34	29	63	57	70	127	76	82	158	76	83	159	62	74	136	74	94	168	71	80	151
9:00 AM	90	60	150	68	46	114	79	59	138	75	68	143	85	77	162	65	71	136	80	110	190	75	72	147
10:00 AM	75	79	154	65	77	142	85	53	138	103	81	184	83	70	153	85	77	162	128	84	212	90	76	166
11:00 AM	102	62	164	71	60	131	75	64	139	71	55	126	84	68	152	72	63	135	131	124	255	76	62	138
12:00 PM	90	85	175	64	57	121	99	90	189	88	83	171	82	85	167	108	85	193	148	127	275	93	84	177
1:00 PM	59	81	140	55	61	116	75	107	182	95	79	174	83	70	153	86	78	164	126	122	248	88	76	164
2:00 PM	66	77	143	42	49	91	69	105	174	84	73	157	78	51	129	95	61	156	153	115	268	86	62	147
3:00 PM	50	55	105	72	54	126	104	90	194	75	97	172	107	73	180	102	82	184	110	151	261	95	84	179
4:00 PM	72	40	112	63	43	106	154	86	240	131	91	222	121	98	219	131	84	215	151	143	294	128	91	219
5:00 PM	59	41	100	59	45	104	151	79	230	122	79	201	115	97	212	107	71	178	117	136	253	115	82	197
6:00 PM	48	39	87	63	40	103	82	73	155	93	73	166	105	114	219	78	66	144	93	104	197	92	84	176
7:00 PM	47	39	86	35	36	71	73	42	115	79	42	121	74	49	123	75	43	118	63	79	142	76	45	121
8:00 PM	32	26	58	33	28	61	33	30	63	33	29	62	42	34	76	34	29	63	53	54	107	36	31	67
9:00 PM	26	28	54	18	20	38	24	25	49	26	27	53	18	15	33	15	27	42	37	40	77	20	23	43
10:00 PM	11	8	19	14	13	27	13	10	23	9	15	24	13	16	29	8	16	24	40	29	69	10	16	26
11:00 PM	9	9	18	3	4	7	9	8	17	7	3	10	3	4	7	6	12	18	76	24	100	5	6	12
Total	**977**	**871**	**1,848**	**804**	**713**	**1,517**	**1,297**	**1,101**	**2,398**	**1,310**	**1,085**	**2,395**	**1,313**	**1,136**	**2,449**	**1,287**	**1,087**	**2,374**	**1,708**	**1,663**	**3,371**	**1,303**	**1,103**	**2,406**
Percent	**53%**	**47%**	-	**53%**	**47%**	-	**54%**	**46%**	-	**55%**	**45%**	-	**54%**	**46%**	-	**54%**	**46%**	-	**51%**	**49%**	-	**54%**	**46%**	-

1. Mid-week average includes data between Tuesday and Thursday.

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Vehicle Classification Report Summary

Location: Casanova Ave N/O Melway Cir
Count Direction: Northbound / Southbound
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

	FHWA Vehicle Classification													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total														
Northbound	139	10,655	3,006	1	221	844	0	4	45	90	0	0	17	15,022
Percent	0.9%	70.9%	20.0%	0.0%	1.5%	5.6%	0.0%	0.0%	0.3%	0.6%	0.0%	0.0%	0.1%	100%
Southbound	345	21,582	472	0	63	70	0	3	159	209	0	0	18	22,921
Percent	1.5%	94.2%	2.1%	0.0%	0.3%	0.3%	0.0%	0.0%	0.7%	0.9%	0.0%	0.0%	0.1%	100%
Total	484	32,237	3,478	1	284	914	0	7	204	299	0	0	35	37,943
Percent	1.3%	85.0%	9.2%	0.0%	0.7%	2.4%	0.0%	0.0%	0.5%	0.8%	0.0%	0.0%	0.1%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Saturday, May 20, 2017
Southbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	0	24	2	0	0	1	0	0	0	0	0	0	0	**27**
1:00 AM	0	18	0	0	1	0	0	0	0	0	0	0	0	**19**
2:00 AM	0	7	0	0	0	0	0	0	0	0	0	0	0	**7**
3:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	10	0	0	0	0	0	0	0	0	0	0	0	**10**
6:00 AM	0	19	2	0	0	0	0	0	0	0	0	0	0	**21**
7:00 AM	0	30	7	0	1	0	0	0	0	0	0	0	0	**38**
8:00 AM	1	40	3	0	0	0	0	0	0	0	0	0	0	**44**
9:00 AM	0	63	12	0	1	0	0	0	0	0	0	0	0	**76**
10:00 AM	2	91	8	0	1	0	0	0	0	0	0	0	0	**102**
11:00 AM	2	90	6	0	2	1	0	0	0	0	0	0	0	**101**
12:00 PM	0	107	7	0	1	0	0	0	0	0	0	0	0	**115**
1:00 PM	1	115	7	0	0	0	0	0	0	0	0	0	0	**123**
2:00 PM	4	77	3	0	0	0	0	1	0	0	0	0	0	**85**
3:00 PM	1	91	10	0	2	2	0	0	0	0	0	0	0	**106**
4:00 PM	2	88	3	0	1	0	0	0	0	0	0	0	0	**94**
5:00 PM	0	109	6	0	1	1	0	0	0	0	0	0	0	**117**
6:00 PM	0	109	5	0	0	0	0	0	0	0	0	0	0	**114**
7:00 PM	2	83	6	0	0	0	0	0	0	0	0	0	0	**91**
8:00 PM	1	74	4	0	0	0	0	0	0	0	0	0	0	**79**
9:00 PM	0	72	2	0	2	1	0	0	0	0	0	0	0	**77**
10:00 PM	1	63	6	0	0	0	0	0	0	0	0	0	0	**70**
11:00 PM	0	54	0	0	0	0	0	0	0	0	0	0	0	**54**
Total	**17**	**1,439**	**100**	**0**	**13**	**6**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1,576**
Percent	**1.1%**	**91.3%**	**6.3%**	**0.0%**	**0.8%**	**0.4%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Sunday, May 21, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	15	0	0	0	0	0	0	0	0	0	0	0	15
1:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
2:00 AM	0	8	1	0	0	0	0	0	0	0	0	0	0	9
3:00 AM	0	9	1	0	0	1	0	0	0	0	0	0	0	11
4:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
5:00 AM	0	18	3	0	0	0	0	0	0	0	0	0	0	21
6:00 AM	0	24	2	0	0	0	0	0	0	0	0	0	0	26
7:00 AM	0	54	4	0	3	0	0	0	0	0	0	0	0	61
8:00 AM	2	63	10	0	1	0	0	0	0	0	0	0	0	76
9:00 AM	2	73	5	0	2	0	0	0	0	0	0	0	0	82
10:00 AM	1	103	17	0	1	0	0	0	0	0	0	0	0	122
11:00 AM	3	91	9	0	1	0	0	0	0	0	0	0	0	104
12:00 PM	2	87	11	0	1	1	0	1	0	0	0	0	0	103
1:00 PM	1	91	5	0	3	0	0	0	0	0	0	0	0	100
2:00 PM	0	67	11	0	1	0	0	0	0	0	0	0	0	79
3:00 PM	1	84	9	0	2	0	0	0	0	0	0	0	0	96
4:00 PM	0	80	10	0	3	0	0	0	0	0	0	0	0	93
5:00 PM	0	74	11	0	1	2	0	0	0	0	0	0	0	88
6:00 PM	1	86	9	0	1	0	0	0	0	0	0	0	0	97
7:00 PM	1	58	9	0	2	1	0	0	0	0	0	0	0	71
8:00 PM	1	41	5	0	2	0	0	0	0	0	0	0	0	49
9:00 PM	0	34	4	0	0	2	0	0	0	0	0	0	0	40
10:00 PM	0	28	3	0	0	0	0	0	0	0	0	0	0	31
11:00 PM	0	18	0	0	0	1	0	0	0	0	0	0	0	19
Total	**15**	**1,215**	**139**	**0**	**24**	**8**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1,402**
Percent	**1.1%**	**86.7%**	**9.9%**	**0.0%**	**1.7%**	**0.6%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Sunday, May 21, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	2	44	0	0	0	0	0	0	0	0	0	0	0	46
1:00 AM	0	10	1	0	0	0	0	0	0	0	0	0	0	11
2:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	0	8
3:00 AM	0	10	0	0	0	0	0	0	0	0	0	0	0	10
4:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
5:00 AM	0	6	0	0	0	1	0	0	0	0	0	0	0	7
6:00 AM	0	11	1	0	0	0	0	0	0	0	0	0	0	12
7:00 AM	0	30	0	0	0	0	0	0	0	0	0	0	0	30
8:00 AM	0	43	2	0	0	0	0	0	0	0	0	0	0	45
9:00 AM	1	54	4	0	0	0	0	0	0	0	0	0	0	59
10:00 AM	1	67	2	0	1	1	0	0	0	0	0	0	0	72
11:00 AM	2	80	2	0	0	0	0	0	0	0	0	0	0	84
12:00 PM	1	79	8	0	2	1	0	0	0	0	0	0	0	91
1:00 PM	0	87	2	0	3	0	0	0	0	0	0	0	0	92
2:00 PM	1	103	5	0	0	0	0	0	0	0	0	0	0	109
3:00 PM	2	107	11	0	2	0	0	0	0	0	0	0	0	122
4:00 PM	0	100	7	0	1	1	0	0	0	0	0	0	0	109
5:00 PM	2	115	11	0	0	0	0	0	0	0	0	0	0	128
6:00 PM	1	99	9	0	0	0	0	1	0	0	0	0	0	110
7:00 PM	1	92	3	0	0	1	0	0	0	0	0	0	0	97
8:00 PM	1	72	6	0	0	1	0	0	0	0	0	0	0	80
9:00 PM	1	59	4	0	0	0	0	0	0	0	0	0	0	64
10:00 PM	0	57	2	0	0	0	0	0	0	0	0	0	0	59
11:00 PM	0	21	0	0	0	1	0	1	0	0	0	0	0	23
Total	**16**	**1,360**	**80**	**0**	**9**	**7**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1,474**
Percent	**1.1%**	**92.3%**	**5.4%**	**0.0%**	**0.6%**	**0.5%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Monday, May 22, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	**9**
1:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	6	1	0	2	0	0	0	0	0	0	0	0	**9**
4:00 AM	0	12	1	0	0	0	0	0	0	0	0	0	0	**13**
5:00 AM	1	23	6	0	2	0	0	0	0	0	0	0	0	**32**
6:00 AM	0	71	12	0	3	6	0	0	0	1	0	0	0	**93**
7:00 AM	1	122	50	0	3	12	0	0	1	1	0	0	0	**190**
8:00 AM	0	107	42	0	2	9	0	0	1	2	0	0	0	**163**
9:00 AM	3	88	25	0	2	6	0	0	0	3	0	0	0	**127**
10:00 AM	1	75	26	0	1	1	0	0	0	0	0	0	0	**104**
11:00 AM	3	77	32	0	3	2	0	0	0	0	0	0	1	**118**
12:00 PM	6	119	39	0	5	4	0	1	0	0	0	0	0	**174**
1:00 PM	1	109	29	0	5	6	0	0	0	0	0	0	0	**150**
2:00 PM	0	92	35	0	2	5	0	0	0	0	0	0	0	**134**
3:00 PM	2	87	41	0	3	3	0	0	0	1	0	0	0	**137**
4:00 PM	4	88	48	0	4	4	0	0	0	0	0	0	0	**148**
5:00 PM	5	124	48	0	2	3	0	0	0	0	0	0	0	**182**
6:00 PM	0	94	28	0	0	10	0	0	1	0	0	0	0	**133**
7:00 PM	0	55	13	0	0	10	0	0	0	0	0	0	0	**78**
8:00 PM	5	41	24	0	0	7	0	0	0	0	0	0	0	**77**
9:00 PM	0	25	9	0	0	7	0	0	0	0	0	0	0	**41**
10:00 PM	0	20	9	0	0	1	0	0	0	0	0	0	0	**30**
11:00 PM	0	12	8	0	1	3	0	0	0	0	0	0	0	**24**
Total	**32**	**1,458**	**527**	**0**	**40**	**99**	**0**	**1**	**3**	**8**	**0**	**0**	**1**	**2,169**
Percent	**1.5%**	**67.2%**	**24.3%**	**0.0%**	**1.8%**	**4.6%**	**0.0%**	**0.0%**	**0.1%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Monday, May 22, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	19	1	0	0	0	0	0	0	0	0	0	0	**20**
1:00 AM	0	7	0	0	0	0	0	0	0	0	0	0	0	**7**
2:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	1	11	1	0	0	0	0	0	0	0	0	0	0	**13**
6:00 AM	1	59	6	0	1	0	0	0	0	0	0	0	0	**67**
7:00 AM	0	87	16	0	6	0	0	0	0	0	0	0	0	**109**
8:00 AM	2	92	10	0	3	0	0	0	0	0	0	0	0	**107**
9:00 AM	0	63	11	0	3	0	0	0	0	0	0	0	0	**77**
10:00 AM	0	63	10	0	1	0	0	0	0	0	0	0	0	**74**
11:00 AM	0	86	17	0	0	0	0	0	0	0	0	0	0	**103**
12:00 PM	0	116	11	0	3	1	0	0	0	0	0	0	0	**131**
1:00 PM	0	204	3	0	1	0	0	0	0	0	0	0	0	**208**
2:00 PM	0	93	10	0	2	0	0	0	0	0	0	0	0	**105**
3:00 PM	1	122	16	0	6	0	0	0	0	0	0	0	0	**145**
4:00 PM	0	143	15	0	4	0	0	0	0	0	0	0	0	**162**
5:00 PM	1	127	15	0	3	0	0	0	0	0	0	0	0	**146**
6:00 PM	0	144	7	0	1	0	0	0	0	0	0	0	0	**152**
7:00 PM	1	94	9	0	1	1	0	0	0	0	0	0	0	**106**
8:00 PM	1	97	13	0	2	0	0	0	0	0	0	0	0	**113**
9:00 PM	0	71	4	0	2	0	0	0	0	0	0	0	0	**77**
10:00 PM	0	47	2	0	0	0	0	0	0	0	0	0	0	**49**
11:00 PM	0	31	1	0	0	0	0	0	0	0	0	0	0	**32**
Total	**8**	**1,783**	**178**	**0**	**39**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,010**
Percent	**0.4%**	**88.7%**	**8.9%**	**0.0%**	**1.9%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Tuesday, May 23, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	2	0	0	2	0	0	0	0	0	0	0	**8**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	2	2	0	0	1	0	0	0	0	0	0	0	**5**
3:00 AM	0	8	0	0	0	2	0	0	0	0	0	0	0	**10**
4:00 AM	0	10	4	0	0	1	0	0	0	0	0	0	0	**15**
5:00 AM	0	32	4	0	0	1	0	0	2	1	0	0	0	**40**
6:00 AM	1	50	19	0	0	13	0	0	2	2	0	0	0	**87**
7:00 AM	2	123	53	0	1	22	0	0	5	4	0	0	2	**212**
8:00 AM	0	64	36	0	0	19	0	0	1	2	0	0	0	**122**
9:00 AM	1	71	33	0	2	9	0	0	0	0	0	0	0	**116**
10:00 AM	0	80	26	0	0	1	0	0	0	0	0	0	0	**107**
11:00 AM	2	88	37	0	3	5	0	0	0	0	0	0	0	**135**
12:00 PM	3	99	26	0	3	5	0	0	1	0	0	0	0	**137**
1:00 PM	2	88	29	0	2	2	0	0	0	0	0	0	0	**123**
2:00 PM	2	90	30	0	7	4	0	0	0	0	0	0	0	**133**
3:00 PM	1	91	39	0	5	6	0	0	0	1	0	0	0	**143**
4:00 PM	2	114	41	0	2	11	0	0	0	0	0	0	0	**170**
5:00 PM	0	127	50	0	4	5	0	0	1	2	0	0	1	**190**
6:00 PM	1	103	33	0	0	10	0	0	0	0	0	0	0	**147**
7:00 PM	1	50	24	0	1	10	0	0	1	0	0	0	0	**87**
8:00 PM	0	31	13	0	2	5	0	0	2	0	0	0	0	**53**
9:00 PM	0	29	9	0	0	8	0	0	0	1	0	0	0	**47**
10:00 PM	1	23	9	0	0	6	0	0	0	0	0	0	0	**39**
11:00 PM	0	15	3	0	0	2	0	0	0	0	0	0	0	**20**
Total	**19**	**1,392**	**522**	**0**	**32**	**150**	**0**	**0**	**15**	**13**	**0**	**0**	**3**	**2,146**
Percent	**0.9%**	**64.9%**	**24.3%**	**0.0%**	**1.5%**	**7.0%**	**0.0%**	**0.0%**	**0.7%**	**0.6%**	**0.0%**	**0.0%**	**0.1%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Tuesday, May 23, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	11	0	0	0	0	0	0	0	0	0	0	0	**11**
1:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
2:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	14	1	0	0	1	0	0	0	0	0	0	0	**16**
6:00 AM	1	68	3	0	1	0	0	0	0	0	0	0	0	**73**
7:00 AM	0	155	0	0	0	0	0	0	0	0	0	0	1	**156**
8:00 AM	0	173	1	0	0	0	0	0	1	0	0	0	0	**175**
9:00 AM	0	155	0	0	0	0	0	0	0	0	0	0	0	**155**
10:00 AM	0	177	0	0	0	0	0	0	0	0	0	0	0	**177**
11:00 AM	0	166	1	0	0	1	0	0	0	0	0	0	0	**168**
12:00 PM	0	262	1	0	0	0	0	0	1	0	0	0	0	**264**
1:00 PM	1	228	1	0	0	0	0	0	0	0	0	0	0	**230**
2:00 PM	0	190	1	0	0	1	0	0	0	0	0	0	0	**192**
3:00 PM	0	235	3	0	0	1	0	0	0	0	0	0	0	**239**
4:00 PM	0	414	0	0	0	0	0	0	0	0	0	0	0	**414**
5:00 PM	2	421	4	0	0	0	0	0	0	1	0	0	0	**428**
6:00 PM	0	308	1	0	0	0	0	0	1	1	0	0	0	**311**
7:00 PM	0	303	1	0	0	1	0	0	0	1	0	0	0	**306**
8:00 PM	0	232	1	0	0	0	0	0	0	0	0	0	0	**233**
9:00 PM	0	180	2	0	0	0	0	0	0	0	0	0	0	**182**
10:00 PM	0	105	1	0	0	0	0	0	0	0	0	0	0	**106**
11:00 PM	1	89	0	0	0	0	0	0	0	0	0	0	0	**90**
Total	**5**	**3,897**	**25**	**0**	**1**	**5**	**0**	**0**	**3**	**3**	**0**	**0**	**1**	**3,940**
Percent	**0.1%**	**98.9%**	**0.6%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Wednesday, May 24, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	3	2	0	0	0	0	0	1	0	0	0	0	**6**
2:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	**2**
3:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	0	**8**
4:00 AM	0	6	5	0	0	4	0	0	0	0	0	0	0	**15**
5:00 AM	0	28	10	0	0	6	0	0	0	0	0	0	0	**44**
6:00 AM	1	56	21	0	1	4	0	0	3	0	0	0	1	**87**
7:00 AM	1	145	55	0	1	23	0	1	2	7	0	0	2	**237**
8:00 AM	0	90	38	0	2	14	0	0	2	5	0	0	1	**152**
9:00 AM	1	91	32	0	1	9	0	0	0	1	0	0	0	**135**
10:00 AM	0	82	32	0	0	12	0	0	1	0	0	0	0	**127**
11:00 AM	3	88	23	0	0	5	0	0	0	1	0	0	0	**120**
12:00 PM	2	132	30	0	8	7	0	0	0	0	0	0	0	**179**
1:00 PM	1	129	27	0	1	7	0	0	1	0	0	0	0	**166**
2:00 PM	1	129	26	0	3	7	0	0	0	0	0	0	0	**166**
3:00 PM	2	131	25	0	2	12	0	0	0	2	0	0	0	**174**
4:00 PM	2	127	44	0	0	15	0	0	1	1	0	0	0	**190**
5:00 PM	1	172	41	0	1	18	0	0	0	1	0	0	0	**234**
6:00 PM	3	111	31	0	0	14	0	0	2	1	0	0	1	**163**
7:00 PM	0	98	19	0	0	13	0	0	0	0	0	0	0	**130**
8:00 PM	0	57	17	0	0	6	0	0	0	1	0	0	0	**81**
9:00 PM	1	50	8	0	0	5	0	0	0	0	0	0	0	**64**
10:00 PM	0	32	9	0	0	4	0	0	0	1	0	0	0	**46**
11:00 PM	0	32	8	0	0	1	0	0	0	0	0	0	0	**41**
Total	**19**	**1,797**	**504**	**0**	**20**	**187**	**0**	**1**	**13**	**21**	**0**	**0**	**5**	**2,567**
Percent	**0.7%**	**70.0%**	**19.6%**	**0.0%**	**0.8%**	**7.3%**	**0.0%**	**0.0%**	**0.5%**	**0.8%**	**0.0%**	**0.0%**	**0.2%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Wednesday, May 24, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	27	0	0	0	0	0	0	0	0	0	0	0	**27**
1:00 AM	0	12	1	0	0	0	0	0	0	0	0	0	0	**13**
2:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	0	**8**
3:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	**6**
4:00 AM	0	9	0	0	0	1	0	0	0	0	0	0	0	**10**
5:00 AM	1	28	0	0	0	0	0	0	0	0	0	0	0	**29**
6:00 AM	1	100	2	0	0	0	0	0	0	0	0	0	0	**103**
7:00 AM	1	204	4	0	0	0	0	0	1	0	0	0	0	**210**
8:00 AM	2	259	0	0	0	0	0	0	0	0	0	0	0	**261**
9:00 AM	4	203	1	0	0	0	0	0	1	1	0	0	0	**210**
10:00 AM	2	166	0	0	0	0	0	0	1	0	0	0	0	**169**
11:00 AM	0	271	4	0	0	2	0	0	0	0	0	0	0	**277**
12:00 PM	2	325	0	0	0	0	0	0	1	0	0	0	0	**328**
1:00 PM	13	304	3	0	0	1	0	0	1	0	0	0	1	**323**
2:00 PM	10	259	1	0	0	0	0	0	1	0	0	0	1	**272**
3:00 PM	10	267	0	0	0	0	0	0	4	0	0	0	0	**281**
4:00 PM	12	401	1	0	0	0	0	0	0	2	0	0	0	**416**
5:00 PM	18	354	0	0	0	1	0	0	2	2	0	0	2	**379**
6:00 PM	10	339	0	0	0	0	0	0	2	2	0	0	0	**353**
7:00 PM	11	277	2	0	0	0	0	0	1	1	0	0	0	**292**
8:00 PM	14	254	2	0	0	1	0	0	0	0	0	0	0	**271**
9:00 PM	7	120	1	0	0	1	0	0	0	1	0	0	1	**131**
10:00 PM	3	140	0	0	0	0	0	0	2	1	0	0	0	**146**
11:00 PM	3	85	4	0	0	0	0	0	1	0	0	0	0	**93**
Total	**124**	**4,418**	**26**	**0**	**0**	**7**	**0**	**0**	**18**	**10**	**0**	**0**	**5**	**4,608**
Percent	**2.7%**	**95.9%**	**0.6%**	**0.0%**	**0.0%**	**0.2%**	**0.0%**	**0.0%**	**0.4%**	**0.2%**	**0.0%**	**0.0%**	**0.1%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Thursday, May 25, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	10	5	0	0	0	0	0	0	0	0	0	0	15
1:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	6
2:00 AM	1	7	0	0	0	1	0	0	0	0	0	0	0	9
3:00 AM	0	9	0	0	0	1	0	0	0	0	0	0	0	10
4:00 AM	0	6	3	0	0	1	0	0	0	1	0	0	0	11
5:00 AM	0	35	8	0	1	3	0	0	0	1	0	0	0	48
6:00 AM	0	80	18	0	1	4	0	0	0	2	0	0	0	105
7:00 AM	1	146	52	1	3	24	0	0	1	6	0	0	0	234
8:00 AM	1	118	41	0	4	18	0	1	1	2	0	0	1	187
9:00 AM	1	105	31	0	2	14	0	0	0	0	0	0	0	153
10:00 AM	3	106	30	0	0	11	0	0	1	2	0	0	1	154
11:00 AM	0	137	26	0	4	8	0	0	0	1	0	0	0	176
12:00 PM	1	152	30	0	2	11	0	0	1	0	0	0	0	197
1:00 PM	0	108	26	0	3	4	0	0	0	0	0	0	0	141
2:00 PM	2	95	23	0	3	4	0	0	0	0	0	0	0	127
3:00 PM	1	107	35	0	8	5	0	0	0	0	0	0	0	156
4:00 PM	0	138	38	0	3	10	0	0	0	0	0	0	0	189
5:00 PM	2	126	48	0	2	6	0	0	0	1	0	0	1	186
6:00 PM	1	117	23	0	2	5	0	0	0	0	0	0	0	148
7:00 PM	2	58	19	0	0	13	0	0	0	1	0	0	1	94
8:00 PM	0	51	19	0	0	7	0	0	0	4	0	0	0	81
9:00 PM	0	45	14	0	2	10	0	0	0	1	0	0	0	72
10:00 PM	1	38	15	0	0	3	0	0	0	1	0	0	0	58
11:00 PM	0	9	4	0	0	3	0	0	0	1	0	0	0	17
Total	**17**	**1,808**	**509**	**1**	**40**	**166**	**0**	**1**	**4**	**24**	**0**	**0**	**4**	**2,574**
Percent	**0.7%**	**70.2%**	**19.8%**	**0.0%**	**1.6%**	**6.4%**	**0.0%**	**0.0%**	**0.2%**	**0.9%**	**0.0%**	**0.0%**	**0.2%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Thursday, May 25, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	1	29	1	0	0	0	0	0	0	3	0	0	0	34
1:00 AM	0	13	1	0	0	0	0	0	0	1	0	0	0	15
2:00 AM	0	12	0	0	0	0	0	0	0	0	0	0	0	12
3:00 AM	0	8	0	0	0	0	0	0	1	1	0	0	0	10
4:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
5:00 AM	4	31	0	0	0	0	0	0	1	2	0	0	0	38
6:00 AM	8	93	0	0	0	0	0	0	0	1	0	0	0	102
7:00 AM	7	256	0	0	0	2	0	0	2	0	0	0	0	267
8:00 AM	11	250	2	0	0	0	0	0	0	1	0	0	0	264
9:00 AM	8	188	1	0	0	1	0	0	1	0	0	0	1	200
10:00 AM	10	121	1	0	0	0	0	0	0	1	0	0	0	133
11:00 AM	12	209	0	0	0	0	0	0	1	1	0	0	0	223
12:00 PM	9	353	1	0	0	1	0	0	0	3	0	0	2	369
1:00 PM	2	230	1	0	0	1	0	0	8	6	0	0	1	249
2:00 PM	2	186	3	0	0	4	0	0	9	11	0	0	0	215
3:00 PM	3	275	0	0	0	2	0	0	13	15	0	0	0	308
4:00 PM	7	295	1	0	0	6	0	0	12	31	0	0	2	354
5:00 PM	9	342	2	0	0	1	0	0	7	18	0	0	0	379
6:00 PM	1	223	1	0	0	4	0	0	18	25	0	0	1	273
7:00 PM	4	224	1	0	0	1	0	0	10	21	0	0	0	261
8:00 PM	6	205	0	0	0	3	0	0	3	5	0	0	1	223
9:00 PM	6	195	4	0	0	0	0	0	6	3	0	0	0	214
10:00 PM	6	150	1	0	0	1	0	0	5	5	0	0	0	168
11:00 PM	2	60	1	0	0	1	0	0	1	1	0	0	0	66
Total	**118**	**3,953**	**22**	**0**	**0**	**28**	**0**	**0**	**98**	**155**	**0**	**0**	**8**	**4,382**
Percent	**2.7%**	**90.2%**	**0.5%**	**0.0%**	**0.0%**	**0.6%**	**0.0%**	**0.0%**	**2.2%**	**3.5%**	**0.0%**	**0.0%**	**0.2%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Friday, May 26, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	7	3	0	1	3	0	0	0	0	0	0	0	14
1:00 AM	0	9	0	0	0	1	0	0	0	0	0	0	0	10
2:00 AM	0	5	3	0	0	0	0	0	0	0	0	0	0	8
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	7
5:00 AM	0	27	13	0	0	1	0	0	0	1	0	0	0	42
6:00 AM	1	55	13	0	2	2	0	0	2	1	0	0	0	76
7:00 AM	0	126	60	0	2	19	0	0	1	4	0	0	2	214
8:00 AM	1	121	44	0	5	14	0	0	1	4	0	0	0	190
9:00 AM	2	73	42	0	2	10	0	0	0	1	0	0	0	130
10:00 AM	1	93	28	0	3	20	0	0	1	0	0	0	0	146
11:00 AM	0	89	34	0	1	13	0	0	1	2	0	0	0	140
12:00 PM	2	119	37	0	2	17	0	0	0	1	0	0	0	178
1:00 PM	2	92	38	0	2	17	0	0	0	0	0	0	0	151
2:00 PM	1	124	42	0	6	10	0	0	0	1	0	0	0	184
3:00 PM	1	157	41	0	2	15	0	0	1	2	0	0	0	219
4:00 PM	6	113	45	0	1	18	0	0	0	1	0	0	0	184
5:00 PM	0	106	38	0	0	14	0	0	0	1	0	0	2	161
6:00 PM	0	85	37	0	0	13	0	0	1	1	0	0	0	137
7:00 PM	1	51	22	0	1	10	0	0	0	2	0	0	0	87
8:00 PM	2	45	18	0	0	9	0	0	1	0	0	0	0	75
9:00 PM	1	45	16	0	0	7	0	0	0	0	0	0	0	69
10:00 PM	2	26	25	0	0	11	0	0	0	0	0	0	0	64
11:00 PM	0	50	14	0	0	6	0	0	1	2	0	0	0	73
Total	**23**	**1,625**	**614**	**0**	**30**	**230**	**0**	**0**	**10**	**24**	**0**	**0**	**4**	**2,560**
Percent	**0.9%**	**63.5%**	**24.0%**	**0.0%**	**1.2%**	**9.0%**	**0.0%**	**0.0%**	**0.4%**	**0.9%**	**0.0%**	**0.0%**	**0.2%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Friday, May 26, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	58	0	0	0	0	0	0	1	1	0	0	0	60
1:00 AM	1	25	0	0	0	0	0	0	1	1	0	0	0	28
2:00 AM	0	14	0	0	0	0	0	0	0	0	0	0	0	14
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	26	0	0	0	0	0	0	0	2	0	0	0	28
6:00 AM	2	70	2	0	1	0	0	0	2	3	0	0	0	80
7:00 AM	5	172	2	0	0	0	0	0	12	15	0	0	0	206
8:00 AM	7	199	0	0	0	2	0	0	4	2	0	0	0	214
9:00 AM	5	193	0	0	0	2	0	0	2	0	0	0	0	202
10:00 AM	4	238	0	0	0	1	0	0	1	2	0	0	0	246
11:00 AM	9	213	1	0	0	3	0	0	7	5	0	0	1	239
12:00 PM	5	335	1	0	0	1	0	0	2	4	0	0	0	348
1:00 PM	5	300	1	0	0	0	0	0	3	2	0	0	3	314
2:00 PM	4	352	0	0	0	2	0	0	0	0	0	0	0	358
3:00 PM	4	333	4	0	0	1	0	0	0	0	0	0	0	342
4:00 PM	2	468	5	0	0	1	0	0	0	1	0	0	0	477
5:00 PM	1	389	4	0	0	1	0	0	1	1	0	0	0	397
6:00 PM	0	294	5	0	0	0	0	0	3	0	0	0	0	302
7:00 PM	0	264	3	0	0	1	0	0	0	1	0	0	0	269
8:00 PM	1	219	4	0	0	0	0	0	0	0	0	0	0	224
9:00 PM	0	237	7	0	0	0	0	0	0	0	0	0	0	244
10:00 PM	1	185	1	0	0	0	0	0	1	0	0	0	0	188
11:00 PM	1	148	1	0	0	0	0	0	0	1	0	0	0	151
Total	**57**	**4,732**	**41**	**0**	**1**	**15**	**0**	**0**	**40**	**41**	**0**	**0**	**4**	**4,931**
Percent	**1.2%**	**96.0%**	**0.8%**	**0.0%**	**0.0%**	**0.3%**	**0.0%**	**0.0%**	**0.8%**	**0.8%**	**0.0%**	**0.0%**	**0.1%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Total Study Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	8	2	0	0	1	0	0	0	0	0	0	0	11
1:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	5
2:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	5
3:00 AM	0	6	0	0	0	1	0	0	0	0	0	0	0	7
4:00 AM	0	7	2	0	0	1	0	0	0	0	0	0	0	10
5:00 AM	0	26	6	0	1	2	0	0	0	0	0	0	0	35
6:00 AM	0	54	13	0	1	4	0	0	1	1	0	0	0	74
7:00 AM	1	110	40	0	2	14	0	0	1	3	0	0	1	172
8:00 AM	1	90	32	0	3	11	0	0	1	2	0	0	0	140
9:00 AM	2	87	27	0	2	7	0	0	0	1	0	0	0	126
10:00 AM	1	93	25	0	1	6	0	0	0	0	0	0	0	126
11:00 AM	2	97	25	0	2	5	0	0	0	1	0	0	0	132
12:00 PM	2	117	27	0	4	7	0	0	0	0	0	0	0	157
1:00 PM	1	100	24	0	2	5	0	0	0	0	0	0	0	132
2:00 PM	1	95	25	0	4	4	0	0	0	0	0	0	0	129
3:00 PM	1	105	28	0	3	6	0	0	0	1	0	0	0	144
4:00 PM	2	108	34	0	2	8	0	0	0	0	0	0	0	154
5:00 PM	1	114	36	0	2	7	0	0	0	1	0	0	1	162
6:00 PM	1	97	24	0	1	7	0	0	1	0	0	0	0	131
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	1	46	15	0	1	5	0	0	0	1	0	0	0	69
9:00 PM	0	37	9	0	0	6	0	0	0	0	0	0	0	52
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	23	5	0	0	2	0	0	0	0	0	0	0	30
Total	**17**	**1,428**	**401**	**0**	**31**	**109**	**0**	**0**	**4**	**11**	**0**	**0**	**2**	**2,003**
Percent	**0.8%**	**71.3%**	**20.0%**	**0.0%**	**1.5%**	**5.4%**	**0.0%**	**0.0%**	**0.2%**	**0.5%**	**0.0%**	**0.0%**	**0.1%**	

Note: Average only condsidered on days with 24-hours of data.

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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Total Study Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	30	1	0	0	0	0	0	0	1	0	0	0	32
1:00 AM	0	13	1	0	0	0	0	0	0	0	0	0	0	14
2:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	0	8
3:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
4:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	1	18	0	0	0	0	0	0	0	1	0	0	0	20
6:00 AM	2	60	2	0	0	0	0	0	0	1	0	0	0	65
7:00 AM	2	133	4	0	1	0	0	0	2	2	0	0	0	144
8:00 AM	3	151	3	0	0	0	0	0	1	0	0	0	0	158
9:00 AM	3	131	4	0	1	0	0	0	1	0	0	0	0	140
10:00 AM	3	132	3	0	0	0	0	0	0	0	0	0	0	138
11:00 AM	4	159	4	0	0	1	0	0	1	1	0	0	0	170
12:00 PM	2	225	4	0	1	1	0	0	1	1	0	0	0	235
1:00 PM	3	210	3	0	1	0	0	0	2	1	0	0	1	221
2:00 PM	3	180	3	0	0	1	0	0	1	2	0	0	0	190
3:00 PM	3	204	6	0	1	1	0	0	2	2	0	0	0	219
4:00 PM	3	273	5	0	1	1	0	0	2	5	0	0	0	290
5:00 PM	5	265	6	0	1	1	0	0	1	3	0	0	0	282
6:00 PM	2	217	4	0	0	1	0	0	3	4	0	0	0	231
7:00 PM	3	191	4	0	0	1	0	0	2	3	0	0	0	204
8:00 PM	3	165	4	0	0	1	0	0	0	1	0	0	0	174
9:00 PM	2	133	3	0	1	0	0	0	1	1	0	0	0	141
10:00 PM	2	107	2	0	0	0	0	0	1	1	0	0	0	113
11:00 PM	1	70	1	0	0	0	0	0	0	0	0	0	0	72
Total	**50**	**3,082**	**67**	**0**	**8**	**9**	**0**	**0**	**21**	**30**	**0**	**0**	**1**	**3,268**
Percent	**1.5%**	**94.3%**	**2.1%**	**0.0%**	**0.2%**	**0.3%**	**0.0%**	**0.0%**	**0.6%**	**0.9%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

3-Day (Tuesday - Thursday) Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	5	2	0	0	1	0	0	0	0	0	0	0	8
1:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
2:00 AM	0	3	1	0	0	1	0	0	0	0	0	0	0	5
3:00 AM	0	8	0	0	0	1	0	0	0	0	0	0	0	9
4:00 AM	0	7	4	0	0	2	0	0	0	0	0	0	0	14
5:00 AM	0	32	7	0	0	3	0	0	1	1	0	0	0	44
6:00 AM	1	62	19	0	1	7	0	0	2	1	0	0	0	93
7:00 AM	1	138	53	0	2	23	0	0	3	6	0	0	1	228
8:00 AM	0	91	38	0	2	17	0	0	1	3	0	0	1	154
9:00 AM	1	89	32	0	2	11	0	0	0	0	0	0	0	135
10:00 AM	1	89	29	0	0	8	0	0	1	1	0	0	0	129
11:00 AM	2	104	29	0	2	6	0	0	0	1	0	0	0	144
12:00 PM	2	128	29	0	4	8	0	0	1	0	0	0	0	171
1:00 PM	1	108	27	0	2	4	0	0	0	0	0	0	0	143
2:00 PM	2	105	26	0	4	5	0	0	0	0	0	0	0	142
3:00 PM	1	110	33	0	5	8	0	0	0	1	0	0	0	158
4:00 PM	1	126	41	0	2	12	0	0	0	0	0	0	0	183
5:00 PM	1	142	46	0	2	10	0	0	0	1	0	0	1	203
6:00 PM	2	110	29	0	1	10	0	0	1	0	0	0	0	153
7:00 PM	1	69	21	0	0	12	0	0	0	0	0	0	0	104
8:00 PM	0	46	16	0	1	6	0	0	1	2	0	0	0	72
9:00 PM	0	41	10	0	1	8	0	0	0	1	0	0	0	61
10:00 PM	1	31	11	0	0	4	0	0	0	1	0	0	0	48
11:00 PM	0	19	5	0	0	2	0	0	0	0	0	0	0	26
Total	**18**	**1,666**	**512**	**0**	**31**	**168**	**0**	**1**	**11**	**19**	**0**	**0**	**4**	**2,429**
Percent	**0.8%**	**68.6%**	**21.1%**	**0.0%**	**1.3%**	**6.9%**	**0.0%**	**0.0%**	**0.4%**	**0.8%**	**0.0%**	**0.0%**	**0.2%**	

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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

3-Day (Tuesday - Thursday) Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	22	0	0	0	0	0	0	0	1	0	0	0	24
1:00 AM	0	10	1	0	0	0	0	0	0	0	0	0	0	11
2:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	0	8
3:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
5:00 AM	2	24	0	0	0	0	0	0	0	1	0	0	0	28
6:00 AM	3	87	2	0	0	0	0	0	0	0	0	0	0	93
7:00 AM	3	205	1	0	0	1	0	0	1	0	0	0	0	211
8:00 AM	4	227	1	0	0	0	0	0	0	0	0	0	0	233
9:00 AM	4	182	1	0	0	0	0	0	1	0	0	0	0	188
10:00 AM	4	155	0	0	0	0	0	0	0	0	0	0	0	160
11:00 AM	4	215	2	0	0	1	0	0	0	0	0	0	0	223
12:00 PM	4	313	1	0	0	0	0	0	1	1	0	0	1	320
1:00 PM	5	254	2	0	0	1	0	0	3	2	0	0	1	267
2:00 PM	4	212	2	0	0	2	0	0	3	4	0	0	0	226
3:00 PM	4	259	1	0	0	1	0	0	6	5	0	0	0	276
4:00 PM	6	370	1	0	0	2	0	0	4	11	0	0	1	395
5:00 PM	10	372	2	0	0	1	0	0	3	7	0	0	1	395
6:00 PM	4	290	1	0	0	1	0	0	7	9	0	0	0	312
7:00 PM	5	268	1	0	0	1	0	0	4	8	0	0	0	286
8:00 PM	7	230	1	0	0	1	0	0	1	2	0	0	0	242
9:00 PM	4	165	2	0	0	0	0	0	2	1	0	0	0	176
10:00 PM	3	132	1	0	0	0	0	0	2	2	0	0	0	140
11:00 PM	2	78	2	0	0	0	0	0	1	0	0	0	0	83
Total	**82**	**4,089**	**24**	**0**	**0**	**13**	**0**	**0**	**40**	**56**	**0**	**0**	**5**	**4,310**
Percent	**1.9%**	**94.9%**	**0.6%**	**0.0%**	**0.0%**	**0.3%**	**0.0%**	**0.0%**	**0.9%**	**1.3%**	**0.0%**	**0.0%**	**0.1%**	

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deon.fouche@idaxdata.com

Vehicle Speed Report Summary

Location: Casanova Ave N/O Melway Cir
Count Direction: Northbound / Southbound
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

	Speed Range (mph)																	Total
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
Study Total																		
Northbound	45	350	2,717	7,485	3,798	554	62	6	1	0	0	0	0	0	0	4	0	15,022
Percent	0.3%	2.3%	18.1%	49.8%	25.3%	3.7%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	151	2,141	12,836	7,228	506	30	21	0	0	0	7	0	0	0	0	0	1	22,921
Percent	0.7%	9.3%	56.0%	31.5%	2.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	196	2,491	15,553	14,713	4,304	584	83	6	1	0	7	0	0	0	0	4	1	37,943
Percent	0.5%	6.6%	41.0%	38.8%	11.3%	1.5%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Northbound			**Northbound**		
50th Percentile (Median)	22.9	mph	Mean (Average) Speed	23.0	mph
85th Percentile	26.8	mph	10 mph Pace	17.7 - 27.7	mph
95th Percentile	29.6	mph	Percent in Pace	80.5	%
Southbound			**Southbound**		
50th Percentile (Median)	18.8	mph	Mean (Average) Speed	18.9	mph
85th Percentile	21.9	mph	10 mph Pace	14.0 - 24.0	mph
95th Percentile	23.7	mph	Percent in Pace	90.9	%

Deon Fouche: (415) 757-7714
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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Saturday, May 20, 2017
Northbound

	Speed Range (mph)																	Total
Time	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
12:00 AM	1	0	0	8	4	0	0	0	0	0	0	0	0	0	0	0	0	**13**
1:00 AM	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	**6**
2:00 AM	0	0	1	6	1	0	0	0	0	0	0	0	0	0	0	0	0	**8**
3:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
4:00 AM	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**5**
5:00 AM	0	0	4	8	7	1	0	0	0	0	0	0	0	0	0	0	0	**20**
6:00 AM	1	0	4	20	21	3	1	0	0	0	0	0	0	0	0	0	0	**50**
7:00 AM	0	1	15	26	22	4	0	0	0	0	0	0	0	0	0	0	0	**68**
8:00 AM	0	2	10	33	32	6	1	0	0	0	0	0	0	0	0	0	0	**84**
9:00 AM	0	2	22	53	45	8	0	0	0	0	0	0	0	0	0	0	0	**130**
10:00 AM	0	2	22	61	32	11	1	0	0	0	0	0	0	0	0	0	0	**129**
11:00 AM	1	3	35	61	26	0	0	0	0	0	0	0	0	0	0	0	0	**126**
12:00 PM	1	5	38	56	33	3	0	0	0	0	0	0	0	0	0	0	0	**136**
1:00 PM	1	6	27	40	22	5	0	0	0	0	0	0	0	0	0	0	0	**101**
2:00 PM	1	2	24	37	14	4	0	0	0	0	0	0	0	0	0	0	0	**82**
3:00 PM	0	4	17	38	24	1	1	0	0	0	0	0	0	0	0	0	0	**85**
4:00 PM	0	0	18	52	28	6	0	0	0	0	0	0	0	0	0	0	0	**104**
5:00 PM	0	3	12	44	25	4	2	1	0	0	0	0	0	0	0	0	0	**91**
6:00 PM	0	3	13	46	24	5	2	0	0	0	0	0	0	0	0	0	0	**93**
7:00 PM	0	3	26	46	19	6	2	0	0	0	0	0	0	0	0	0	0	**102**
8:00 PM	0	2	18	28	12	0	0	0	0	0	0	0	0	0	0	0	0	**60**
9:00 PM	0	0	4	20	8	2	0	0	0	0	0	0	0	0	0	0	0	**34**
10:00 PM	0	3	11	23	8	3	0	0	0	0	0	0	0	0	0	0	0	**48**
11:00 PM	0	3	4	12	8	1	0	0	0	0	0	0	0	0	0	0	0	**28**
Total	**6**	**44**	**327**	**724**	**418**	**74**	**10**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,604**
Percent	**0.4%**	**2.7%**	**20.4%**	**45.1%**	**26.1%**	**4.6%**	**0.6%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	23.0	mph	Mean (Average) Speed	23.0	mph
85th Percentile	27.3	mph	10 mph Pace	17.9 - 27.9	mph
95th Percentile	30.1	mph	Percent in Pace	76.7	%

Deon Fouche: (415) 757-7714
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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Saturday, May 20, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	7	14	6	0	0	0	0	0	0	0	0	0	0	0	0	0	**27**
1:00 AM	0	0	10	6	3	0	0	0	0	0	0	0	0	0	0	0	0	**19**
2:00 AM	0	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
3:00 AM	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
5:00 AM	0	0	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
6:00 AM	0	2	8	10	1	0	0	0	0	0	0	0	0	0	0	0	0	**21**
7:00 AM	0	4	20	10	4	0	0	0	0	0	0	0	0	0	0	0	0	**38**
8:00 AM	0	8	19	15	2	0	0	0	0	0	0	0	0	0	0	0	0	**44**
9:00 AM	0	7	39	27	2	1	0	0	0	0	0	0	0	0	0	0	0	**76**
10:00 AM	0	8	68	22	4	0	0	0	0	0	0	0	0	0	0	0	0	**102**
11:00 AM	1	14	65	20	1	0	0	0	0	0	0	0	0	0	0	0	0	**101**
12:00 PM	2	10	72	29	2	0	0	0	0	0	0	0	0	0	0	0	0	**115**
1:00 PM	3	13	68	35	4	0	0	0	0	0	0	0	0	0	0	0	0	**123**
2:00 PM	3	11	37	31	3	0	0	0	0	0	0	0	0	0	0	0	0	**85**
3:00 PM	6	22	62	13	3	0	0	0	0	0	0	0	0	0	0	0	0	**106**
4:00 PM	1	11	56	24	1	0	1	0	0	0	0	0	0	0	0	0	0	**94**
5:00 PM	0	8	75	32	2	0	0	0	0	0	0	0	0	0	0	0	0	**117**
6:00 PM	2	14	58	35	5	0	0	0	0	0	0	0	0	0	0	0	0	**114**
7:00 PM	0	6	53	29	2	1	0	0	0	0	0	0	0	0	0	0	0	**91**
8:00 PM	0	9	43	23	4	0	0	0	0	0	0	0	0	0	0	0	0	**79**
9:00 PM	2	10	47	17	1	0	0	0	0	0	0	0	0	0	0	0	0	**77**
10:00 PM	0	7	42	17	3	0	1	0	0	0	0	0	0	0	0	0	0	**70**
11:00 PM	0	4	30	20	0	0	0	0	0	0	0	0	0	0	0	0	0	**54**
Total	**20**	**176**	**899**	**429**	**48**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,576**
Percent	**1.3%**	**11.2%**	**57.0%**	**27.2%**	**3.0%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.4	mph	Mean (Average) Speed	18.6	mph
85th Percentile	21.6	mph	10 mph Pace	13.6 - 23.6	mph
95th Percentile	24.1	mph	Percent in Pace	86.3	%

Deon Fouche: (415) 757-7714
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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Sunday, May 21, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	1	4	7	1	1	0	0	0	0	0	0	0	0	0	0	0	**15**
1:00 AM	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	1	3	1	4	0	0	0	0	0	0	0	0	0	0	0	0	**9**
3:00 AM	0	1	0	5	4	1	0	0	0	0	0	0	0	0	0	0	0	**11**
4:00 AM	0	0	0	2	3	1	0	0	0	0	0	0	0	0	0	0	0	**6**
5:00 AM	0	0	4	8	8	1	0	0	0	0	0	0	0	0	0	0	0	**21**
6:00 AM	0	0	5	13	4	4	0	0	0	0	0	0	0	0	0	0	0	**26**
7:00 AM	0	0	8	33	14	5	1	0	0	0	0	0	0	0	0	0	0	**61**
8:00 AM	0	4	14	34	19	4	1	0	0	0	0	0	0	0	0	0	0	**76**
9:00 AM	0	2	11	36	30	3	0	0	0	0	0	0	0	0	0	0	0	**82**
10:00 AM	0	4	30	56	29	3	0	0	0	0	0	0	0	0	0	0	0	**122**
11:00 AM	0	2	12	50	37	2	1	0	0	0	0	0	0	0	0	0	0	**104**
12:00 PM	0	9	19	53	20	2	0	0	0	0	0	0	0	0	0	0	0	**103**
1:00 PM	0	4	18	45	26	7	0	0	0	0	0	0	0	0	0	0	0	**100**
2:00 PM	0	0	13	32	26	8	0	0	0	0	0	0	0	0	0	0	0	**79**
3:00 PM	0	1	17	59	16	3	0	0	0	0	0	0	0	0	0	0	0	**96**
4:00 PM	0	2	17	47	23	4	0	0	0	0	0	0	0	0	0	0	0	**93**
5:00 PM	1	4	12	51	15	4	1	0	0	0	0	0	0	0	0	0	0	**88**
6:00 PM	0	2	24	39	27	4	1	0	0	0	0	0	0	0	0	0	0	**97**
7:00 PM	0	3	14	35	18	1	0	0	0	0	0	0	0	0	0	0	0	**71**
8:00 PM	0	0	14	25	9	0	0	1	0	0	0	0	0	0	0	0	0	**49**
9:00 PM	1	3	7	18	9	2	0	0	0	0	0	0	0	0	0	0	0	**40**
10:00 PM	0	0	5	16	8	2	0	0	0	0	0	0	0	0	0	0	0	**31**
11:00 PM	0	1	3	7	8	0	0	0	0	0	0	0	0	0	0	0	0	**19**
Total	**3**	**44**	**254**	**675**	**358**	**62**	**5**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,402**
Percent	**0.2%**	**3.1%**	**18.1%**	**48.1%**	**25.5%**	**4.4%**	**0.4%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	22.9	mph	Mean (Average) Speed	23.1	mph
85th Percentile	27.2	mph	10 mph Pace	17.9 - 27.9	mph
95th Percentile	29.8	mph	Percent in Pace	78.1	%

Deon Fouche: (415) 757-7714
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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Sunday, May 21, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	2	8	27	8	1	0	0	0	0	0	0	0	0	0	0	0	0	**46**
1:00 AM	0	0	6	4	1	0	0	0	0	0	0	0	0	0	0	0	0	**11**
2:00 AM	0	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
3:00 AM	0	0	7	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**10**
4:00 AM	1	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
5:00 AM	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
6:00 AM	0	0	11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
7:00 AM	0	1	13	15	1	0	0	0	0	0	0	0	0	0	0	0	0	**30**
8:00 AM	0	1	30	13	1	0	0	0	0	0	0	0	0	0	0	0	0	**45**
9:00 AM	0	5	26	24	4	0	0	0	0	0	0	0	0	0	0	0	0	**59**
10:00 AM	1	8	40	19	3	1	0	0	0	0	0	0	0	0	0	0	0	**72**
11:00 AM	1	6	49	28	0	0	0	0	0	0	0	0	0	0	0	0	0	**84**
12:00 PM	0	19	30	41	1	0	0	0	0	0	0	0	0	0	0	0	0	**91**
1:00 PM	1	5	51	29	6	0	0	0	0	0	0	0	0	0	0	0	0	**92**
2:00 PM	0	9	52	43	4	1	0	0	0	0	0	0	0	0	0	0	0	**109**
3:00 PM	0	13	62	42	5	0	0	0	0	0	0	0	0	0	0	0	0	**122**
4:00 PM	1	17	58	26	5	2	0	0	0	0	0	0	0	0	0	0	0	**109**
5:00 PM	1	10	75	39	2	1	0	0	0	0	0	0	0	0	0	0	0	**128**
6:00 PM	2	16	61	29	2	0	0	0	0	0	0	0	0	0	0	0	0	**110**
7:00 PM	0	9	55	31	1	1	0	0	0	0	0	0	0	0	0	0	0	**97**
8:00 PM	0	8	55	14	1	2	0	0	0	0	0	0	0	0	0	0	0	**80**
9:00 PM	0	11	34	17	2	0	0	0	0	0	0	0	0	0	0	0	0	**64**
10:00 PM	1	6	32	18	2	0	0	0	0	0	0	0	0	0	0	0	0	**59**
11:00 PM	0	3	11	9	0	0	0	0	0	0	0	0	0	0	0	0	0	**23**
Total	**11**	**158**	**800**	**454**	**43**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,474**
Percent	**0.7%**	**10.7%**	**54.3%**	**30.8%**	**2.9%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.6	mph	Mean (Average) Speed	18.8	mph
85th Percentile	21.9	mph	10 mph Pace	13.5 - 23.5	mph
95th Percentile	24.3	mph	Percent in Pace	87.7	%

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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Monday, May 22, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	6	3	0	0	0	0	0	0	0	0	0	0	0	0	**9**
1:00 AM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 AM	0	0	0	7	1	1	0	0	0	0	0	0	0	0	0	0	0	**9**
4:00 AM	0	0	1	8	4	0	0	0	0	0	0	0	0	0	0	0	0	**13**
5:00 AM	0	0	6	9	12	4	1	0	0	0	0	0	0	0	0	0	0	**32**
6:00 AM	0	1	17	29	38	8	0	0	0	0	0	0	0	0	0	0	0	**93**
7:00 AM	2	1	19	81	75	11	1	0	0	0	0	0	0	0	0	0	0	**190**
8:00 AM	0	1	30	87	36	8	1	0	0	0	0	0	0	0	0	0	0	**163**
9:00 AM	0	1	14	50	53	9	0	0	0	0	0	0	0	0	0	0	0	**127**
10:00 AM	0	2	23	61	16	2	0	0	0	0	0	0	0	0	0	0	0	**104**
11:00 AM	0	5	26	63	23	1	0	0	0	0	0	0	0	0	0	0	0	**118**
12:00 PM	1	9	43	91	26	3	1	0	0	0	0	0	0	0	0	0	0	**174**
1:00 PM	1	11	48	67	20	3	0	0	0	0	0	0	0	0	0	0	0	**150**
2:00 PM	0	1	34	72	21	6	0	0	0	0	0	0	0	0	0	0	0	**134**
3:00 PM	0	1	46	61	25	4	0	0	0	0	0	0	0	0	0	0	0	**137**
4:00 PM	0	1	33	77	34	3	0	0	0	0	0	0	0	0	0	0	0	**148**
5:00 PM	1	10	35	99	33	3	0	1	0	0	0	0	0	0	0	0	0	**182**
6:00 PM	0	1	24	66	37	4	1	0	0	0	0	0	0	0	0	0	0	**133**
7:00 PM	0	3	17	46	8	4	0	0	0	0	0	0	0	0	0	0	0	**78**
8:00 PM	0	0	11	40	23	3	0	0	0	0	0	0	0	0	0	0	0	**77**
9:00 PM	0	0	8	25	5	2	1	0	0	0	0	0	0	0	0	0	0	**41**
10:00 PM	0	0	1	18	7	3	1	0	0	0	0	0	0	0	0	0	0	**30**
11:00 PM	0	0	2	16	6	0	0	0	0	0	0	0	0	0	0	0	0	**24**
Total	**5**	**48**	**439**	**1,081**	**506**	**82**	**7**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,169**
Percent	**0.2%**	**2.2%**	**20.2%**	**49.8%**	**23.3%**	**3.8%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	22.5	mph	Mean (Average) Speed	22.8	mph
85th Percentile	26.7	mph	10 mph Pace	17.9 - 27.9	mph
95th Percentile	29.6	mph	Percent in Pace	80.3	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Monday, May 22, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	14	4	1	0	0	0	0	0	0	0	0	0	0	0	0	**20**
1:00 AM	0	2	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
2:00 AM	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	1	5	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**13**
6:00 AM	1	3	45	14	3	1	0	0	0	0	0	0	0	0	0	0	0	**67**
7:00 AM	2	3	63	31	10	0	0	0	0	0	0	0	0	0	0	0	0	**109**
8:00 AM	1	8	38	52	8	0	0	0	0	0	0	0	0	0	0	0	0	**107**
9:00 AM	1	9	43	22	2	0	0	0	0	0	0	0	0	0	0	0	0	**77**
10:00 AM	0	6	31	31	6	0	0	0	0	0	0	0	0	0	0	0	0	**74**
11:00 AM	1	10	49	38	5	0	0	0	0	0	0	0	0	0	0	0	0	**103**
12:00 PM	0	8	76	41	4	2	0	0	0	0	0	0	0	0	0	0	0	**131**
1:00 PM	0	53	88	59	8	0	0	0	0	0	0	0	0	0	0	0	0	**208**
2:00 PM	0	7	50	39	9	0	0	0	0	0	0	0	0	0	0	0	0	**105**
3:00 PM	0	11	76	51	7	0	0	0	0	0	0	0	0	0	0	0	0	**145**
4:00 PM	1	9	67	65	18	2	0	0	0	0	0	0	0	0	0	0	0	**162**
5:00 PM	4	12	79	42	9	0	0	0	0	0	0	0	0	0	0	0	0	**146**
6:00 PM	0	9	92	42	8	1	0	0	0	0	0	0	0	0	0	0	0	**152**
7:00 PM	0	11	46	43	5	1	0	0	0	0	0	0	0	0	0	0	0	**106**
8:00 PM	1	6	62	42	2	0	0	0	0	0	0	0	0	0	0	0	0	**113**
9:00 PM	0	12	50	14	1	0	0	0	0	0	0	0	0	0	0	0	0	**77**
10:00 PM	0	1	24	20	4	0	0	0	0	0	0	0	0	0	0	0	0	**49**
11:00 PM	1	3	15	10	3	0	0	0	0	0	0	0	0	0	0	0	0	**32**
Total	**14**	**189**	**1,018**	**669**	**113**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,010**
Percent	**0.7%**	**9.4%**	**50.6%**	**33.3%**	**5.6%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.2	mph	Mean (Average) Speed	19.3	mph
85th Percentile	22.7	mph	10 mph Pace	14.1 - 24.1	mph
95th Percentile	25.2	mph	Percent in Pace	86.8	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Tuesday, May 23, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	6	1	0	0	0	0	0	0	0	0	0	0	0	0	**8**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2:00 AM	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	**5**
3:00 AM	0	0	0	4	4	1	1	0	0	0	0	0	0	0	0	0	0	**10**
4:00 AM	0	0	2	9	4	0	0	0	0	0	0	0	0	0	0	0	0	**15**
5:00 AM	0	0	7	23	10	0	0	0	0	0	0	0	0	0	0	0	0	**40**
6:00 AM	0	0	7	32	44	3	1	0	0	0	0	0	0	0	0	0	0	**87**
7:00 AM	0	2	11	113	75	11	0	0	0	0	0	0	0	0	0	0	0	**212**
8:00 AM	0	3	18	54	44	3	0	0	0	0	0	0	0	0	0	0	0	**122**
9:00 AM	0	4	19	51	40	2	0	0	0	0	0	0	0	0	0	0	0	**116**
10:00 AM	0	0	10	59	33	5	0	0	0	0	0	0	0	0	0	0	0	**107**
11:00 AM	0	4	29	71	30	1	0	0	0	0	0	0	0	0	0	0	0	**135**
12:00 PM	0	2	42	78	14	1	0	0	0	0	0	0	0	0	0	0	0	**137**
1:00 PM	0	0	24	63	30	5	1	0	0	0	0	0	0	0	0	0	0	**123**
2:00 PM	2	7	40	61	23	0	0	0	0	0	0	0	0	0	0	0	0	**133**
3:00 PM	1	8	32	74	26	2	0	0	0	0	0	0	0	0	0	0	0	**143**
4:00 PM	2	6	39	86	36	1	0	0	0	0	0	0	0	0	0	0	0	**170**
5:00 PM	0	3	38	100	42	7	0	0	0	0	0	0	0	0	0	0	0	**190**
6:00 PM	1	0	15	80	48	3	0	0	0	0	0	0	0	0	0	0	0	**147**
7:00 PM	0	1	20	48	16	1	1	0	0	0	0	0	0	0	0	0	0	**87**
8:00 PM	0	3	13	21	15	0	1	0	0	0	0	0	0	0	0	0	0	**53**
9:00 PM	0	2	11	16	15	3	0	0	0	0	0	0	0	0	0	0	0	**47**
10:00 PM	1	0	3	18	16	1	0	0	0	0	0	0	0	0	0	0	0	**39**
11:00 PM	0	0	10	7	3	0	0	0	0	0	0	0	0	0	0	0	0	**20**
Total	**7**	**45**	**391**	**1,075**	**573**	**50**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,146**
Percent	**0.3%**	**2.1%**	**18.2%**	**50.1%**	**26.7%**	**2.3%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	22.9	mph	Mean (Average) Speed	22.9	mph
85th Percentile	26.6	mph	10 mph Pace	17.8 - 27.8	mph
95th Percentile	28.8	mph	Percent in Pace	82.9	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Tuesday, May 23, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	5	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**11**
1:00 AM	0	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
2:00 AM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
5:00 AM	0	1	4	11	0	0	0	0	0	0	0	0	0	0	0	0	0	**16**
6:00 AM	2	2	25	44	0	0	0	0	0	0	0	0	0	0	0	0	0	**73**
7:00 AM	0	3	84	6	60	3	0	0	0	0	0	0	0	0	0	0	0	**156**
8:00 AM	0	0	71	103	1	0	0	0	0	0	0	0	0	0	0	0	0	**175**
9:00 AM	0	0	0	155	0	0	0	0	0	0	0	0	0	0	0	0	0	**155**
10:00 AM	0	5	140	32	0	0	0	0	0	0	0	0	0	0	0	0	0	**177**
11:00 AM	0	0	142	26	0	0	0	0	0	0	0	0	0	0	0	0	0	**168**
12:00 PM	0	4	233	27	0	0	0	0	0	0	0	0	0	0	0	0	0	**264**
1:00 PM	1	129	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**230**
2:00 PM	0	44	111	35	2	0	0	0	0	0	0	0	0	0	0	0	0	**192**
3:00 PM	0	0	238	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**239**
4:00 PM	0	0	414	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**414**
5:00 PM	19	116	182	111	0	0	0	0	0	0	0	0	0	0	0	0	0	**428**
6:00 PM	0	38	50	219	4	0	0	0	0	0	0	0	0	0	0	0	0	**311**
7:00 PM	1	41	239	25	0	0	0	0	0	0	0	0	0	0	0	0	0	**306**
8:00 PM	0	0	230	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**233**
9:00 PM	0	1	181	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**182**
10:00 PM	0	0	106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**106**
11:00 PM	0	0	37	53	0	0	0	0	0	0	0	0	0	0	0	0	0	**90**
Total	**23**	**386**	**2,595**	**865**	**68**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3,940**
Percent	**0.6%**	**9.8%**	**65.9%**	**22.0%**	**1.7%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.7	mph	Mean (Average) Speed	18.5	mph
85th Percentile	21.3	mph	10 mph Pace	12.5 - 22.5	mph
95th Percentile	22.4	mph	Percent in Pace	96.3	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Wednesday, May 24, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**6**
2:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	2	5	1	0	0	0	0	0	0	0	0	0	0	0	**8**
4:00 AM	0	0	1	5	6	2	1	0	0	0	0	0	0	0	0	0	0	**15**
5:00 AM	1	0	3	17	21	2	0	0	0	0	0	0	0	0	0	0	0	**44**
6:00 AM	0	0	8	31	39	9	0	0	0	0	0	0	0	0	0	0	0	**87**
7:00 AM	0	4	17	98	100	13	5	0	0	0	0	0	0	0	0	0	0	**237**
8:00 AM	0	3	18	68	52	11	0	0	0	0	0	0	0	0	0	0	0	**152**
9:00 AM	0	6	12	65	40	7	5	0	0	0	0	0	0	0	0	0	0	**135**
10:00 AM	0	2	17	78	25	5	0	0	0	0	0	0	0	0	0	0	0	**127**
11:00 AM	0	6	21	55	27	10	1	0	0	0	0	0	0	0	0	0	0	**120**
12:00 PM	1	9	52	102	15	0	0	0	0	0	0	0	0	0	0	0	0	**179**
1:00 PM	1	2	27	93	41	2	0	0	0	0	0	0	0	0	0	0	0	**166**
2:00 PM	2	9	28	106	20	1	0	0	0	0	0	0	0	0	0	0	0	**166**
3:00 PM	0	10	24	97	40	3	0	0	0	0	0	0	0	0	0	0	0	**174**
4:00 PM	0	2	24	118	41	4	0	0	1	0	0	0	0	0	0	0	0	**190**
5:00 PM	2	2	32	137	55	6	0	0	0	0	0	0	0	0	0	0	0	**234**
6:00 PM	0	2	28	74	57	1	1	0	0	0	0	0	0	0	0	0	0	**163**
7:00 PM	1	4	11	70	40	4	0	0	0	0	0	0	0	0	0	0	0	**130**
8:00 PM	0	0	18	51	12	0	0	0	0	0	0	0	0	0	0	0	0	**81**
9:00 PM	0	1	4	44	13	2	0	0	0	0	0	0	0	0	0	0	0	**64**
10:00 PM	2	0	9	25	8	2	0	0	0	0	0	0	0	0	0	0	0	**46**
11:00 PM	2	0	8	20	10	1	0	0	0	0	0	0	0	0	0	0	0	**41**
Total	**12**	**62**	**364**	**1,361**	**668**	**86**	**13**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,567**
Percent	**0.5%**	**2.4%**	**14.2%**	**53.0%**	**26.0%**	**3.4%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	23.2	mph	Mean (Average) Speed	23.2	mph
85th Percentile	26.8	mph	10 mph Pace	18.5 - 28.5	mph
95th Percentile	29.4	mph	Percent in Pace	82.7	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Wednesday, May 24, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	3	24	0	0	0	0	0	0	0	0	0	0	0	0	0	**27**
1:00 AM	0	1	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	**13**
2:00 AM	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
3:00 AM	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
4:00 AM	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
5:00 AM	0	7	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**29**
6:00 AM	0	53	36	11	3	0	0	0	0	0	0	0	0	0	0	0	0	**103**
7:00 AM	0	8	117	81	4	0	0	0	0	0	0	0	0	0	0	0	0	**210**
8:00 AM	0	1	61	197	2	0	0	0	0	0	0	0	0	0	0	0	0	**261**
9:00 AM	0	2	122	80	6	0	0	0	0	0	0	0	0	0	0	0	0	**210**
10:00 AM	0	1	41	124	3	0	0	0	0	0	0	0	0	0	0	0	0	**169**
11:00 AM	43	128	57	49	0	0	0	0	0	0	0	0	0	0	0	0	0	**277**
12:00 PM	2	35	141	147	3	0	0	0	0	0	0	0	0	0	0	0	0	**328**
1:00 PM	1	24	156	135	7	0	0	0	0	0	0	0	0	0	0	0	0	**323**
2:00 PM	0	4	197	70	1	0	0	0	0	0	0	0	0	0	0	0	0	**272**
3:00 PM	0	14	141	118	8	0	0	0	0	0	0	0	0	0	0	0	0	**281**
4:00 PM	2	20	214	177	3	0	0	0	0	0	0	0	0	0	0	0	0	**416**
5:00 PM	0	10	215	151	3	0	0	0	0	0	0	0	0	0	0	0	0	**379**
6:00 PM	0	3	158	185	7	0	0	0	0	0	0	0	0	0	0	0	0	**353**
7:00 PM	1	5	217	63	6	0	0	0	0	0	0	0	0	0	0	0	0	**292**
8:00 PM	0	4	220	44	3	0	0	0	0	0	0	0	0	0	0	0	0	**271**
9:00 PM	0	5	87	39	0	0	0	0	0	0	0	0	0	0	0	0	0	**131**
10:00 PM	0	7	95	40	4	0	0	0	0	0	0	0	0	0	0	0	0	**146**
11:00 PM	0	9	60	23	1	0	0	0	0	0	0	0	0	0	0	0	0	**93**
Total	**49**	**341**	**2,384**	**1,770**	**64**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4,608**
Percent	**1.1%**	**7.4%**	**51.7%**	**38.4%**	**1.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.2	mph	Mean (Average) Speed	19.1	mph
85th Percentile	22.1	mph	10 mph Pace	14.3 - 24.3	mph
95th Percentile	23.4	mph	Percent in Pace	91.6	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Thursday, May 25, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	2	10	2	1	0	0	0	0	0	0	0	0	0	0	0	**15**
1:00 AM	0	0	0	0	5	1	0	0	0	0	0	0	0	0	0	0	0	**6**
2:00 AM	0	1	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
3:00 AM	0	0	2	3	4	0	1	0	0	0	0	0	0	0	0	0	0	**10**
4:00 AM	0	0	0	5	4	1	1	0	0	0	0	0	0	0	0	0	0	**11**
5:00 AM	0	0	3	17	25	3	0	0	0	0	0	0	0	0	0	0	0	**48**
6:00 AM	1	0	8	40	46	9	1	0	0	0	0	0	0	0	0	0	0	**105**
7:00 AM	0	3	29	117	70	14	1	0	0	0	0	0	0	0	0	0	0	**234**
8:00 AM	2	6	36	97	38	6	2	0	0	0	0	0	0	0	0	0	0	**187**
9:00 AM	0	4	14	61	69	4	1	0	0	0	0	0	0	0	0	0	0	**153**
10:00 AM	0	4	26	82	41	1	0	0	0	0	0	0	0	0	0	0	0	**154**
11:00 AM	0	3	39	96	36	2	0	0	0	0	0	0	0	0	0	0	0	**176**
12:00 PM	1	9	66	106	13	2	0	0	0	0	0	0	0	0	0	0	0	**197**
1:00 PM	1	5	25	76	26	5	3	0	0	0	0	0	0	0	0	0	0	**141**
2:00 PM	0	4	21	66	27	8	1	0	0	0	0	0	0	0	0	0	0	**127**
3:00 PM	0	8	38	69	36	5	0	0	0	0	0	0	0	0	0	0	0	**156**
4:00 PM	0	4	33	101	37	8	1	1	0	0	0	0	0	0	0	4	0	**189**
5:00 PM	0	2	38	86	48	12	0	0	0	0	0	0	0	0	0	0	0	**186**
6:00 PM	0	5	32	70	35	5	0	1	0	0	0	0	0	0	0	0	0	**148**
7:00 PM	2	1	22	34	32	2	1	0	0	0	0	0	0	0	0	0	0	**94**
8:00 PM	0	0	16	49	15	1	0	0	0	0	0	0	0	0	0	0	0	**81**
9:00 PM	1	4	22	30	13	2	0	0	0	0	0	0	0	0	0	0	0	**72**
10:00 PM	0	2	4	34	16	2	0	0	0	0	0	0	0	0	0	0	0	**58**
11:00 PM	0	0	1	4	7	5	0	0	0	0	0	0	0	0	0	0	0	**17**
Total	**8**	**65**	**484**	**1,254**	**645**	**99**	**13**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**2,574**
Percent	**0.3%**	**2.5%**	**18.8%**	**48.7%**	**25.1%**	**3.8%**	**0.5%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.2%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	22.8	mph	Mean (Average) Speed	23.0	mph
85th Percentile	26.8	mph	10 mph Pace	17.6 - 27.6	mph
95th Percentile	29.7	mph	Percent in Pace	80.2	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Thursday, May 25, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	2	23	9	0	0	0	0	0	0	0	0	0	0	0	0	0	34
1:00 AM	0	0	2	10	3	0	0	0	0	0	0	0	0	0	0	0	0	15
2:00 AM	0	1	8	3	0	0	0	0	0	0	0	0	0	0	0	0	0	12
3:00 AM	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
4:00 AM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
5:00 AM	0	0	18	19	1	0	0	0	0	0	0	0	0	0	0	0	0	38
6:00 AM	0	3	62	34	3	0	0	0	0	0	0	0	0	0	0	0	0	102
7:00 AM	0	5	132	127	3	0	0	0	0	0	0	0	0	0	0	0	0	267
8:00 AM	1	10	99	154	0	0	0	0	0	0	0	0	0	0	0	0	0	264
9:00 AM	0	10	113	72	5	0	0	0	0	0	0	0	0	0	0	0	0	200
10:00 AM	0	5	62	62	3	1	0	0	0	0	0	0	0	0	0	0	0	133
11:00 AM	0	10	125	84	4	0	0	0	0	0	0	0	0	0	0	0	0	223
12:00 PM	0	25	244	100	0	0	0	0	0	0	0	0	0	0	0	0	0	369
1:00 PM	0	5	128	109	7	0	0	0	0	0	0	0	0	0	0	0	0	249
2:00 PM	1	4	43	152	15	0	0	0	0	0	0	0	0	0	0	0	0	215
3:00 PM	0	5	108	181	14	0	0	0	0	0	0	0	0	0	0	0	0	308
4:00 PM	0	27	175	142	10	0	0	0	0	0	0	0	0	0	0	0	0	354
5:00 PM	0	22	152	196	9	0	0	0	0	0	0	0	0	0	0	0	0	379
6:00 PM	0	8	132	118	14	1	0	0	0	0	0	0	0	0	0	0	0	273
7:00 PM	0	16	118	121	6	0	0	0	0	0	0	0	0	0	0	0	0	261
8:00 PM	0	3	84	132	4	0	0	0	0	0	0	0	0	0	0	0	0	223
9:00 PM	0	23	109	76	5	1	0	0	0	0	0	0	0	0	0	0	0	214
10:00 PM	0	3	142	16	7	0	0	0	0	0	0	0	0	0	0	0	0	168
11:00 PM	0	3	30	27	6	0	0	0	0	0	0	0	0	0	0	0	0	66
Total	**2**	**190**	**2,124**	**1,944**	**119**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4,382**
Percent	**0.0%**	**4.3%**	**48.5%**	**44.4%**	**2.7%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	19.7	mph	Mean (Average) Speed	19.8	mph
85th Percentile	22.4	mph	10 mph Pace	14.5 - 24.5	mph
95th Percentile	24.1	mph	Percent in Pace	93.4	%

Deon Fouche: (415) 757-7714
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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Friday, May 26, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	0	2	7	4	0	0	0	0	0	0	0	0	0	0	0	0	14
1:00 AM	0	0	0	3	5	2	0	0	0	0	0	0	0	0	0	0	0	10
2:00 AM	0	0	0	1	7	0	0	0	0	0	0	0	0	0	0	0	0	8
3:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	0	1	3	2	1	0	0	0	0	0	0	0	0	0	0	0	7
5:00 AM	0	0	2	21	17	2	0	0	0	0	0	0	0	0	0	0	0	42
6:00 AM	0	1	7	33	27	8	0	0	0	0	0	0	0	0	0	0	0	76
7:00 AM	0	2	33	106	54	17	2	0	0	0	0	0	0	0	0	0	0	214
8:00 AM	0	2	21	76	72	18	1	0	0	0	0	0	0	0	0	0	0	190
9:00 AM	0	0	12	52	57	8	0	1	0	0	0	0	0	0	0	0	0	130
10:00 AM	0	2	16	80	40	7	1	0	0	0	0	0	0	0	0	0	0	146
11:00 AM	0	2	15	77	43	1	2	0	0	0	0	0	0	0	0	0	0	140
12:00 PM	0	3	28	113	29	5	0	0	0	0	0	0	0	0	0	0	0	178
1:00 PM	1	1	41	64	36	8	0	0	0	0	0	0	0	0	0	0	0	151
2:00 PM	0	4	55	101	24	0	0	0	0	0	0	0	0	0	0	0	0	184
3:00 PM	1	5	32	108	63	8	2	0	0	0	0	0	0	0	0	0	0	219
4:00 PM	1	4	40	106	29	3	1	0	0	0	0	0	0	0	0	0	0	184
5:00 PM	0	5	42	79	29	6	0	0	0	0	0	0	0	0	0	0	0	161
6:00 PM	0	1	29	61	44	2	0	0	0	0	0	0	0	0	0	0	0	137
7:00 PM	0	3	24	51	8	1	0	0	0	0	0	0	0	0	0	0	0	87
8:00 PM	0	1	21	44	8	1	0	0	0	0	0	0	0	0	0	0	0	75
9:00 PM	0	2	14	48	5	0	0	0	0	0	0	0	0	0	0	0	0	69
10:00 PM	0	2	18	37	5	2	0	0	0	0	0	0	0	0	0	0	0	64
11:00 PM	0	2	5	44	21	1	0	0	0	0	0	0	0	0	0	0	0	73
Total	**4**	**42**	**458**	**1,315**	**630**	**101**	**9**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,560**
Percent	**0.2%**	**1.6%**	**17.9%**	**51.4%**	**24.6%**	**3.9%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	23.0	mph	Mean (Average) Speed	23.1	mph
85th Percentile	26.6	mph	10 mph Pace	17.6 - 27.6	mph
95th Percentile	29.7	mph	Percent in Pace	82.4	%

Deon Fouche: (415) 757-7714
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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Friday, May 26, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	15	44	1	0	0	0	0	0	0	0	0	0	0	0	0	**60**
1:00 AM	0	1	12	15	0	0	0	0	0	0	0	0	0	0	0	0	0	**28**
2:00 AM	0	0	5	9	0	0	0	0	0	0	0	0	0	0	0	0	0	**14**
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 AM	0	2	20	6	0	0	0	0	0	0	0	0	0	0	0	0	0	**28**
6:00 AM	0	16	26	32	0	0	3	0	0	0	2	0	0	0	0	0	1	**80**
7:00 AM	0	2	47	145	12	0	0	0	0	0	0	0	0	0	0	0	0	**206**
8:00 AM	0	4	125	80	5	0	0	0	0	0	0	0	0	0	0	0	0	**214**
9:00 AM	0	6	108	88	0	0	0	0	0	0	0	0	0	0	0	0	0	**202**
10:00 AM	0	1	68	173	4	0	0	0	0	0	0	0	0	0	0	0	0	**246**
11:00 AM	0	5	133	95	5	1	0	0	0	0	0	0	0	0	0	0	0	**239**
12:00 PM	24	6	210	107	1	0	0	0	0	0	0	0	0	0	0	0	0	**348**
1:00 PM	3	27	207	71	6	0	0	0	0	0	0	0	0	0	0	0	0	**314**
2:00 PM	1	25	290	36	1	5	0	0	0	0	0	0	0	0	0	0	0	**358**
3:00 PM	0	24	287	31	0	0	0	0	0	0	0	0	0	0	0	0	0	**342**
4:00 PM	4	129	243	67	13	0	16	0	0	0	5	0	0	0	0	0	0	**477**
5:00 PM	0	86	308	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**397**
6:00 PM	0	7	248	43	3	1	0	0	0	0	0	0	0	0	0	0	0	**302**
7:00 PM	0	47	221	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**269**
8:00 PM	0	104	120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**224**
9:00 PM	0	105	139	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**244**
10:00 PM	0	103	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**188**
11:00 PM	0	1	99	51	0	0	0	0	0	0	0	0	0	0	0	0	0	**151**
Total	**32**	**701**	**3,016**	**1,097**	**51**	**7**	**19**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**1**	**4,931**
Percent	**0.6%**	**14.2%**	**61.2%**	**22.2%**	**1.0%**	**0.1%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	17.3	mph	Mean (Average) Speed	17.9	mph
85th Percentile	20.6	mph	10 mph Pace	13.1 - 23.1	mph
95th Percentile	23.2	mph	Percent in Pace	92.9	%

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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Total Study Average
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	6	2	0	0	0	0	0	0	0	0	0	0	0	0	**9**
1:00 AM	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	**4**
2:00 AM	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	**6**
3:00 AM	0	0	0	3	3	1	0	0	0	0	0	0	0	0	0	0	0	**7**
4:00 AM	0	0	1	5	3	1	0	0	0	0	0	0	0	0	0	0	0	**10**
5:00 AM	0	0	4	15	14	2	0	0	0	0	0	0	0	0	0	0	0	**35**
6:00 AM	0	0	8	28	31	6	0	0	0	0	0	0	0	0	0	0	0	**73**
7:00 AM	0	2	19	82	59	11	1	0	0	0	0	0	0	0	0	0	0	**174**
8:00 AM	0	3	21	64	42	8	1	0	0	0	0	0	0	0	0	0	0	**139**
9:00 AM	0	3	15	53	48	6	1	0	0	0	0	0	0	0	0	0	0	**126**
10:00 AM	0	2	21	68	31	5	0	0	0	0	0	0	0	0	0	0	0	**127**
11:00 AM	0	4	25	68	32	2	1	0	0	0	0	0	0	0	0	0	0	**132**
12:00 PM	1	7	41	86	21	2	0	0	0	0	0	0	0	0	0	0	0	**158**
1:00 PM	1	4	30	64	29	5	1	0	0	0	0	0	0	0	0	0	0	**134**
2:00 PM	1	4	31	68	22	4	0	0	0	0	0	0	0	0	0	0	0	**130**
3:00 PM	0	5	29	72	33	4	0	0	0	0	0	0	0	0	0	0	0	**143**
4:00 PM	0	3	29	84	33	4	0	0	0	0	0	0	0	0	0	1	0	**154**
5:00 PM	1	4	30	85	35	6	0	0	0	0	0	0	0	0	0	0	0	**161**
6:00 PM	0	2	24	62	39	3	1	0	0	0	0	0	0	0	0	0	0	**131**
7:00 PM	0	3	19	47	20	3	1	0	0	0	0	0	0	0	0	0	0	**93**
8:00 PM	0	1	16	37	13	1	0	0	0	0	0	0	0	0	0	0	0	**68**
9:00 PM	0	2	10	29	10	2	0	0	0	0	0	0	0	0	0	0	0	**53**
10:00 PM	0	1	7	24	10	2	0	0	0	0	0	0	0	0	0	0	0	**44**
11:00 PM	0	1	5	16	9	1	0	0	0	0	0	0	0	0	0	0	0	**32**
Total	**4**	**51**	**388**	**1,070**	**543**	**79**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2,143**
Percent	**0.2%**	**2.4%**	**18.1%**	**49.9%**	**25.3%**	**3.7%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	22.9	mph	Mean (Average) Speed	23.0	mph
85th Percentile	26.8	mph	10 mph Pace	17.7 - 27.7	mph
95th Percentile	29.6	mph	Percent in Pace	80.5	%

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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 to 5/26/2017
Site Code: 05

Total Study Average
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	3	14	14	1	0	0	0	0	0	0	0	0	0	0	0	0	**32**
1:00 AM	0	1	5	8	1	0	0	0	0	0	0	0	0	0	0	0	0	**15**
2:00 AM	0	0	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
3:00 AM	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
5:00 AM	0	2	12	6	0	0	0	0	0	0	0	0	0	0	0	0	0	**20**
6:00 AM	0	11	30	21	1	0	0	0	0	0	0	0	0	0	0	0	0	**63**
7:00 AM	0	4	68	59	13	0	0	0	0	0	0	0	0	0	0	0	0	**144**
8:00 AM	0	5	63	88	3	0	0	0	0	0	0	0	0	0	0	0	0	**159**
9:00 AM	0	6	64	67	3	0	0	0	0	0	0	0	0	0	0	0	0	**140**
10:00 AM	0	5	64	66	3	0	0	0	0	0	0	0	0	0	0	0	0	**138**
11:00 AM	7	25	89	49	2	0	0	0	0	0	0	0	0	0	0	0	0	**172**
12:00 PM	4	15	144	70	2	0	0	0	0	0	0	0	0	0	0	0	0	**235**
1:00 PM	1	37	114	63	5	0	0	0	0	0	0	0	0	0	0	0	0	**220**
2:00 PM	1	15	111	58	5	1	0	0	0	0	0	0	0	0	0	0	0	**191**
3:00 PM	1	13	139	62	5	0	0	0	0	0	0	0	0	0	0	0	0	**220**
4:00 PM	1	30	175	72	7	1	2	0	0	0	1	0	0	0	0	0	0	**289**
5:00 PM	3	38	155	82	4	0	0	0	0	0	0	0	0	0	0	0	0	**282**
6:00 PM	1	14	114	96	6	0	0	0	0	0	0	0	0	0	0	0	0	**231**
7:00 PM	0	19	136	45	3	0	0	0	0	0	0	0	0	0	0	0	0	**203**
8:00 PM	0	19	116	37	2	0	0	0	0	0	0	0	0	0	0	0	0	**174**
9:00 PM	0	24	92	23	1	0	0	0	0	0	0	0	0	0	0	0	0	**140**
10:00 PM	0	18	75	16	3	0	0	0	0	0	0	0	0	0	0	0	0	**112**
11:00 PM	0	3	40	28	1	0	0	0	0	0	0	0	0	0	0	0	0	**72**
Total	**19**	**307**	**1,831**	**1,035**	**71**	**2**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**3,268**
Percent	**0.6%**	**9.4%**	**56.0%**	**31.7%**	**2.2%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	18.8	mph	Mean (Average) Speed	18.9	mph
85th Percentile	21.9	mph	10 mph Pace	14.0 - 24.0	mph
95th Percentile	23.7	mph	Percent in Pace	90.9	%

Deon Fouche: (415) 757-7714
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Location: Casanova Ave N/O Melway Cir
Date Range: 5/20/2017 - 5/26/2017
Site Code: 05

Time	Saturday 5/20/2017			Sunday 5/21/2017			Monday 5/22/2017			Tuesday 5/23/2017			Wednesday 5/24/2017			Thursday 5/25/2017			Friday 5/26/2017			Mid-Week Average		
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	13	27	40	15	46	61	9	20	29	8	11	19	0	27	27	15	34	49	14	60	74	8	24	32
1:00 AM	6	19	25	3	11	14	3	7	10	0	6	6	6	13	19	6	15	21	10	28	38	4	11	15
2:00 AM	8	7	15	9	8	17	0	4	4	5	4	9	2	8	10	9	12	21	8	14	22	5	8	13
3:00 AM	1	4	5	11	10	21	9	0	9	10	3	13	8	6	14	10	10	20	1	0	1	9	6	16
4:00 AM	5	2	7	6	6	12	13	3	16	15	1	16	15	10	25	11	5	16	7	0	7	14	5	19
5:00 AM	20	10	30	21	7	28	32	13	45	40	16	56	44	29	73	48	38	86	42	28	70	44	28	72
6:00 AM	50	21	71	26	12	38	93	67	160	87	73	160	87	103	190	105	102	207	76	80	156	93	93	186
7:00 AM	68	38	106	61	30	91	190	109	299	212	156	368	237	210	447	234	267	501	214	206	420	228	211	439
8:00 AM	84	44	128	76	45	121	163	107	270	122	175	297	152	261	413	187	264	451	190	214	404	154	233	387
9:00 AM	130	76	206	82	59	141	127	77	204	116	155	271	135	210	345	153	200	353	130	202	332	135	188	323
10:00 AM	129	102	231	122	72	194	104	74	178	107	177	284	127	169	296	154	133	287	146	246	392	129	160	289
11:00 AM	126	101	227	104	84	188	118	103	221	135	168	303	120	277	397	176	223	399	140	239	379	144	223	366
12:00 PM	136	115	251	103	91	194	174	131	305	137	264	401	179	328	507	197	369	566	178	348	526	171	320	491
1:00 PM	101	123	224	100	92	192	150	208	358	123	230	353	166	323	489	141	249	390	151	314	465	143	267	411
2:00 PM	82	85	167	79	109	188	134	105	239	133	192	325	166	272	438	127	215	342	184	358	542	142	226	368
3:00 PM	85	106	191	96	122	218	137	145	282	143	239	382	174	281	455	156	308	464	219	342	561	158	276	434
4:00 PM	104	94	198	93	109	202	148	162	310	170	414	584	190	416	606	189	354	543	184	477	661	183	395	578
5:00 PM	91	117	208	88	128	216	182	146	328	190	428	618	234	379	613	186	379	565	161	397	558	203	395	599
6:00 PM	93	114	207	97	110	207	133	152	285	147	311	458	163	353	516	148	273	421	137	302	439	153	312	465
7:00 PM	102	91	193	71	97	168	78	106	184	87	306	393	130	292	422	94	261	355	87	269	356	104	286	390
8:00 PM	60	79	139	49	80	129	77	113	190	53	233	286	81	271	352	81	223	304	75	224	299	72	242	314
9:00 PM	34	77	111	40	64	104	41	77	118	47	182	229	64	131	195	72	214	286	69	244	313	61	176	237
10:00 PM	48	70	118	31	59	90	30	49	79	39	106	145	46	146	192	58	168	226	64	188	252	48	140	188
11:00 PM	28	54	82	19	23	42	24	32	56	20	90	110	41	93	134	17	66	83	73	151	224	26	83	109
Total	**1,604**	**1,576**	**3,180**	**1,402**	**1,474**	**2,876**	**2,169**	**2,010**	**4,179**	**2,146**	**3,940**	**6,086**	**2,567**	**4,608**	**7,175**	**2,574**	**4,382**	**6,956**	**2,560**	**4,931**	**7,491**	**2,429**	**4,310**	**6,739**
Percent	**50%**	**50%**	-	**49%**	**51%**	-	**52%**	**48%**	-	**35%**	**65%**	-	**36%**	**64%**	-	**37%**	**63%**	-	**34%**	**66%**	-	**36%**	**64%**	-

1. Mid-week average includes data between Tuesday and Thursday.

Deon Fouche: (415) 757-7714
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Vehicle Classification Report Summary

Location: Casanova S/O Fremont
Count Direction: Northbound / Southbound
Date Range: 6/7/2017 to 6/8/2017
Site Code: 01

	FHWA Vehicle Classification													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total														
Northbound	32	2,124	419	0	112	11	0	1	0	0	0	0	0	2,699
Percent	1.2%	78.7%	15.5%	0.0%	4.1%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	28	1,973	300	0	64	13	0	3	2	0	0	0	0	2,383
Percent	1.2%	82.8%	12.6%	0.0%	2.7%	0.5%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	100%
Total	60	4,097	719	0	176	24	0	4	2	0	0	0	0	5,082
Percent	1.2%	80.6%	14.1%	0.0%	3.5%	0.5%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 01

Wednesday, June 7, 2017
Southbound

	FHWA Vehicle Classification													Total
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
12:00 AM	1	12	2	0	0	0	0	0	0	0	0	0	0	**15**
1:00 AM	0	7	2	0	1	0	0	0	0	0	0	0	0	**10**
2:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	3	0	0	1	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	9	2	0	1	0	0	0	0	0	0	0	0	**12**
6:00 AM	0	29	6	0	3	0	0	0	0	0	0	0	0	**38**
7:00 AM	0	58	13	0	4	0	0	0	0	0	0	0	0	**75**
8:00 AM	0	47	12	0	2	0	0	0	0	0	0	0	0	**61**
9:00 AM	0	38	17	0	4	0	0	0	0	0	0	0	0	**59**
10:00 AM	0	57	14	0	5	0	0	0	0	0	0	0	0	**76**
11:00 AM	2	78	12	0	1	0	0	1	0	0	0	0	0	**94**
12:00 PM	1	134	17	0	1	1	0	0	0	0	0	0	0	**154**
1:00 PM	1	84	8	0	3	2	0	0	0	0	0	0	0	**98**
2:00 PM	2	74	12	0	4	3	0	1	0	0	0	0	0	**96**
3:00 PM	2	80	13	0	2	1	0	0	0	0	0	0	0	**98**
4:00 PM	3	110	21	0	3	1	0	0	1	0	0	0	0	**139**
5:00 PM	4	162	18	0	1	1	0	0	1	0	0	0	0	**187**
6:00 PM	0	124	8	0	1	0	0	1	0	0	0	0	0	**134**
7:00 PM	4	95	8	0	0	0	0	0	0	0	0	0	0	**107**
8:00 PM	0	72	10	0	1	0	0	0	0	0	0	0	0	**83**
9:00 PM	1	71	6	0	0	0	0	0	0	0	0	0	0	**78**
10:00 PM	1	60	3	0	1	0	0	0	0	0	0	0	0	**65**
11:00 PM	1	39	2	0	0	0	0	0	0	0	0	0	0	**42**
Total	**23**	**1,450**	**206**	**0**	**39**	**9**	**0**	**3**	**2**	**0**	**0**	**0**	**0**	**1,732**
Percent	**1.3%**	**83.7%**	**11.9%**	**0.0%**	**2.3%**	**0.5%**	**0.0%**	**0.2%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 01

Thursday, June 8, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	10	1	0	1	0	0	0	0	0	0	0	0	**12**
1:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
2:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
4:00 AM	0	10	2	0	0	0	0	0	0	0	0	0	0	**12**
5:00 AM	1	23	7	0	2	0	0	0	0	0	0	0	0	**33**
6:00 AM	1	57	12	0	1	1	0	0	0	0	0	0	0	**72**
7:00 AM	2	127	24	0	8	2	0	0	0	0	0	0	0	**163**
8:00 AM	0	97	26	0	6	0	0	0	0	0	0	0	0	**129**
9:00 AM	1	99	13	0	7	0	0	0	0	0	0	0	0	**120**
10:00 AM	3	79	12	0	4	0	0	0	0	0	0	0	0	**98**
11:00 AM	1	87	12	0	7	2	0	0	0	0	0	0	0	**109**
12:00 PM	1	91	19	0	5	1	0	0	0	0	0	0	0	**117**
1:00 PM	0	23	5	0	2	0	0	0	0	0	0	0	0	**30**
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**10**	**714**	**136**	**0**	**43**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**909**
Percent	**1.1%**	**78.5%**	**15.0%**	**0.0%**	**4.7%**	**0.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 01

Thursday, June 8, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	22	1	0	1	1	0	0	0	0	0	0	0	**25**
1:00 AM	0	7	0	0	1	0	0	0	0	0	0	0	0	**8**
2:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	7	0	0	0	0	0	0	0	0	0	0	0	**7**
5:00 AM	0	8	2	0	1	0	0	0	0	0	0	0	0	**11**
6:00 AM	0	28	8	0	6	0	0	0	0	0	0	0	0	**42**
7:00 AM	0	57	15	0	0	0	0	0	0	0	0	0	0	**72**
8:00 AM	2	52	13	0	3	0	0	0	0	0	0	0	0	**70**
9:00 AM	0	65	16	0	4	1	0	0	0	0	0	0	0	**86**
10:00 AM	0	55	8	0	4	1	0	0	0	0	0	0	0	**68**
11:00 AM	1	80	11	0	2	0	0	0	0	0	0	0	0	**94**
12:00 PM	2	106	12	0	1	0	0	0	0	0	0	0	0	**121**
1:00 PM	0	33	6	0	2	1	0	0	0	0	0	0	0	**42**
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**5**	**523**	**94**	**0**	**25**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**651**
Percent	**0.8%**	**80.3%**	**14.4%**	**0.0%**	**3.8%**	**0.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 01

Total Study Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	11	1	0	1	0	0	0	0	0	0	0	0	**13**
1:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
2:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
4:00 AM	0	10	2	0	1	0	0	0	0	0	0	0	0	**13**
5:00 AM	1	22	7	0	2	0	0	0	0	0	0	0	0	**32**
6:00 AM	1	57	12	0	1	1	0	0	0	0	0	0	0	**72**
7:00 AM	2	127	24	0	9	1	0	0	0	0	0	0	0	**163**
8:00 AM	1	91	25	0	5	1	0	0	0	0	0	0	0	**123**
9:00 AM	1	98	16	0	6	0	0	0	0	0	0	0	0	**121**
10:00 AM	2	70	14	0	3	0	0	0	0	0	0	0	0	**89**
11:00 AM	1	89	16	0	5	1	0	1	0	0	0	0	0	**113**
12:00 PM	1	101	18	0	7	1	0	0	0	0	0	0	0	**128**
1:00 PM	2	49	11	0	4	0	0	0	0	0	0	0	0	**66**
2:00 PM	1	36	8	0	4	0	0	0	0	0	0	0	0	**49**
3:00 PM	0	44	9	0	2	0	0	0	0	0	0	0	0	**55**
4:00 PM	1	59	15	0	3	0	0	0	0	0	0	0	0	**78**
5:00 PM	3	67	10	0	3	1	0	0	0	0	0	0	0	**84**
6:00 PM	0	45	8	0	1	0	0	0	0	0	0	0	0	**54**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	18	4	0	1	0	0	0	0	0	0	0	0	**23**
9:00 PM	1	17	5	0	0	0	0	0	0	0	0	0	0	**23**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	1	6	2	0	1	0	0	0	0	0	0	0	0	**10**
Total	**19**	**1,027**	**211**	**0**	**59**	**6**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1,323**
Percent	**1.4%**	**77.6%**	**15.9%**	**0.0%**	**4.5%**	**0.5%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Deon Fouche: (415) 757-7714
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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 01

Total Study Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	1	17	2	0	1	1	0	0	0	0	0	0	0	**22**
1:00 AM	0	7	1	0	1	0	0	0	0	0	0	0	0	**9**
2:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	3	0	0	1	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
5:00 AM	0	9	2	0	1	0	0	0	0	0	0	0	0	**12**
6:00 AM	0	29	7	0	5	0	0	0	0	0	0	0	0	**41**
7:00 AM	0	58	14	0	2	0	0	0	0	0	0	0	0	**74**
8:00 AM	1	50	13	0	3	0	0	0	0	0	0	0	0	**67**
9:00 AM	0	52	17	0	4	1	0	0	0	0	0	0	0	**74**
10:00 AM	0	56	11	0	5	1	0	0	0	0	0	0	0	**73**
11:00 AM	2	79	12	0	2	0	0	1	0	0	0	0	0	**96**
12:00 PM	2	120	15	0	1	1	0	0	0	0	0	0	0	**139**
1:00 PM	1	59	7	0	3	2	0	0	0	0	0	0	0	**72**
2:00 PM	1	37	6	0	2	2	0	1	0	0	0	0	0	**49**
3:00 PM	1	40	7	0	1	1	0	0	0	0	0	0	0	**50**
4:00 PM	2	55	11	0	2	1	0	0	1	0	0	0	0	**72**
5:00 PM	2	81	9	0	1	1	0	0	1	0	0	0	0	**95**
6:00 PM	0	62	4	0	1	0	0	1	0	0	0	0	0	**68**
7:00 PM	2	48	4	0	0	0	0	0	0	0	0	0	0	**54**
8:00 PM	0	36	5	0	1	0	0	0	0	0	0	0	0	**42**
9:00 PM	1	36	3	0	0	0	0	0	0	0	0	0	0	**40**
10:00 PM	1	30	2	0	1	0	0	0	0	0	0	0	0	**34**
11:00 PM	1	20	1	0	0	0	0	0	0	0	0	0	0	**22**
Total	**18**	**992**	**154**	**0**	**38**	**11**	**0**	**3**	**2**	**0**	**0**	**0**	**0**	**1,218**
Percent	**1.5%**	**81.4%**	**12.6%**	**0.0%**	**3.1%**	**0.9%**	**0.0%**	**0.2%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 01

3-Day (Tuesday - Thursday) Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	11	1	0	1	0	0	0	0	0	0	0	0	13
1:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
2:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
4:00 AM	0	10	1	0	1	0	0	0	0	0	0	0	0	12
5:00 AM	0	20	6	0	1	0	0	0	0	0	0	0	0	27
6:00 AM	1	57	12	0	1	1	0	0	0	0	0	0	0	72
7:00 AM	2	127	24	0	10	0	0	0	0	0	0	0	0	163
8:00 AM	1	84	24	0	4	1	0	0	0	0	0	0	0	114
9:00 AM	0	96	18	0	4	0	0	0	0	0	0	0	0	118
10:00 AM	1	61	16	0	2	0	0	0	0	0	0	0	0	80
11:00 AM	0	90	20	0	3	0	0	1	0	0	0	0	0	114
12:00 PM	1	111	16	0	8	1	0	0	0	0	0	0	0	137
1:00 PM	3	75	16	0	6	0	0	0	0	0	0	0	0	100
2:00 PM	1	72	16	0	7	0	0	0	0	0	0	0	0	96
3:00 PM	0	87	17	0	3	0	0	0	0	0	0	0	0	107
4:00 PM	1	117	29	0	5	0	0	0	0	0	0	0	0	152
5:00 PM	6	134	20	0	5	1	0	0	0	0	0	0	0	166
6:00 PM	0	89	15	0	2	0	0	0	0	0	0	0	0	106
7:00 PM	2	57	6	0	4	1	0	0	0	0	0	0	0	70
8:00 PM	0	36	7	0	1	0	0	0	0	0	0	0	0	44
9:00 PM	2	33	9	0	0	0	0	0	0	0	0	0	0	44
10:00 PM	0	23	5	0	0	0	0	0	0	0	0	0	0	28
11:00 PM	1	12	3	0	1	0	0	0	0	0	0	0	0	17
Total	**22**	**1,410**	**283**	**0**	**69**	**5**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1,790**
Percent	**1.2%**	**78.8%**	**15.8%**	**0.0%**	**3.9%**	**0.3%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 01

3-Day (Tuesday - Thursday) Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	1	12	2	0	0	0	0	0	0	0	0	0	0	15
1:00 AM	0	7	2	0	1	0	0	0	0	0	0	0	0	10
2:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
3:00 AM	0	3	0	0	1	0	0	0	0	0	0	0	0	4
4:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	0	9	2	0	1	0	0	0	0	0	0	0	0	12
6:00 AM	0	29	6	0	3	0	0	0	0	0	0	0	0	38
7:00 AM	0	58	13	0	4	0	0	0	0	0	0	0	0	75
8:00 AM	0	47	12	0	2	0	0	0	0	0	0	0	0	61
9:00 AM	0	38	17	0	4	0	0	0	0	0	0	0	0	59
10:00 AM	0	57	14	0	5	0	0	0	0	0	0	0	0	76
11:00 AM	2	78	12	0	1	0	0	1	0	0	0	0	0	94
12:00 PM	1	134	17	0	1	1	0	0	0	0	0	0	0	154
1:00 PM	1	84	8	0	3	2	0	0	0	0	0	0	0	98
2:00 PM	2	74	12	0	4	3	0	1	0	0	0	0	0	96
3:00 PM	2	80	13	0	2	1	0	0	0	0	0	0	0	98
4:00 PM	3	110	21	0	3	1	0	0	1	0	0	0	0	139
5:00 PM	4	162	18	0	1	1	0	0	1	0	0	0	0	187
6:00 PM	0	124	8	0	1	0	0	1	0	0	0	0	0	134
7:00 PM	4	95	8	0	0	0	0	0	0	0	0	0	0	107
8:00 PM	0	72	10	0	1	0	0	0	0	0	0	0	0	83
9:00 PM	1	71	6	0	0	0	0	0	0	0	0	0	0	78
10:00 PM	1	60	3	0	1	0	0	0	0	0	0	0	0	65
11:00 PM	1	39	2	0	0	0	0	0	0	0	0	0	0	42
Total	**23**	**1,450**	**206**	**0**	**39**	**9**	**0**	**3**	**2**	**0**	**0**	**0**	**0**	**1,732**
Percent	**1.3%**	**83.7%**	**11.9%**	**0.0%**	**2.3%**	**0.5%**	**0.0%**	**0.2%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 01

Wednesday, June 07, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	11	1	0	1	0	0	0	0	0	0	0	0	**13**
1:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
4:00 AM	0	10	1	0	1	0	0	0	0	0	0	0	0	**12**
5:00 AM	0	20	6	0	1	0	0	0	0	0	0	0	0	**27**
6:00 AM	1	57	12	0	1	1	0	0	0	0	0	0	0	**72**
7:00 AM	2	127	24	0	10	0	0	0	0	0	0	0	0	**163**
8:00 AM	1	84	24	0	4	1	0	0	0	0	0	0	0	**114**
9:00 AM	0	96	18	0	4	0	0	0	0	0	0	0	0	**118**
10:00 AM	1	61	16	0	2	0	0	0	0	0	0	0	0	**80**
11:00 AM	0	90	20	0	3	0	0	1	0	0	0	0	0	**114**
12:00 PM	1	111	16	0	8	1	0	0	0	0	0	0	0	**137**
1:00 PM	3	75	16	0	6	0	0	0	0	0	0	0	0	**100**
2:00 PM	1	72	16	0	7	0	0	0	0	0	0	0	0	**96**
3:00 PM	0	87	17	0	3	0	0	0	0	0	0	0	0	**107**
4:00 PM	1	117	29	0	5	0	0	0	0	0	0	0	0	**152**
5:00 PM	6	134	20	0	5	1	0	0	0	0	0	0	0	**166**
6:00 PM	0	89	15	0	2	0	0	0	0	0	0	0	0	**106**
7:00 PM	2	57	6	0	4	1	0	0	0	0	0	0	0	**70**
8:00 PM	0	36	7	0	1	0	0	0	0	0	0	0	0	**44**
9:00 PM	2	33	9	0	0	0	0	0	0	0	0	0	0	**44**
10:00 PM	0	23	5	0	0	0	0	0	0	0	0	0	0	**28**
11:00 PM	1	12	3	0	1	0	0	0	0	0	0	0	0	**17**
Total	**22**	**1,410**	**283**	**0**	**69**	**5**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1,790**
Percent	**1.2%**	**78.8%**	**15.8%**	**0.0%**	**3.9%**	**0.3%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Vehicle Speed Report Summary

idax DATA SOLUTIONS

Location: Casanova S/O Fremont
Count Direction: Northbound / Southbound
Date Range: 6/7/2017 to 6/8/2017
Site Code: 01

	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
Study Total																		
Northbound	17	92	473	1,215	738	152	12	0	0	0	0	0	0	0	0	0	0	2,699
Percent	0.6%	3.4%	17.5%	45.0%	27.3%	5.6%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	61	307	1,205	707	93	10	0	0	0	0	0	0	0	0	0	0	0	2,383
Percent	2.6%	12.9%	50.6%	29.7%	3.9%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	78	399	1,678	1,922	831	162	12	0	0	0	0	0	0	0	0	0	0	5,082
Percent	1.5%	7.9%	33.0%	37.8%	16.4%	3.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Northbound			**Northbound**		
50th Percentile (Median)	23.0	mph	Mean (Average) Speed	23.2	mph
85th Percentile	27.4	mph	10 mph Pace	18.0 - 28.0	mph
95th Percentile	30.2	mph	Percent in Pace	76.8	%
Southbound			**Southbound**		
50th Percentile (Median)	18.5	mph	Mean (Average) Speed	18.6	mph
85th Percentile	22.2	mph	10 mph Pace	14.0 - 24.0	mph
95th Percentile	24.7	mph	Percent in Pace	82.1	%

Deon Fouche: (415) 757-7714
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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 01

Wednesday, June 7, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	4	6	2	0	0	0	0	0	0	0	0	0	0	0	0	**13**
1:00 AM	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	2	1	2	0	0	0	0	0	0	0	0	0	0	0	**5**
4:00 AM	0	0	3	5	2	1	1	0	0	0	0	0	0	0	0	0	0	**12**
5:00 AM	0	0	0	14	11	2	0	0	0	0	0	0	0	0	0	0	0	**27**
6:00 AM	0	0	9	36	21	6	0	0	0	0	0	0	0	0	0	0	0	**72**
7:00 AM	0	1	29	72	48	12	1	0	0	0	0	0	0	0	0	0	0	**163**
8:00 AM	0	2	15	49	34	13	1	0	0	0	0	0	0	0	0	0	0	**114**
9:00 AM	1	2	18	49	42	4	2	0	0	0	0	0	0	0	0	0	0	**118**
10:00 AM	0	4	11	35	24	6	0	0	0	0	0	0	0	0	0	0	0	**80**
11:00 AM	0	1	31	46	30	6	0	0	0	0	0	0	0	0	0	0	0	**114**
12:00 PM	2	7	33	63	28	4	0	0	0	0	0	0	0	0	0	0	0	**137**
1:00 PM	0	2	19	49	26	4	0	0	0	0	0	0	0	0	0	0	0	**100**
2:00 PM	0	1	12	46	33	4	0	0	0	0	0	0	0	0	0	0	0	**96**
3:00 PM	0	1	12	52	32	9	1	0	0	0	0	0	0	0	0	0	0	**107**
4:00 PM	3	15	39	60	28	7	0	0	0	0	0	0	0	0	0	0	0	**152**
5:00 PM	4	6	37	80	35	4	0	0	0	0	0	0	0	0	0	0	0	**166**
6:00 PM	2	3	22	57	20	1	1	0	0	0	0	0	0	0	0	0	0	**106**
7:00 PM	1	1	16	32	15	4	1	0	0	0	0	0	0	0	0	0	0	**70**
8:00 PM	0	2	7	23	10	2	0	0	0	0	0	0	0	0	0	0	0	**44**
9:00 PM	0	1	8	20	12	3	0	0	0	0	0	0	0	0	0	0	0	**44**
10:00 PM	0	1	4	15	5	3	0	0	0	0	0	0	0	0	0	0	0	**28**
11:00 PM	0	2	2	9	4	0	0	0	0	0	0	0	0	0	0	0	0	**17**
Total	**13**	**54**	**331**	**823**	**464**	**97**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,790**
Percent	**0.7%**	**3.0%**	**18.5%**	**46.0%**	**25.9%**	**5.4%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	23.0	mph	Mean (Average) Speed	23.1	mph
85th Percentile	27.1	mph	10 mph Pace	17.8 - 27.8	mph
95th Percentile	30.1	mph	Percent in Pace	77.5	%

Deon Fouche: (415) 757-7714
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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 01

Wednesday, June 7, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	2	4	5	3	1	0	0	0	0	0	0	0	0	0	0	0	**15**
1:00 AM	0	1	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	**10**
2:00 AM	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	1	5	3	3	0	0	0	0	0	0	0	0	0	0	0	0	**12**
6:00 AM	1	3	18	12	4	0	0	0	0	0	0	0	0	0	0	0	0	**38**
7:00 AM	0	6	26	32	10	1	0	0	0	0	0	0	0	0	0	0	0	**75**
8:00 AM	0	1	32	23	5	0	0	0	0	0	0	0	0	0	0	0	0	**61**
9:00 AM	1	6	24	24	3	1	0	0	0	0	0	0	0	0	0	0	0	**59**
10:00 AM	1	2	36	33	4	0	0	0	0	0	0	0	0	0	0	0	0	**76**
11:00 AM	6	10	40	33	4	1	0	0	0	0	0	0	0	0	0	0	0	**94**
12:00 PM	8	28	84	31	3	0	0	0	0	0	0	0	0	0	0	0	0	**154**
1:00 PM	0	10	54	31	2	1	0	0	0	0	0	0	0	0	0	0	0	**98**
2:00 PM	1	9	46	37	3	0	0	0	0	0	0	0	0	0	0	0	0	**96**
3:00 PM	3	12	35	44	3	1	0	0	0	0	0	0	0	0	0	0	0	**98**
4:00 PM	16	28	58	32	5	0	0	0	0	0	0	0	0	0	0	0	0	**139**
5:00 PM	1	11	113	55	7	0	0	0	0	0	0	0	0	0	0	0	0	**187**
6:00 PM	0	10	79	38	7	0	0	0	0	0	0	0	0	0	0	0	0	**134**
7:00 PM	1	14	58	30	2	2	0	0	0	0	0	0	0	0	0	0	0	**107**
8:00 PM	0	7	49	26	1	0	0	0	0	0	0	0	0	0	0	0	0	**83**
9:00 PM	0	12	46	17	3	0	0	0	0	0	0	0	0	0	0	0	0	**78**
10:00 PM	1	7	33	21	2	1	0	0	0	0	0	0	0	0	0	0	0	**65**
11:00 PM	0	9	16	14	3	0	0	0	0	0	0	0	0	0	0	0	0	**42**
Total	**40**	**190**	**866**	**549**	**78**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,732**
Percent	**2.3%**	**11.0%**	**50.0%**	**31.7%**	**4.5%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.8	mph	Mean (Average) Speed	18.9	mph
85th Percentile	22.6	mph	10 mph Pace	14.2 - 24.2	mph
95th Percentile	24.9	mph	Percent in Pace	82.2	%

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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 01

Thursday, June 8, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	6	3	2	0	0	0	0	0	0	0	0	0	0	0	0	**12**
1:00 AM	0	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**4**
2:00 AM	0	0	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	0	1	3	0	2	0	0	0	0	0	0	0	0	0	0	0	**6**
4:00 AM	0	0	1	7	4	0	0	0	0	0	0	0	0	0	0	0	0	**12**
5:00 AM	0	3	5	13	10	2	0	0	0	0	0	0	0	0	0	0	0	**33**
6:00 AM	0	3	10	26	27	6	0	0	0	0	0	0	0	0	0	0	0	**72**
7:00 AM	1	7	17	65	62	11	0	0	0	0	0	0	0	0	0	0	0	**163**
8:00 AM	0	2	22	66	27	10	2	0	0	0	0	0	0	0	0	0	0	**129**
9:00 AM	0	3	17	44	45	11	0	0	0	0	0	0	0	0	0	0	0	**120**
10:00 AM	1	5	13	44	28	7	0	0	0	0	0	0	0	0	0	0	0	**98**
11:00 AM	1	6	20	50	27	4	1	0	0	0	0	0	0	0	0	0	0	**109**
12:00 PM	1	4	23	52	35	1	1	0	0	0	0	0	0	0	0	0	0	**117**
1:00 PM	0	3	6	17	4	0	0	0	0	0	0	0	0	0	0	0	0	**30**
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**4**	**38**	**142**	**392**	**274**	**55**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**909**
Percent	**0.4%**	**4.2%**	**15.6%**	**43.1%**	**30.1%**	**6.1%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	23.4	mph	Mean (Average) Speed	23.4	mph
85th Percentile	27.7	mph	10 mph Pace	18.5 - 28.5	mph
95th Percentile	30.3	mph	Percent in Pace	75.7	%

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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 01

Thursday, June 8, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	2	5	10	7	1	0	0	0	0	0	0	0	0	0	0	0	0	**25**
1:00 AM	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
2:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
4:00 AM	0	2	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**7**
5:00 AM	0	1	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
6:00 AM	2	5	23	12	0	0	0	0	0	0	0	0	0	0	0	0	0	**42**
7:00 AM	6	13	31	22	0	0	0	0	0	0	0	0	0	0	0	0	0	**72**
8:00 AM	4	8	42	14	1	1	0	0	0	0	0	0	0	0	0	0	0	**70**
9:00 AM	1	14	39	28	4	0	0	0	0	0	0	0	0	0	0	0	0	**86**
10:00 AM	4	10	39	12	3	0	0	0	0	0	0	0	0	0	0	0	0	**68**
11:00 AM	2	15	57	18	2	0	0	0	0	0	0	0	0	0	0	0	0	**94**
12:00 PM	0	29	62	28	2	0	0	0	0	0	0	0	0	0	0	0	0	**121**
1:00 PM	0	13	20	8	1	0	0	0	0	0	0	0	0	0	0	0	0	**42**
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**21**	**117**	**339**	**158**	**15**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**651**
Percent	**3.2%**	**18.0%**	**52.1%**	**24.3%**	**2.3%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	17.7	mph	Mean (Average) Speed	17.7	mph
85th Percentile	21.5	mph	10 mph Pace	12.6 - 22.6	mph
95th Percentile	23.8	mph	Percent in Pace	84.2	%

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 01

Total Study Average
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	5	5	2	0	0	0	0	0	0	0	0	0	0	0	0	**13**
1:00 AM	0	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**4**
2:00 AM	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	**5**
3:00 AM	0	0	1	3	1	2	0	0	0	0	0	0	0	0	0	0	0	**7**
4:00 AM	0	0	2	6	3	1	1	0	0	0	0	0	0	0	0	0	0	**13**
5:00 AM	0	2	3	14	11	2	0	0	0	0	0	0	0	0	0	0	0	**32**
6:00 AM	0	2	10	31	24	6	0	0	0	0	0	0	0	0	0	0	0	**73**
7:00 AM	1	4	23	69	55	12	1	0	0	0	0	0	0	0	0	0	0	**165**
8:00 AM	0	2	19	58	31	12	2	0	0	0	0	0	0	0	0	0	0	**124**
9:00 AM	1	3	18	47	44	8	1	0	0	0	0	0	0	0	0	0	0	**122**
10:00 AM	1	5	12	40	26	7	0	0	0	0	0	0	0	0	0	0	0	**91**
11:00 AM	1	4	26	48	29	5	1	0	0	0	0	0	0	0	0	0	0	**114**
12:00 PM	2	6	28	58	32	3	1	0	0	0	0	0	0	0	0	0	0	**130**
1:00 PM	0	3	13	33	15	2	0	0	0	0	0	0	0	0	0	0	0	**66**
2:00 PM	0	1	6	23	17	2	0	0	0	0	0	0	0	0	0	0	0	**49**
3:00 PM	0	1	6	26	16	5	1	0	0	0	0	0	0	0	0	0	0	**55**
4:00 PM	2	8	20	30	14	4	0	0	0	0	0	0	0	0	0	0	0	**78**
5:00 PM	2	3	19	40	18	2	0	0	0	0	0	0	0	0	0	0	0	**84**
6:00 PM	1	2	11	29	10	1	1	0	0	0	0	0	0	0	0	0	0	**55**
7:00 PM	1	1	8	16	8	2	1	0	0	0	0	0	0	0	0	0	0	**37**
8:00 PM	0	1	4	12	5	1	0	0	0	0	0	0	0	0	0	0	0	**23**
9:00 PM	0	1	4	10	6	2	0	0	0	0	0	0	0	0	0	0	0	**23**
10:00 PM	0	1	2	8	3	2	0	0	0	0	0	0	0	0	0	0	0	**16**
11:00 PM	0	1	1	5	2	0	0	0	0	0	0	0	0	0	0	0	0	**9**
Total	**12**	**54**	**242**	**614**	**374**	**82**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,388**
Percent	**0.9%**	**3.9%**	**17.4%**	**44.2%**	**26.9%**	**5.9%**	**0.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	23.0	mph	Mean (Average) Speed	23.2	mph
85th Percentile	27.4	mph	10 mph Pace	18.0 - 28.0	mph
95th Percentile	30.2	mph	Percent in Pace	76.8	%

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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 01

Total Study Average
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	4	7	6	2	1	0	0	0	0	0	0	0	0	0	0	0	**21**
1:00 AM	0	1	4	4	1	0	0	0	0	0	0	0	0	0	0	0	0	**10**
2:00 AM	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
3:00 AM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	**7**
5:00 AM	0	1	6	3	2	0	0	0	0	0	0	0	0	0	0	0	0	**12**
6:00 AM	2	4	21	12	2	0	0	0	0	0	0	0	0	0	0	0	0	**41**
7:00 AM	3	10	29	27	5	1	0	0	0	0	0	0	0	0	0	0	0	**75**
8:00 AM	2	5	37	19	3	1	0	0	0	0	0	0	0	0	0	0	0	**67**
9:00 AM	1	10	32	26	4	1	0	0	0	0	0	0	0	0	0	0	0	**74**
10:00 AM	3	6	38	23	4	0	0	0	0	0	0	0	0	0	0	0	0	**74**
11:00 AM	4	13	49	26	3	1	0	0	0	0	0	0	0	0	0	0	0	**96**
12:00 PM	4	29	73	30	3	0	0	0	0	0	0	0	0	0	0	0	0	**139**
1:00 PM	0	12	37	20	2	1	0	0	0	0	0	0	0	0	0	0	0	**72**
2:00 PM	1	5	23	19	2	0	0	0	0	0	0	0	0	0	0	0	0	**50**
3:00 PM	2	6	18	22	2	1	0	0	0	0	0	0	0	0	0	0	0	**51**
4:00 PM	8	14	29	16	3	0	0	0	0	0	0	0	0	0	0	0	0	**70**
5:00 PM	1	6	57	28	4	0	0	0	0	0	0	0	0	0	0	0	0	**96**
6:00 PM	0	5	40	19	4	0	0	0	0	0	0	0	0	0	0	0	0	**68**
7:00 PM	1	7	29	15	1	1	0	0	0	0	0	0	0	0	0	0	0	**54**
8:00 PM	0	4	25	13	1	0	0	0	0	0	0	0	0	0	0	0	0	**43**
9:00 PM	0	6	23	9	2	0	0	0	0	0	0	0	0	0	0	0	0	**40**
10:00 PM	1	4	17	11	1	1	0	0	0	0	0	0	0	0	0	0	0	**35**
11:00 PM	0	5	8	7	2	0	0	0	0	0	0	0	0	0	0	0	0	**22**
Total	**34**	**160**	**609**	**360**	**54**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,226**
Percent	**2.8%**	**13.1%**	**49.7%**	**29.4%**	**4.4%**	**0.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	18.5	mph	Mean (Average) Speed	18.6	mph
85th Percentile	22.2	mph	10 mph Pace	14.0 - 24.0	mph
95th Percentile	24.7	mph	Percent in Pace	82.1	%

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Location: Casanova S/O Fremont
Date Range: 6/7/2017 - 6/13/2017
Site Code: 01

	Wednesday			Thursday			Friday			Saturday			Sunday			Monday			Tuesday			Mid-Week Average		
	6/7/2017			6/8/2017			6/9/2017			6/10/2017			6/11/2017			6/12/2017			6/13/2017					
Time	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	13	15	28	12	25	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	20	33
1:00 AM	3	10	13	4	8	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	9	13
2:00 AM	2	4	6	4	3	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4	7
3:00 AM	5	4	9	6	2	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	3	9
4:00 AM	12	3	15	12	7	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	5	17
5:00 AM	27	12	39	33	11	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	12	42
6:00 AM	72	38	110	72	42	114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	72	40	112
7:00 AM	163	75	238	163	72	235	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	163	74	237
8:00 AM	114	61	175	129	70	199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	122	66	187
9:00 AM	118	59	177	120	86	206	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	119	73	192
10:00 AM	80	76	156	98	68	166	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	89	72	161
11:00 AM	114	94	208	109	94	203	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	112	94	206
12:00 PM	137	154	291	117	121	238	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	127	138	265
1:00 PM	100	98	198	30	42	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65	70	135
2:00 PM	96	96	192	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	48	96
3:00 PM	107	98	205	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54	49	103
4:00 PM	152	139	291	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76	70	146
5:00 PM	166	187	353	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	83	94	177
6:00 PM	106	134	240	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53	67	120
7:00 PM	70	107	177	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35	54	89
8:00 PM	44	83	127	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	42	64
9:00 PM	44	78	122	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	39	61
10:00 PM	28	65	93	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	33	47
11:00 PM	17	42	59	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	21	30
Total	**1,790**	**1,732**	**3,522**	**909**	**651**	**1,560**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1,350**	**1,192**	**2,541**
Percent	**51%**	**49%**	-	**58%**	**42%**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**53%**	**47%**	-

1. Mid-week average includes data between Tuesday and Thursday.

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Vehicle Classification Report Summary

Location: Casanova S/O Fremont
Count Direction: Northbound / Southbound
Date Range: 6/7/2017 to 6/8/2017
Site Code: 02

	FHWA Vehicle Classification													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
	Study Total													
Northbound	34	2,074	447	0	136	11	0	0	0	0	0	0	0	2,702
Percent	1.3%	76.8%	16.5%	0.0%	5.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	21	1,963	262	0	48	74	0	0	0	2	0	0	0	2,370
Percent	0.9%	82.8%	11.1%	0.0%	2.0%	3.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	100%
Total	55	4,037	709	0	184	85	0	0	0	2	0	0	0	5,072
Percent	1.1%	79.6%	14.0%	0.0%	3.6%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 02

Wednesday, June 07, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	11	1	0	1	0	0	0	0	0	0	0	0	13
1:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
2:00 AM	1	0	1	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
4:00 AM	0	10	0	0	2	0	0	0	0	0	0	0	0	12
5:00 AM	0	20	5	0	2	0	0	0	0	0	0	0	0	27
6:00 AM	1	58	11	0	1	2	0	0	0	0	0	0	0	73
7:00 AM	2	126	23	0	13	1	0	0	0	0	0	0	0	165
8:00 AM	1	83	23	0	6	1	0	0	0	0	0	0	0	114
9:00 AM	0	96	18	0	5	0	0	0	0	0	0	0	0	119
10:00 AM	1	64	13	0	3	0	0	0	0	0	0	0	0	81
11:00 AM	0	90	19	0	4	0	0	0	0	0	0	0	0	113
12:00 PM	2	113	14	0	11	0	0	0	0	0	0	0	0	140
1:00 PM	3	73	17	0	8	0	0	0	0	0	0	0	0	101
2:00 PM	1	66	21	0	7	0	0	0	0	0	0	0	0	95
3:00 PM	0	86	18	0	4	0	0	0	0	0	0	0	0	108
4:00 PM	0	110	32	0	7	1	0	0	0	0	0	0	0	150
5:00 PM	6	129	26	0	7	0	0	0	0	0	0	0	0	168
6:00 PM	0	88	18	0	2	0	0	0	0	0	0	0	0	108
7:00 PM	3	58	7	0	4	1	0	0	0	0	0	0	0	73
8:00 PM	0	39	6	0	2	0	0	0	0	0	0	0	0	47
9:00 PM	2	32	9	0	0	0	0	0	0	0	0	0	0	43
10:00 PM	0	22	5	0	0	0	0	0	0	0	0	0	0	27
11:00 PM	1	14	3	0	0	0	0	0	0	0	0	0	0	18
Total	**24**	**1,396**	**290**	**0**	**89**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,805**
Percent	**1.3%**	**77.3%**	**16.1%**	**0.0%**	**4.9%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 02

Wednesday, June 7, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	1	14	0	0	0	0	0	0	0	0	0	0	0	15
1:00 AM	0	9	2	0	0	0	0	0	0	0	0	0	0	11
2:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
3:00 AM	0	2	0	0	1	1	0	0	0	0	0	0	0	4
4:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	0	10	2	0	0	0	0	0	0	0	0	0	0	12
6:00 AM	0	31	3	0	2	3	0	0	0	0	0	0	0	39
7:00 AM	0	64	5	0	1	8	0	0	0	0	0	0	0	78
8:00 AM	0	54	5	0	2	2	0	0	0	0	0	0	0	63
9:00 AM	0	47	7	0	1	6	0	0	0	0	0	0	0	61
10:00 AM	0	57	8	0	5	5	0	0	0	0	0	0	0	75
11:00 AM	0	81	12	0	2	1	0	0	0	0	0	0	0	96
12:00 PM	1	128	16	0	1	6	0	0	0	0	0	0	0	152
1:00 PM	1	80	10	0	3	2	0	0	0	0	0	0	0	96
2:00 PM	2	76	10	0	4	1	0	0	0	1	0	0	0	94
3:00 PM	2	79	13	0	1	0	0	0	0	0	0	0	0	95
4:00 PM	1	111	18	0	3	5	0	0	0	0	0	0	0	138
5:00 PM	3	161	16	0	1	4	0	0	0	1	0	0	0	186
6:00 PM	0	116	11	0	1	3	0	0	0	0	0	0	0	131
7:00 PM	4	96	6	0	0	1	0	0	0	0	0	0	0	107
8:00 PM	0	71	7	0	1	4	0	0	0	0	0	0	0	83
9:00 PM	1	69	4	0	0	6	0	0	0	0	0	0	0	80
10:00 PM	1	59	4	0	1	0	0	0	0	0	0	0	0	65
11:00 PM	1	38	3	0	0	0	0	0	0	0	0	0	0	42
Total	**18**	**1,462**	**162**	**0**	**30**	**58**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**1,732**
Percent	**1.0%**	**84.4%**	**9.4%**	**0.0%**	**1.7%**	**3.3%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 02

Thursday, June 8, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	1	12	1	0	1	0	0	0	0	0	0	0	0	**15**
1:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	**4**
2:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
4:00 AM	0	10	2	0	0	0	0	0	0	0	0	0	0	**12**
5:00 AM	0	24	8	0	2	0	0	0	0	0	0	0	0	**34**
6:00 AM	1	52	14	0	1	1	0	0	0	0	0	0	0	**69**
7:00 AM	2	118	29	0	10	2	0	0	0	0	0	0	0	**161**
8:00 AM	0	98	29	0	4	1	0	0	0	0	0	0	0	**132**
9:00 AM	1	97	16	0	7	0	0	0	0	0	0	0	0	**121**
10:00 AM	3	76	13	0	6	0	0	0	0	0	0	0	0	**98**
11:00 AM	1	81	14	0	9	1	0	0	0	0	0	0	0	**106**
12:00 PM	1	89	21	0	6	0	0	0	0	0	0	0	0	**117**
1:00 PM	0	12	5	0	1	0	0	0	0	0	0	0	0	**18**
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**10**	**678**	**157**	**0**	**47**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**897**
Percent	**1.1%**	**75.6%**	**17.5%**	**0.0%**	**5.2%**	**0.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 02

Thursday, June 8, 2017
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	23	3	0	0	0	0	0	0	0	0	0	0	**26**
1:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	0	**8**
2:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	7	0	0	0	0	0	0	0	0	0	0	0	**7**
5:00 AM	0	8	2	0	0	1	0	0	0	0	0	0	0	**11**
6:00 AM	0	30	6	0	5	3	0	0	0	0	0	0	0	**44**
7:00 AM	0	59	12	0	0	4	0	0	0	0	0	0	0	**75**
8:00 AM	0	46	13	0	2	3	0	0	0	0	0	0	0	**64**
9:00 AM	0	63	17	0	4	0	0	0	0	0	0	0	0	**84**
10:00 AM	0	54	9	0	3	3	0	0	0	0	0	0	0	**69**
11:00 AM	1	80	13	0	2	1	0	0	0	0	0	0	0	**97**
12:00 PM	2	95	20	0	2	0	0	0	0	0	0	0	0	**119**
1:00 PM	0	24	3	0	0	1	0	0	0	0	0	0	0	**28**
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**3**	**501**	**100**	**0**	**18**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**638**
Percent	**0.5%**	**78.5%**	**15.7%**	**0.0%**	**2.8%**	**2.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 02

Total Study Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	1	12	1	0	1	0	0	0	0	0	0	0	0	**15**
1:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	**4**
2:00 AM	1	1	2	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	**6**
4:00 AM	0	10	1	0	1	0	0	0	0	0	0	0	0	**12**
5:00 AM	0	22	7	0	2	0	0	0	0	0	0	0	0	**31**
6:00 AM	1	55	13	0	1	2	0	0	0	0	0	0	0	**72**
7:00 AM	2	122	26	0	12	2	0	0	0	0	0	0	0	**164**
8:00 AM	1	91	26	0	5	1	0	0	0	0	0	0	0	**124**
9:00 AM	1	97	17	0	6	0	0	0	0	0	0	0	0	**121**
10:00 AM	2	70	13	0	5	0	0	0	0	0	0	0	0	**90**
11:00 AM	1	86	17	0	7	1	0	0	0	0	0	0	0	**112**
12:00 PM	2	101	18	0	9	0	0	0	0	0	0	0	0	**130**
1:00 PM	2	43	11	0	5	0	0	0	0	0	0	0	0	**61**
2:00 PM	1	33	11	0	4	0	0	0	0	0	0	0	0	**49**
3:00 PM	0	43	9	0	2	0	0	0	0	0	0	0	0	**54**
4:00 PM	0	55	16	0	4	1	0	0	0	0	0	0	0	**76**
5:00 PM	3	65	13	0	4	0	0	0	0	0	0	0	0	**85**
6:00 PM	0	44	9	0	1	0	0	0	0	0	0	0	0	**54**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	20	3	0	1	0	0	0	0	0	0	0	0	**24**
9:00 PM	1	16	5	0	0	0	0	0	0	0	0	0	0	**22**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	1	7	2	0	0	0	0	0	0	0	0	0	0	**10**
Total	**20**	**1,001**	**222**	**0**	**70**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,320**
Percent	**1.5%**	**75.8%**	**16.8%**	**0.0%**	**5.3%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 02

Total Study Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	1	19	2	0	0	0	0	0	0	0	0	0	0	**22**
1:00 AM	0	9	1	0	0	0	0	0	0	0	0	0	0	**10**
2:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	**5**
3:00 AM	0	3	0	0	1	1	0	0	0	0	0	0	0	**5**
4:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
5:00 AM	0	9	2	0	0	1	0	0	0	0	0	0	0	**12**
6:00 AM	0	31	5	0	4	3	0	0	0	0	0	0	0	**43**
7:00 AM	0	62	9	0	1	6	0	0	0	0	0	0	0	**78**
8:00 AM	0	50	9	0	2	3	0	0	0	0	0	0	0	**64**
9:00 AM	0	55	12	0	3	3	0	0	0	0	0	0	0	**73**
10:00 AM	0	56	9	0	4	4	0	0	0	0	0	0	0	**73**
11:00 AM	1	81	13	0	2	1	0	0	0	0	0	0	0	**98**
12:00 PM	2	112	18	0	2	3	0	0	0	0	0	0	0	**137**
1:00 PM	1	52	7	0	2	2	0	0	0	0	0	0	0	**64**
2:00 PM	1	38	5	0	2	1	0	0	0	1	0	0	0	**48**
3:00 PM	1	40	7	0	1	0	0	0	0	0	0	0	0	**49**
4:00 PM	1	56	9	0	2	3	0	0	0	0	0	0	0	**71**
5:00 PM	2	81	8	0	1	2	0	0	0	1	0	0	0	**95**
6:00 PM	0	58	6	0	1	2	0	0	0	0	0	0	0	**67**
7:00 PM	2	48	3	0	0	1	0	0	0	0	0	0	0	**54**
8:00 PM	0	36	4	0	1	2	0	0	0	0	0	0	0	**43**
9:00 PM	1	35	2	0	0	3	0	0	0	0	0	0	0	**41**
10:00 PM	1	30	2	0	1	0	0	0	0	0	0	0	0	**34**
11:00 PM	1	19	2	0	0	0	0	0	0	0	0	0	0	**22**
Total	**15**	**989**	**136**	**0**	**30**	**41**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**1,213**
Percent	**1.2%**	**81.5%**	**11.2%**	**0.0%**	**2.5%**	**3.4%**	**0.0%**	**0.0%**	**0.0%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 02

3-Day (Tuesday - Thursday) Average
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	11	1	0	1	0	0	0	0	0	0	0	0	13
1:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
2:00 AM	1	0	1	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
4:00 AM	0	10	0	0	2	0	0	0	0	0	0	0	0	12
5:00 AM	0	20	5	0	2	0	0	0	0	0	0	0	0	27
6:00 AM	1	58	11	0	1	2	0	0	0	0	0	0	0	73
7:00 AM	2	126	23	0	13	1	0	0	0	0	0	0	0	165
8:00 AM	1	83	23	0	6	1	0	0	0	0	0	0	0	114
9:00 AM	0	96	18	0	5	0	0	0	0	0	0	0	0	119
10:00 AM	1	64	13	0	3	0	0	0	0	0	0	0	0	81
11:00 AM	0	90	19	0	4	0	0	0	0	0	0	0	0	113
12:00 PM	2	113	14	0	11	0	0	0	0	0	0	0	0	140
1:00 PM	3	73	17	0	8	0	0	0	0	0	0	0	0	101
2:00 PM	1	66	21	0	7	0	0	0	0	0	0	0	0	95
3:00 PM	0	86	18	0	4	0	0	0	0	0	0	0	0	108
4:00 PM	0	110	32	0	7	1	0	0	0	0	0	0	0	150
5:00 PM	6	129	26	0	7	0	0	0	0	0	0	0	0	168
6:00 PM	0	88	18	0	2	0	0	0	0	0	0	0	0	108
7:00 PM	3	58	7	0	4	1	0	0	0	0	0	0	0	73
8:00 PM	0	39	6	0	2	0	0	0	0	0	0	0	0	47
9:00 PM	2	32	9	0	0	0	0	0	0	0	0	0	0	43
10:00 PM	0	22	5	0	0	0	0	0	0	0	0	0	0	27
11:00 PM	1	14	3	0	0	0	0	0	0	0	0	0	0	18
Total	**24**	**1,396**	**290**	**0**	**89**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,805**
Percent	**1.3%**	**77.3%**	**16.1%**	**0.0%**	**4.9%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 02

3-Day (Tuesday - Thursday) Average
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	1	14	0	0	0	0	0	0	0	0	0	0	0	15
1:00 AM	0	9	2	0	0	0	0	0	0	0	0	0	0	11
2:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	6
3:00 AM	0	2	0	0	1	1	0	0	0	0	0	0	0	4
4:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	0	10	2	0	0	0	0	0	0	0	0	0	0	12
6:00 AM	0	31	3	0	2	3	0	0	0	0	0	0	0	39
7:00 AM	0	64	5	0	1	8	0	0	0	0	0	0	0	78
8:00 AM	0	54	5	0	2	2	0	0	0	0	0	0	0	63
9:00 AM	0	47	7	0	1	6	0	0	0	0	0	0	0	61
10:00 AM	0	57	8	0	5	5	0	0	0	0	0	0	0	75
11:00 AM	0	81	12	0	2	1	0	0	0	0	0	0	0	96
12:00 PM	1	128	16	0	1	6	0	0	0	0	0	0	0	152
1:00 PM	1	80	10	0	3	2	0	0	0	0	0	0	0	96
2:00 PM	2	76	10	0	4	1	0	0	0	1	0	0	0	94
3:00 PM	2	79	13	0	1	0	0	0	0	0	0	0	0	95
4:00 PM	1	111	18	0	3	5	0	0	0	0	0	0	0	138
5:00 PM	3	161	16	0	1	4	0	0	0	1	0	0	0	186
6:00 PM	0	116	11	0	1	3	0	0	0	0	0	0	0	131
7:00 PM	4	96	6	0	0	1	0	0	0	0	0	0	0	107
8:00 PM	0	71	7	0	1	4	0	0	0	0	0	0	0	83
9:00 PM	1	69	4	0	0	6	0	0	0	0	0	0	0	80
10:00 PM	1	59	4	0	1	0	0	0	0	0	0	0	0	65
11:00 PM	1	38	3	0	0	0	0	0	0	0	0	0	0	42
Total	**18**	**1,462**	**162**	**0**	**30**	**58**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**1,732**
Percent	**1.0%**	**84.4%**	**9.4%**	**0.0%**	**1.7%**	**3.3%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**	

Deon Fouche: (415) 757-7714
deon.fouche@idaxdata.com

Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 02

Wednesday, June 07, 2017
Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	11	1	0	1	0	0	0	0	0	0	0	0	**13**
1:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	1	0	1	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
4:00 AM	0	10	0	0	2	0	0	0	0	0	0	0	0	**12**
5:00 AM	0	20	5	0	2	0	0	0	0	0	0	0	0	**27**
6:00 AM	1	58	11	0	1	2	0	0	0	0	0	0	0	**73**
7:00 AM	2	126	23	0	13	1	0	0	0	0	0	0	0	**165**
8:00 AM	1	83	23	0	6	1	0	0	0	0	0	0	0	**114**
9:00 AM	0	96	18	0	5	0	0	0	0	0	0	0	0	**119**
10:00 AM	1	64	13	0	3	0	0	0	0	0	0	0	0	**81**
11:00 AM	0	90	19	0	4	0	0	0	0	0	0	0	0	**113**
12:00 PM	2	113	14	0	11	0	0	0	0	0	0	0	0	**140**
1:00 PM	3	73	17	0	8	0	0	0	0	0	0	0	0	**101**
2:00 PM	1	66	21	0	7	0	0	0	0	0	0	0	0	**95**
3:00 PM	0	86	18	0	4	0	0	0	0	0	0	0	0	**108**
4:00 PM	0	110	32	0	7	1	0	0	0	0	0	0	0	**150**
5:00 PM	6	129	26	0	7	0	0	0	0	0	0	0	0	**168**
6:00 PM	0	88	18	0	2	0	0	0	0	0	0	0	0	**108**
7:00 PM	3	58	7	0	4	1	0	0	0	0	0	0	0	**73**
8:00 PM	0	39	6	0	2	0	0	0	0	0	0	0	0	**47**
9:00 PM	2	32	9	0	0	0	0	0	0	0	0	0	0	**43**
10:00 PM	0	22	5	0	0	0	0	0	0	0	0	0	0	**27**
11:00 PM	1	14	3	0	0	0	0	0	0	0	0	0	0	**18**
Total	**24**	**1,396**	**290**	**0**	**89**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,805**
Percent	**1.3%**	**77.3%**	**16.1%**	**0.0%**	**4.9%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Vehicle Speed Report Summary

idax DATA SOLUTIONS

Location: Casanova S/O Fremont
Count Direction: Northbound / Southbound
Date Range: 6/7/2017 to 6/8/2017
Site Code: 02

	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
Study Total																		
Northbound	21	91	464	1,185	763	164	14	0	0	0	0	0	0	0	0	0	0	2,702
Percent	0.8%	3.4%	17.2%	43.9%	28.2%	6.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	38	286	1,236	712	90	8	0	0	0	0	0	0	0	0	0	0	0	2,370
Percent	1.6%	12.1%	52.2%	30.0%	3.8%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	59	377	1,700	1,897	853	172	14	0	0	0	0	0	0	0	0	0	0	5,072
Percent	1.2%	7.4%	33.5%	37.4%	16.8%	3.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Northbound			**Northbound**		
50th Percentile (Median)	23.2	mph	Mean (Average) Speed	23.3	mph
85th Percentile	27.6	mph	10 mph Pace	18.1 - 28.1	mph
95th Percentile	30.6	mph	Percent in Pace	75.2	%
Southbound			**Southbound**		
50th Percentile (Median)	18.6	mph	Mean (Average) Speed	18.7	mph
85th Percentile	22.3	mph	10 mph Pace	14.0 - 24.0	mph
95th Percentile	24.7	mph	Percent in Pace	84.5	%

Deon Fouche: (415) 757-7714
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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 02

Wednesday, June 7, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	1	4	6	2	0	0	0	0	0	0	0	0	0	0	0	0	**13**
1:00 AM	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**3**
2:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
3:00 AM	0	0	0	2	1	1	1	0	0	0	0	0	0	0	0	0	0	**5**
4:00 AM	0	0	3	4	3	1	1	0	0	0	0	0	0	0	0	0	0	**12**
5:00 AM	0	0	0	14	11	2	0	0	0	0	0	0	0	0	0	0	0	**27**
6:00 AM	0	0	9	37	21	6	0	0	0	0	0	0	0	0	0	0	0	**73**
7:00 AM	0	1	30	75	46	12	1	0	0	0	0	0	0	0	0	0	0	**165**
8:00 AM	0	2	13	49	35	14	1	0	0	0	0	0	0	0	0	0	0	**114**
9:00 AM	1	2	19	49	41	5	2	0	0	0	0	0	0	0	0	0	0	**119**
10:00 AM	0	4	11	35	26	5	0	0	0	0	0	0	0	0	0	0	0	**81**
11:00 AM	0	2	30	44	31	6	0	0	0	0	0	0	0	0	0	0	0	**113**
12:00 PM	2	7	25	70	31	5	0	0	0	0	0	0	0	0	0	0	0	**140**
1:00 PM	0	2	24	44	25	6	0	0	0	0	0	0	0	0	0	0	0	**101**
2:00 PM	0	1	11	47	32	4	0	0	0	0	0	0	0	0	0	0	0	**95**
3:00 PM	0	1	15	47	36	8	1	0	0	0	0	0	0	0	0	0	0	**108**
4:00 PM	3	17	36	61	26	6	1	0	0	0	0	0	0	0	0	0	0	**150**
5:00 PM	2	7	38	76	40	5	0	0	0	0	0	0	0	0	0	0	0	**168**
6:00 PM	3	3	20	55	24	3	0	0	0	0	0	0	0	0	0	0	0	**108**
7:00 PM	2	1	14	31	19	5	1	0	0	0	0	0	0	0	0	0	0	**73**
8:00 PM	0	2	7	26	10	2	0	0	0	0	0	0	0	0	0	0	0	**47**
9:00 PM	0	0	9	19	11	4	0	0	0	0	0	0	0	0	0	0	0	**43**
10:00 PM	0	1	3	14	6	3	0	0	0	0	0	0	0	0	0	0	0	**27**
11:00 PM	1	0	3	10	4	0	0	0	0	0	0	0	0	0	0	0	0	**18**
Total	**14**	**55**	**325**	**817**	**482**	**103**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,805**
Percent	**0.8%**	**3.0%**	**18.0%**	**45.3%**	**26.7%**	**5.7%**	**0.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	23.0	mph	Mean (Average) Speed	23.2	mph
85th Percentile	27.3	mph	10 mph Pace	17.6 - 27.6	mph
95th Percentile	30.4	mph	Percent in Pace	76.3	%

Deon Fouche: (415) 757-7714
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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 02

Wednesday, June 7, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	3	4	5	3	0	0	0	0	0	0	0	0	0	0	0	0	**15**
1:00 AM	0	1	6	4	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
2:00 AM	0	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
3:00 AM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
5:00 AM	0	1	3	4	4	0	0	0	0	0	0	0	0	0	0	0	0	**12**
6:00 AM	1	2	20	14	2	0	0	0	0	0	0	0	0	0	0	0	0	**39**
7:00 AM	2	7	31	30	7	1	0	0	0	0	0	0	0	0	0	0	0	**78**
8:00 AM	0	1	41	18	3	0	0	0	0	0	0	0	0	0	0	0	0	**63**
9:00 AM	0	6	32	19	3	1	0	0	0	0	0	0	0	0	0	0	0	**61**
10:00 AM	0	1	36	35	3	0	0	0	0	0	0	0	0	0	0	0	0	**75**
11:00 AM	0	20	40	31	4	1	0	0	0	0	0	0	0	0	0	0	0	**96**
12:00 PM	7	28	80	34	3	0	0	0	0	0	0	0	0	0	0	0	0	**152**
1:00 PM	0	16	52	24	3	1	0	0	0	0	0	0	0	0	0	0	0	**96**
2:00 PM	0	9	42	40	3	0	0	0	0	0	0	0	0	0	0	0	0	**94**
3:00 PM	2	10	40	38	4	1	0	0	0	0	0	0	0	0	0	0	0	**95**
4:00 PM	10	20	72	32	4	0	0	0	0	0	0	0	0	0	0	0	0	**138**
5:00 PM	0	11	105	62	8	0	0	0	0	0	0	0	0	0	0	0	0	**186**
6:00 PM	0	8	78	38	7	0	0	0	0	0	0	0	0	0	0	0	0	**131**
7:00 PM	5	8	56	32	4	2	0	0	0	0	0	0	0	0	0	0	0	**107**
8:00 PM	0	8	51	23	1	0	0	0	0	0	0	0	0	0	0	0	0	**83**
9:00 PM	0	11	46	20	3	0	0	0	0	0	0	0	0	0	0	0	0	**80**
10:00 PM	1	7	32	22	3	0	0	0	0	0	0	0	0	0	0	0	0	**65**
11:00 PM	0	7	17	16	2	0	0	0	0	0	0	0	0	0	0	0	0	**42**
Total	**28**	**186**	**892**	**545**	**74**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,732**
Percent	**1.6%**	**10.7%**	**51.5%**	**31.5%**	**4.3%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.7	mph	Mean (Average) Speed	18.9	mph
85th Percentile	22.6	mph	10 mph Pace	14.2 - 24.2	mph
95th Percentile	24.8	mph	Percent in Pace	84.6	%

Deon Fouche: (415) 757-7714
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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 02

Thursday, June 8, 2017
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	5	4	3	2	0	0	0	0	0	0	0	0	0	0	0	0	**15**
1:00 AM	0	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	**4**
2:00 AM	0	0	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	**4**
3:00 AM	0	0	1	3	0	2	0	0	0	0	0	0	0	0	0	0	0	**6**
4:00 AM	0	0	1	7	4	0	0	0	0	0	0	0	0	0	0	0	0	**12**
5:00 AM	2	2	5	11	11	3	0	0	0	0	0	0	0	0	0	0	0	**34**
6:00 AM	1	3	8	26	25	6	0	0	0	0	0	0	0	0	0	0	0	**69**
7:00 AM	1	7	17	63	60	12	1	0	0	0	0	0	0	0	0	0	0	**161**
8:00 AM	0	1	26	64	30	9	2	0	0	0	0	0	0	0	0	0	0	**132**
9:00 AM	0	3	19	40	46	13	0	0	0	0	0	0	0	0	0	0	0	**121**
10:00 AM	1	5	13	41	29	9	0	0	0	0	0	0	0	0	0	0	0	**98**
11:00 AM	0	6	20	47	27	5	1	0	0	0	0	0	0	0	0	0	0	**106**
12:00 PM	1	3	21	49	41	1	1	0	0	0	0	0	0	0	0	0	0	**117**
1:00 PM	0	0	3	13	2	0	0	0	0	0	0	0	0	0	0	0	0	**18**
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**7**	**36**	**139**	**368**	**281**	**61**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**897**
Percent	**0.8%**	**4.0%**	**15.5%**	**41.0%**	**31.3%**	**6.8%**	**0.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	23.6	mph	Mean (Average) Speed	23.5	mph
85th Percentile	28.0	mph	10 mph Pace	19.0 - 29.0	mph
95th Percentile	30.8	mph	Percent in Pace	75.1	%

Deon Fouche: (415) 757-7714
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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 02

Thursday, June 8, 2017
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	6	11	6	2	0	0	0	0	0	0	0	0	0	0	0	0	**26**
1:00 AM	0	1	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
2:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
3:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
4:00 AM	0	2	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**7**
5:00 AM	0	1	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
6:00 AM	1	7	24	12	0	0	0	0	0	0	0	0	0	0	0	0	0	**44**
7:00 AM	3	8	44	20	0	0	0	0	0	0	0	0	0	0	0	0	0	**75**
8:00 AM	0	6	43	13	1	1	0	0	0	0	0	0	0	0	0	0	0	**64**
9:00 AM	0	13	37	30	4	0	0	0	0	0	0	0	0	0	0	0	0	**84**
10:00 AM	1	8	40	17	3	0	0	0	0	0	0	0	0	0	0	0	0	**69**
11:00 AM	2	18	51	24	2	0	0	0	0	0	0	0	0	0	0	0	0	**97**
12:00 PM	2	26	58	31	2	0	0	0	0	0	0	0	0	0	0	0	0	**119**
1:00 PM	0	4	18	5	1	0	0	0	0	0	0	0	0	0	0	0	0	**28**
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**10**	**100**	**344**	**167**	**16**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**638**
Percent	**1.6%**	**15.7%**	**53.9%**	**26.2%**	**2.5%**	**0.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	18.1	mph	Mean (Average) Speed	18.2	mph
85th Percentile	21.6	mph	10 mph Pace	13.2 - 23.2	mph
95th Percentile	24.1	mph	Percent in Pace	86.7	%

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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 02

Total Study Average
Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	3	4	5	2	0	0	0	0	0	0	0	0	0	0	0	0	**15**
1:00 AM	0	1	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	**5**
2:00 AM	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	**5**
3:00 AM	0	0	1	3	1	2	1	0	0	0	0	0	0	0	0	0	0	**8**
4:00 AM	0	0	2	6	4	1	1	0	0	0	0	0	0	0	0	0	0	**14**
5:00 AM	1	1	3	13	11	3	0	0	0	0	0	0	0	0	0	0	0	**32**
6:00 AM	1	2	9	32	23	6	0	0	0	0	0	0	0	0	0	0	0	**73**
7:00 AM	1	4	24	69	53	12	1	0	0	0	0	0	0	0	0	0	0	**164**
8:00 AM	0	2	20	57	33	12	2	0	0	0	0	0	0	0	0	0	0	**126**
9:00 AM	1	3	19	45	44	9	1	0	0	0	0	0	0	0	0	0	0	**122**
10:00 AM	1	5	12	38	28	7	0	0	0	0	0	0	0	0	0	0	0	**91**
11:00 AM	0	4	25	46	29	6	1	0	0	0	0	0	0	0	0	0	0	**111**
12:00 PM	2	5	23	60	36	3	1	0	0	0	0	0	0	0	0	0	0	**130**
1:00 PM	0	1	14	29	14	3	0	0	0	0	0	0	0	0	0	0	0	**61**
2:00 PM	0	1	6	24	16	2	0	0	0	0	0	0	0	0	0	0	0	**49**
3:00 PM	0	1	8	24	18	4	1	0	0	0	0	0	0	0	0	0	0	**56**
4:00 PM	2	9	18	31	13	3	1	0	0	0	0	0	0	0	0	0	0	**77**
5:00 PM	1	4	19	38	20	3	0	0	0	0	0	0	0	0	0	0	0	**85**
6:00 PM	2	2	10	28	12	2	0	0	0	0	0	0	0	0	0	0	0	**56**
7:00 PM	1	1	7	16	10	3	1	0	0	0	0	0	0	0	0	0	0	**39**
8:00 PM	0	1	4	13	5	1	0	0	0	0	0	0	0	0	0	0	0	**24**
9:00 PM	0	0	5	10	6	2	0	0	0	0	0	0	0	0	0	0	0	**23**
10:00 PM	0	1	2	7	3	2	0	0	0	0	0	0	0	0	0	0	0	**15**
11:00 PM	1	0	2	5	2	0	0	0	0	0	0	0	0	0	0	0	0	**10**
Total	**15**	**52**	**239**	**601**	**386**	**87**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,391**
Percent	**1.1%**	**3.7%**	**17.2%**	**43.2%**	**27.7%**	**6.3%**	**0.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	23.2	mph	Mean (Average) Speed	23.3	mph
85th Percentile	27.6	mph	10 mph Pace	18.1 - 28.1	mph
95th Percentile	30.6	mph	Percent in Pace	75.2	%

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Location: Casanova S/O Fremont
Date Range: 6/7/2017 to 6/8/2017
Site Code: 02

Total Study Average
Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	1	5	8	6	3	0	0	0	0	0	0	0	0	0	0	0	0	**23**
1:00 AM	0	1	4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
2:00 AM	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
3:00 AM	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
4:00 AM	0	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**6**
5:00 AM	0	1	5	4	2	0	0	0	0	0	0	0	0	0	0	0	0	**12**
6:00 AM	1	5	22	13	1	0	0	0	0	0	0	0	0	0	0	0	0	**42**
7:00 AM	3	8	38	25	4	1	0	0	0	0	0	0	0	0	0	0	0	**79**
8:00 AM	0	4	42	16	2	1	0	0	0	0	0	0	0	0	0	0	0	**65**
9:00 AM	0	10	35	25	4	1	0	0	0	0	0	0	0	0	0	0	0	**75**
10:00 AM	1	5	38	26	3	0	0	0	0	0	0	0	0	0	0	0	0	**73**
11:00 AM	1	19	46	28	3	1	0	0	0	0	0	0	0	0	0	0	0	**98**
12:00 PM	5	27	69	33	3	0	0	0	0	0	0	0	0	0	0	0	0	**137**
1:00 PM	0	10	35	15	2	1	0	0	0	0	0	0	0	0	0	0	0	**63**
2:00 PM	0	5	21	20	2	0	0	0	0	0	0	0	0	0	0	0	0	**48**
3:00 PM	1	5	20	19	2	1	0	0	0	0	0	0	0	0	0	0	0	**48**
4:00 PM	5	10	36	16	2	0	0	0	0	0	0	0	0	0	0	0	0	**69**
5:00 PM	0	6	53	31	4	0	0	0	0	0	0	0	0	0	0	0	0	**94**
6:00 PM	0	4	39	19	4	0	0	0	0	0	0	0	0	0	0	0	0	**66**
7:00 PM	3	4	28	16	2	1	0	0	0	0	0	0	0	0	0	0	0	**54**
8:00 PM	0	4	26	12	1	0	0	0	0	0	0	0	0	0	0	0	0	**43**
9:00 PM	0	6	23	10	2	0	0	0	0	0	0	0	0	0	0	0	0	**41**
10:00 PM	1	4	16	11	2	0	0	0	0	0	0	0	0	0	0	0	0	**34**
11:00 PM	0	4	9	8	1	0	0	0	0	0	0	0	0	0	0	0	0	**22**
Total	**22**	**149**	**622**	**361**	**50**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,211**
Percent	**1.8%**	**12.3%**	**51.4%**	**29.8%**	**4.1%**	**0.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	

Note: Average only condsidered on days with 24-hours of data.

Total Study Percentile Speed Summary			Total Study Speed Statistics		
50th Percentile (Median)	18.6	mph	Mean (Average) Speed	18.7	mph
85th Percentile	22.3	mph	10 mph Pace	14.0 - 24.0	mph
95th Percentile	24.7	mph	Percent in Pace	84.5	%

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Location: Casanova S/O Fremont
Date Range: 6/7/2017 - 6/13/2017
Site Code: 02

	Wednesday			Thursday			Friday			Saturday			Sunday			Monday			Tuesday					
	6/7/2017			6/8/2017			6/9/2017			6/10/2017			6/11/2017			6/12/2017			6/13/2017			Mid-Week Average		
Time	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	13	15	28	15	26	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	21	35
1:00 AM	3	11	14	4	8	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	10	13
2:00 AM	2	6	8	4	3	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	5	8
3:00 AM	5	4	9	6	3	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	4	9
4:00 AM	12	3	15	12	7	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	5	17
5:00 AM	27	12	39	34	11	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31	12	42
6:00 AM	73	39	112	69	44	113	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	71	42	113
7:00 AM	165	78	243	161	75	236	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	163	77	240
8:00 AM	114	63	177	132	64	196	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	123	64	187
9:00 AM	119	61	180	121	84	205	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120	73	193
10:00 AM	81	75	156	98	69	167	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	72	162
11:00 AM	113	96	209	106	97	203	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	110	97	206
12:00 PM	140	152	292	117	119	236	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	129	136	264
1:00 PM	101	96	197	18	28	46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	62	122
2:00 PM	95	94	189	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	47	95
3:00 PM	108	95	203	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54	48	102
4:00 PM	150	138	288	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	75	69	144
5:00 PM	168	186	354	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	84	93	177
6:00 PM	108	131	239	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54	66	120
7:00 PM	73	107	180	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37	54	90
8:00 PM	47	83	130	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	42	65
9:00 PM	43	80	123	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	40	62
10:00 PM	27	65	92	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	33	46
11:00 PM	18	42	60	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	21	30
Total	**1,805**	**1,732**	**3,537**	**897**	**638**	**1,535**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1,351**	**1,185**	**2,536**
Percent	**51%**	**49%**	-	**58%**	**42%**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**53%**	**47%**	-

1. Mid-week average includes data between Tuesday and Thursday.

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1

N: TIRE Index

Traffic Infusion on Residential Environment (TIRE)

Level of service is a measure of congestion experienced by through traffic while TIRE is a measure of the impact of traffic on residents along a street. The TIRE index scale ranges from 0 to 5 depending on daily traffic volume. An index of 0 represents the least infusion of traffic and 5 the greatest, and, thereby, poorest residential environment.

The TIRE index is derived from a theory by D.K. Goodrich based on work by Appleyard of the University of California at Berkeley, and by Buchanan of the Ministry of Transport, England. TIRE is based on the theory that a given increase in traffic volume has a greater impact on residential environment along a residential street with a low traffic volume than along a street with a high pre-existing volume. TIRE effects are separate from noise and air pollution impacts. TIRE represents the effect of traffic on the safety and comfort of human activities such as walking, cycling, and playing on or near a street and on the freedom to maneuver personal autos in and out of residential driveways.

The TIRE Index Table gives TIRE values associated with various daily traffic volume ranges. The mathematical relationships are logarithmic. A street with a TIRE value of three or greater is considered to function primarily as a traffic street and to exhibit significantly impaired residential environment. The projected difference between a pre-and post-project TIRE value is the predicted impact of the project on residential environment. Any projected change of 0.1 or greater would be noticeable to residents.

TIRE INDEX TABLE

Vehicles Per Day	TIRE Index	Vehicles Per Day	TIRE Index
6-7	0.8	711-890	2.9
7-8	0.9	891-1,100	3.0
9-10	1.0	1,101-1,400	3.1
11-14	1.1	1,401-1,800	3.2
15-17	1.2	1,801-2,200	3.3
18-22	1.3	2,201-2,800	3.4
23-28	1.4	2,801-3,500	3.5
29-35	1.5	3,501-4,500	3.6
36-44	1.6	4,501-5,600	3.7
45-56	1.7	5,601-7,100	3.8
57-70	1.8	7,101-8,900	3.9
71-89	1.9	8,901-11,000	4.0
90-112	2.0	11,001-14,000	4.1
113-140	2.1	14,001-18,000	4.2
141-180	2.2	18,001-22,000	4.3
181-220	2.3	22,001-28,000	4.4
221-280	2.4	28,001-35,000	4.5
281-350	2.5	35,001-45,000	4.6
351-450	2.6	45,001-56,000	4.7
451-560	2.7	56,001-71,000	4.8
561-710	2.8	71,001-89,000	4.9

O: Highway 1 / N. Fremont Street / Highway 68 Interchange Weaving Segments

O
1
2
3
4
HIGHWAY 1
N. FREMONT ST
FAIRGROUND RD
HIGHWAY 68
1530'
1420'
1100'
410'

P: Lists and Map of Approved and Proposed Projects

TRIP GENERATION FOR APPROVED PROJECTS

PROJECT	SIZE	DAILY TRIPS	AM PEAK HOUR PEAK HOUR VOL.	AM PEAK HOUR (% OF DAILY)	AM PEAK HOUR IN	AM PEAK HOUR OUT	PM PEAK HOUR PEAK HOUR VOL.	PM PEAK HOUR (% OF DAILY)	PM PEAK HOUR IN	PM PEAK HOUR OUT
City of Marina:										
1. The Dunes on Monterey Bay [2]										
Phase 1 (Remainder)	- -	34,135	1,619	(5%)	850	769	3,050	(9%)	1,604	1,446
2. CSUMB North Campus Housing [3]	492 Units	2,188	172	(8%)	34	138	211	(10%)	139	72
3. CSUMB Students (2015-2025) [4]	3,054 Students	2,959	262	(9%)	210	53	262	(9%)	79	183
4. Marina Heights	1,050 Units	10,049	788	(8%)	197	591	1,061	(11%)	711	350
City of Seaside:										
5. Seaside Resort [5]	- -	5,672	267	(5%)	145	122	362	(6%)	180	182
6. Seaside Senior Assisted Living[6]	144 Units	447	29	(6%)	20	9	47	(11%)	24	23
7. Veterans Cemetery	164 Acres	776	28	(4%)	20	8	138	(18%)	46	92
8. Dadwal proposed hotel and restaurant						0				
Hotel	110 Rooms	611	58	(9%)	34	24	66	(11%)	32	34
Restaurant	8,000 SF	1,017	86	(8%)	47	39	79	(8%)	47	32
City of Sand City										
9. The Collection at Monterey Bay [7]	- -	3,669	194	(5%)	112	82	279	(8%)	141	138
10. Monterey Bay Shores [8]	- -	2,032	117	(6%)	51	66	155	(8%)	76	79
City of Monterey:										
11. Ryan Ranch Road (Storage Buildings)	14,280 SF	51	4	(8%)	3	1	5	(10%)	1	4
12. 2969 Monterey Salinas Hwy Office Building	59,520 SF	657	93	(14%)	82	11	89	(14%)	15	74
13. 2201 N. Fremont Mixed Use	- -	110	8	(7%)	3	5	8	(7%)	4	4
14. 10-20 Ryan Court	- -	286	27	(9%)	9	18	36	(13%)	14	22
Automotive Storage Facility[9]	108,000 SF	142	36	(25%)	33	3	36	(25%)	3	33
Office	9,800 SF	108	15	(14%)	13	2	15	(14%)	3	12
15. MIIS Master Plan Update	850 Students	1,454	145	(10%)	113	32	145	(10%)	46	99
16. 2 Upper Ragsdale Drive (Med. Office/Clinics)[10]	66,173 SF	2,717	227	(8%)	188	39	302	(11%)	73	229
17. Ocean View Plaza[11]	- -	4,362	305	(7%)	183	122	325	(7%)	187	138
Unincorporated Monterey County:										
18. East Garrison [12]	- -	12,391	975	(8%)	247	728	1,315	(11%)	793	522
19. Monterra Ranch	151 Homes	1,445	113	(8%)	28	85	153	(11%)	103	50
20. Pasadera	43 Homes	412	32	(8%)	8	24	43	(10%)	29	14
21. Harper 14 Lots of Record	14 Homes	134	11	(8%)	3	8	14	(10%)	9	5
22. Oaks Subdivision	11 Homes	105	8	(8%)	2	6	11	(10%)	7	4
23. Laguna Seca Business Park										
York Road Office Building [13]	20,000 SF	220	31	(14%)	27	4	30	(14%)	5	25
Laguna Seca Villas (Condominiums) [14]	104 Units	664	53	(8%)	9	44	62	(9%)	42	20
24. Corral De Tierra Shopping Center [15]	Mixed Use	5,100	95	(2%)	63	32	235	(5%)	108	127
25. Ferrini Ranch [16]	- -	1,999	165	(8%)	49	116	226	(11%)	138	88
TOTAL APPROVED PROJECTS		95,912	5,963	(6%)	2,783	3,180	8,760	(9%)	4,659	4,101

Notes:

1. Traffic volumes are based on trip generation rates quoted by the Institute of Transportation Engineers, *Trip Generation,* unless otherwise noted.
2. Trip generation from *Marina University Villages Mixed Use Development Traffic Impact Study Report* , Higgins Associates, December 17, 2004.
3. Trip generation from *CSUMB 2007 Master Plan Traffic Impact Analysis* , Higgins Associates, November 5, 2007.
4. Trip generation from *CSUMB 2007 Master Plan Traffic Impact Analysis* , Higgins Associates, November 5, 2007.
5. Trip generation from *Transportation Impact Analysis for Seaside Resort* , Fehr & Peers, May 2004.
6. Trip generation from *Seaside Senior Assisted Living* letter report, Hatch Mott MacDonald, October, 2015.
7. Trip generation from *The Collection at Monterey Bay Transportation Impact Analysis,* Fehr & Peers, April 2012. The project consists of 234 Condo Hotel units, 108 Resort Hotel Units and three restaurants.
8. Trip generation from *Focused Transportation Impact Analysis for the Propsed Monterey Bay Shores Resort Project in Sand City, California* , Fehr & Peers, August 2008. The project consists of 56 Condo Hotel units, 162 Hotel units, 42 visitor serving condo hotel unitsand 96 residential condominiums.
9. Trip generation for Automotive Storage Facility from *Club Auto Sport Traffic Analysis, Ryan Ranch Campus, Monterey, California,* Higgins Associates, June 12, 2008.
10. Trip generation from *Community Hospital Ryan Ranch Traffic Report,* Hatch Mott MacDonald, June 2, 2016.
11. Daily and PM peak hour trip generation for Ocean View Plaza from *Ocean View Plaza Draft Environmental Impact Report,* Pacific Municipal Consultants, April 2001. AM peak hour trip generation assumed as 7% of daily trips.
12. Trip generation represents trips external to the development itself.
13. Size of building unknown -- square footage used to derive trip generation is assumed, based upon other buildings within business park.
14. Daily, AM peak hour, and PM peak hour trip generation for the Laguna Seca Villas project taken from Laguna Seca Villas Initial Study, Monterey County Planning and Building Inspection Department, March 2006. Inbound and outbound distributions derived from ITE's *Trip Generation* (Source #1), above.
15. AM and PM peak hour trip generation from *Corral De Tierra Mixed Use Devlopment Final Traffic Report* , Hexagon Transportation Consultants, April 8, 2005. Daily trip generation estimated, based upon trip generation assumptions utilized in peak hour trip generation derivation in said report.
16. Trip generation from *Ferrini Ranch Subdivision Traffic Impact Analysis* , Higgins Associates, October 29, 2008.
17. Table updated 3/1/18.

TRIP GENERATION FOR CUMULATIVE PROJECTS

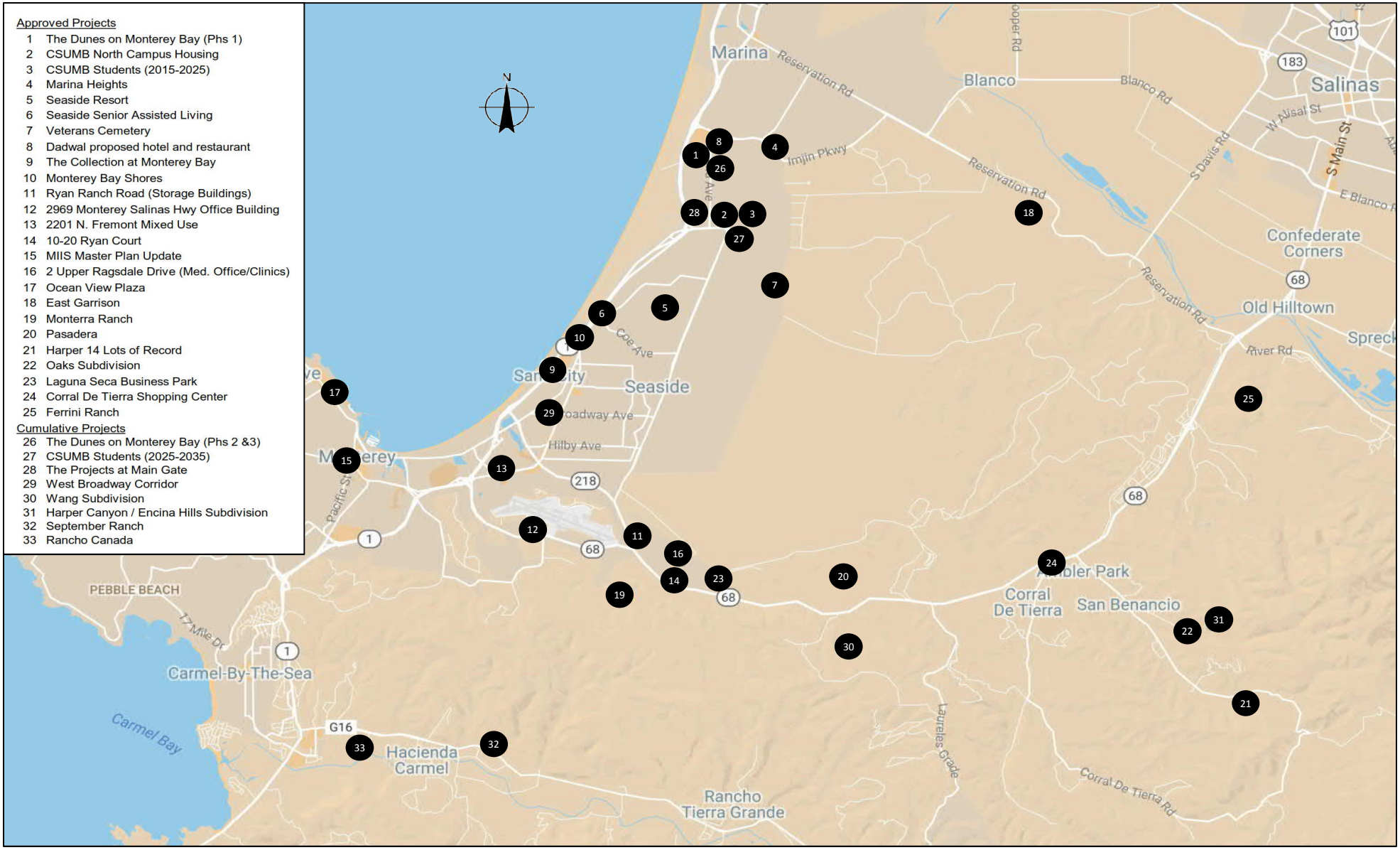
PROJECT	SIZE	DAILY TRIP RATE	DAILY TRIPS	AM PEAK HOUR PEAK HOUR VOL.	AM PEAK HOUR (% OF DAILY)	AM PEAK HOUR IN	AM PEAK HOUR OUT	PM PEAK HOUR PEAK HOUR VOL.	PM PEAK HOUR (% OF DAILY)	PM PEAK HOUR IN	PM PEAK HOUR OUT
City of Marina:											
26. The Dunes on Monterey Bay [2]											
Phases 2 & 3	- -	-	45,662	2,896	(6%)	1,762	1,134	4,561	(10%)	2,127	2,434
27. CSUMB Students (2025-2035) [3]	3,054 Students	-	2,959	262	(9%)	210	53	262	(9%)	79	183
City of Seaside:											
28. The Projects at Main Gate [4]	- -	-	26,067	716	(3%)	437	279	1,931	(7%)	934	997
29. West Broadway Corridor [5]	- -	-	3,783	350	(9%)	191	159	362	(10%)	134	228
Unincorporated Monterey County:											
30. Wang Subdivision [6]											
Single-Family Homes	23 Units	9.57	220	17	(8%)	4	13	23	(10%)	14	9
Inclusionary Housing	6 Units	5.86	35	3	(9%)	1	2	3	(9%)	2	1
31. Harper Canyon / Encina Hills Subdivision [7]	17 Units	9.57	163	13	(8%)	3	10	17	(10%)	11	6
Carmel Valley:											
32. September Ranch	110 Units	9.57	1,053	83	(8%)	21	62	111	(11%)	70	41
33. Rancho Canada	281 Units	9.57	2,689	211	(8%)	53	158	284	(11%)	179	105
TOTAL CUMULATIVE PROJECTS			82,631	4,551		2,682	1,869	7,554		3,550	4,004

Notes:

1. Traffic volumes are based on trip generation rates quoted by the Institute of Transportation Engineers, *Trip Generation,* unless otherwise noted.
2. Trip generation from *Marina University Villages Mixed Use Development Traffic Impact Study Report* , Higgins Associates, December 17, 2004.
3. Trip generation from *CSUMB 2007 Master Plan Traffic Impact Analysis* , Higgins Associates, November 5, 2007.
4. Trip generation from *Seaside Main Gate Retail Development Traffic Impact Analysis* , Hexagon Transportation Consultants, March 26, 2008.
5. Trip generation from *West Broadway Urban Village Specific Plan Transportation Study* , Fehr & Peers, May 2004. Includes proposed library opportunity site.
6. Trip generation from *Wang Subdivision Traffic Impact Analysis* , Higgins Associates, December 21, 2005.
7. Trip generation from *Harper Canyon / Encina Hills Subdivision Traffic Impact Analysis* , Hatch Mott MacDonald, December 15, 2009.
8. Table updated 3/1/18.

Appendix P

Approved and Cumulative Project Locations



Q: FAA Forecast Approval Letter and Aviation Demand Forecast Summary

U.S. Department
of Transportation
Federal Aviation Administration

Western-Pacific Region
Airports Division

San Francisco Airports District Office
1000 Marina Boulevard, Suite 220
Brisbane, CA 94005-1835

September 24, 2014

Mr. Mark Bautista
Deputy General Manager
Planning and Development Department
City of Monterey
200 Fred Kane Drive, Suite 200
Monterey, CA 93940

Dear Mr. Bautista,

RE: FAA Review of Aviation Activity Forecast; Monterey Regional Airport,
Airport Improvement Program (AIP) Project No. 3-06-0159-059

The San Francisco Airports District Office (SFO-ADO) has completed the review of the updated *Aviation Activity Forecast* document titled "Chapter Two- Forecasts" for the Monterey Regional Airport (MRY) dated May 2014. The SFO-ADO review determination is as follows:

- Concur with the aviation activity forecast methodology. The forecast assumptions presented are considered reasonable and well supported.

- Concur with the total forecasted aircraft operations and based aircraft presented in Exhibit 2R-*Aviation Demand Forecast Summary* for the five-year and ten-year forecast. Recommend updating the Airport IQ 5010 data to reflect based aircraft at the airport. Acknowledge the discrepancy between the Terminal Area Forecast (TAF) based aircraft and the document provided.

- The SFO ADO finds the subject growth rates acceptable from a planning standpoint. Accordingly, the SFO-ADO has determined that the aviation activity forecasts are consistent with the TAF. The aviation activity forecast provides adequate justification for near-term airport planning and development of the subject airport facility.

If you have any questions, please contact me at 650-827-7611.

Kind regards,

Katherine Kennedy
FAA Airports Planner

Received

SEP 26 2014

Planning and Development
Monterey Peninsula Airport District

AVIATION DEMAND FORECAST SUMMARY

	Base Year	Forecast		
	2013	2018	2023	2033
NPLANEMENTS AND AIR AR O				
Annual Enplanements	200,651	223,000	245,000	275,000
Air Cargo (lbs.)	1,021,856	1,124,000	1,196,000	1,339,000
ANNUAL OPERATIONS				
Commercial Operations (Itinerant)				
Air Carrier (>59 seats)	1,062	1,400	2,200	3,500
Commuter Airline (<60 seats)	10,724	10,400	9,800	8,300
Air Cargo	568	600	700	800
Total Commercial Operations	*12,354*	*12,400*	*12,700*	*12,600*
General Aviation Operations				
Itinerant	25,270	28,100	31,300	40,400
Local	10,876	11,800	12,800	15,900
Total General Aviation Operations	*36,146*	*39,900*	*44,100*	*56,300*
Military and Other Air Taxi Operations				
Other Air Taxi	3,610	4,300	6,300	10,200
Military Ininerant	803	900	900	900
Military Local	914	600	600	600
Total Military and Other Air Taxi Operations	*5,327*	*5,800*	*7,800*	*11,700*
Total Local Operations	*11,790*	*12,400*	*13,400*	*16,500*
Total Itinerant Operations	*42,037*	*45,700*	*51,200*	*64,100*
TOTAL ANNUAL OPERATIONS	**53,827**	**58,100**	**64,600**	**80,600**
BASED AIRCRAFT				
Single Engine	126	129	138	152
Multi-engine	9	9	9	8
Turboprop	6	8	10	14
Business Jet	7	9	12	18
Helicopter	4	5	6	8
TOTAL BASED AIRCRAFT	**152**	**160**	**175**	**200**

PEAKING ACTIVITY PROJECTIONS

	Base Year	Forecast		
	2013	2018	2023	2033
AIRLINE ENPLANEMENTS				
Annual Enplanements	200,651	223,000	245,000	275,000
Peak Month	18,246	21,496	23,617	26,509
Design Day	589	699	768	862
Design Hour	183	217	239	268
AIRLINE OPERATIONS				
Annual Operations	11,786	11,800	12,000	11,800
Peak Month	1,088	1,092	1,111	1,092
Design Day	30	32	32	32
Design Hour	5	5	5	5
GENERAL AVIATION OPERATIONS				
Annual Operations	36,146	39,900	44,100	56,300
Peak Month	3,478	3,976	4,395	5,611
Design Day	112	128	142	181
Design Hour	16	18	20	25
TOTAL AIRPORT OPERATIONS				
Annual Operations	53,827	58,100	64,600	80,600
Peak Month	5,177	5,695	6,332	7,900
Design Day	167	184	204	255
Design Hour	23	25	28	35

FLY MONTEREY

Exhibit 2R
FOR AST SUMMARY

MOTT MACDONALD

1300-B First Street
Gilroy, CA 95020
T 408-848-3122 www.mottmac.com

MONTEREY REGIONAL AIRPORT EIR TRAFFIC IMPACT ANALYSIS MEMORANDUM OF ASSUMPTIONS

To: Jim Harris, Coffman Associates
Judi Krauss, Coffman Associates

From: Keith Higgins, PE, TE, Mott MacDonald
Julie Oates, PE, TE, Mott MacDonald

Date: October 17, 2016

1) Project Description

The *Monterey Regional Airport Environmental Impact Report (EIR) Traffic Impact Analysis (TIA)* will serve as the basis for the Traffic and Circulation Element of the Draft EIR for the Monterey Regional Airport (Airport) Master Plan and its associated projects. The traffic analysis will be based on the scope of work agreed to between Mott MacDonald and Coffman Associates.

The proposed projects that will be evaluated within the Draft EIR include all the projects recommended in the proposed Airport Master Plan as well as the recommended overall on-airport land use plan (which includes possible non-aviation development and redevelopment of the Old Industrial area on the Airport property). Proposed short- and intermediate-term projects will be evaluated at a project-specific level. Proposed long-term projects will only be addressed in the Draft EIR at a programmatic level due to the lack of project details available for proposed projects likely to be implemented more than ten years from now. Further environmental analysis for long-term projects will be required prior to approval.

The Draft EIR TIA will evaluate the potential traffic impacts associated with the following proposed short- and intermediate-term projects at a project-specific level:

- Runway 10L-28R Overlay and Connector Taxiway System Improvements
- North Side Access Road Construction
- Airport Safety Enhancement Project for Taxiway “A” Relocation & Associated Building Relocations (see description below)

The Draft EIR TIA will analyze the potential traffic impacts associated with the following proposed long-term projects at a programmatic level:

- North side General Aviation (GA) development (Phase 2)
- Maintenance building construction
- Runway Protection Zone (RPZ) land acquisition (20 acres)
- RPZ avigation easement (14 acres)
- Taxiway “B” extension to the Runway 28L threshold

The potential traffic impacts associated with the proposed Airport Safety Enhancement Project for Taxiway "A" Relocation & Associated Building Relocations (safety enhancement project) will be assessed as part of an Environmental Assessment (EA), which is a federal environmental document being prepared consistent with the requirements of the National Environmental Policy Act (NEPA). The Federal Aviation Administration (FAA) is the lead agency for the EA. The *Monterey Regional Airport Environmental Assessment (EA) Traffic Impact Analysis (TIA)* will be incorporated into the Draft EIR TIA. The proposed safety enhancement project includes several project components associated with increasing the runway-taxiway separation to 327.5 feet (ft) between Taxiway "A" and Runway 10R-28L to provide additional runway-taxiway separation. These project components include:

- Southeast General Aviation (GA) hangar relocation (Phase 1)
- Potential property acquisition (5.5 acres)
- South side frontage road construction
- Terminal complex construction (relocation)
- Airport rescue and firefighting (ARFF) building relocation
- Existing terminal and ARFF building demolition
- Taxiway "A" shift to 327.5 ft from Runway 10R-28L (including connector taxiways "G" and "J")

A project location map is included as **Exhibit 1** and a draft of the recommended development alternative for the project is included as **Exhibit 2**.

2) **Data Collection**

Where appropriate, Mott MacDonald will use existing traffic count data from other recently completed traffic studies in the study area, including the *Monterey Bay Operations and Maintenance Facility Project Traffic Impact Analysis* (Mott MacDonald, April 2015), and the *Del Rey Oaks RV Park Traffic Impact Analysis* (Mott MacDonald, October 2015). The traffic counts for these studies were conducted in January and July, 2015, respectively. In addition, traffic count data and analysis from the EA TIA (to be completed concurrently with the Draft EIR TIA) will be incorporated into the Draft EIR TIA. Traffic counts from the Highway 68 Scenic Highway Plan study (currently in progress) will also be requested from the Transportation Agency for Monterey County (TAMC). The count data received from TAMC will be compared to the previous data and the highest count data will be used in order to provide a conservative (i.e., worst-case) analysis.

It is anticipated that by the time this traffic analysis is completed, the traffic counts conducted in January 2015 will be approaching the Caltrans two-year time limit for data collection. As a result, Mott MacDonald will conduct new traffic counts at the following select locations in order to validate the January 2015 counts.

- Intersection Counts:

    1. Del Rey Gardens Drive/Highway 218

2. San Benancio Road/Highway 68

The intersection turning movement counts will be conducted during the weekday AM and PM peak periods (7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM). Counts will include cars, trucks, buses, pedestrians and bicycles. From these counts, the weekday AM and PM peak hours will be identified. The new counts will be compared to the counts conducted in January 2015 and the count data received from TAMC for the Highway 68 Scenic Highway Plan study. If the new counts are significantly higher than the aforementioned counts, adjustment factors may be used to increase the volumes accordingly. The appropriate adjustment factors will be determined through consultation with the affected jurisdiction (i.e., City, Caltrans, etc.).

3) **Study Intersections and Road Segments**

Where appropriate, Mott MacDonald will reference the intersection and road segment analyses from previously completed or ongoing traffic studies (such as the Highway 68 Scenic Highway Plan study). The locations of the study intersections and road segments are shown in **Exhibit 3**.

The following study intersections will be included in the analysis:

1. Olmsted Road/Highway 68
2. Garden Road/Olmsted Road
3. Airport Road/Euclid Avenue
4. N. Fremont Street/Airport Road
5. Del Monte Boulevard/Highway 218
6. Fremont Boulevard/Highway 218
7. General Jim Moore Boulevard/Highway 218
8. Del Rey Gardens Drive/Highway 218
9. Ryan Ranch Road/Highway 218
10. Josselyn Canyon Road/Highway 68
11. Highway 218/Highway 68
12. Ragsdale Drive/Highway 68
13. York Road/Highway 68
14. Pasadera Drive/Highway 68
15. Laureles Grade Road/Highway 68
16. Corral De Tierra Road/Highway 68
17. San Benancio Road/Highway 68
18. Torero Drive/Highway 68

The following study segments will be included in the analysis:

1. Highway 68, from SR 1 to Josselyn Canyon Rd
2. Highway 68, from Josselyn Canyon Road to Olmsted Road
3. Highway 68, from Olmsted Rd to SR 218
4. Highway 68, from SR 218 to Ragsdale Drive

5. Highway 68, from Ragsdale Drive to York Road
6. Highway 68, from York Road to Boots Road – Pasadera Drive
7. Highway 68, from Boots Road – Pasadera Drive to Laureles Grade
8. Highway 68, from Laureles Grade to Corral De Tierra Road
9. Highway 68, from Corral De Tierra Road to San Benancio Road
10. Highway 68, from San Benancio Road to Torero Drive
11. Highway 68 from Torero Drive to Portola Drive

4) **Airport Road Capacity Assessment**

The amount of daily traffic that can be added to Airport Road before causing a potentially significant traffic impact will be estimated based on the roadway's classification and existing traffic load. The City of Monterey will be consulted as to the appropriate roadway classification and capacity threshold for use in the assessment.

5) **Proposed Project & Project Alternative Trip Generation, Distribution & Assignment**

The project description for the Proposed Project will be based on assumptions contained in the *Initial Study for the Monterey Regional Airport Master Plan* (Coffman Associates, December 2015). Trip generation estimates will be developed for the Proposed Project and a recommended Project Alternative for development (proposed primarily on the north side of the Airport). Details of the project alternatives will be provided as a part of the overall environmental study. The Proposed Project will include a relatively higher trip generating land use and the Project Alternative will include a relatively lower trip generating land use.

These estimates will be customized based on anticipated patterns of trip activity, and will utilize trip rates from *Trip Generation Manual*, 9th Edition, published by the Institute of Transportation Engineers in 2012, where applicable. The project trip distribution will also be estimated based on existing traffic circulation patterns, proximity to population and employment centers, and engineering judgment. The project trip assignment will be derived from the project trip generation and distribution.

Traffic growth associated with increased enplanements will be added as part of the background and cumulative scenarios, based on the Airport Master Plan planning horizons and consistent with information provided in the draft Airport Master Plan.

6) **Analysis Scenarios**

The following traffic scenarios will be analyzed for the weekday AM and PM peak hours:

1. Existing Conditions (2015)
2. Existing Plus Proposed Project Conditions
3. Existing Plus Project Alternative Conditions
4. Background (10-Year) Conditions (includes projected growth in enplanements)
5. Background (10-Year) Plus Proposed Project Conditions

6. Background (10-Year) Plus Project Alternative Conditions
7. Cumulative (20-Year) Conditions (includes projected growth in enplanements)
8. Cumulative (20-Year) Plus Proposed Project Conditions
9. Cumulative (20-Year) Plus Project Alternative Conditions

The Olmsted Road / Highway 68 intersection will be analyzed with and without a roundabout, which is a potential mitigation measure, for all of the above development scenarios.

7) Approved and Cumulative Projects

A number of projects have recently been approved and are currently being proposed within the study area that have not yet been approved and/or constructed. The addition of their respective traffic to the study area will be used to forecast potential future cumulative traffic conditions. Traffic generated by approved projects will be added to the Existing Conditions traffic volumes to obtain Background (10-Year) Conditions traffic volumes, and traffic generated by proposed (but not yet approved) projects will be added to the Background (10-Year) Conditions volumes to obtain Cumulative (20-Year) Conditions traffic volumes. In addition, Cumulative traffic volume forecasts in the 2010 Monterey County General Plan, the Highway 68 Scenic Highway Plan study (if available) and previously-completed traffic studies for projects in the study area will also be considered.

Trip generation estimates for the approved and proposed projects are included in **Exhibits 4** and **5**, respectively. It is assumed that the approved projects in **Exhibit 4** will be implemented within the next 6 to 10 years, and that the proposed projects (not yet approved) in **Exhibit 5** will be implemented within the next 11 to 20 years. The lists of approved and proposed projects include projects in the cities of Seaside, Sand City, and Monterey, as well as unincorporated areas of Monterey County.

8) Proposed Road Network Modifications

One of the approved projects (Monterra Ranch) proposes to add a fourth approach to the York Road / Highway 68 intersection. Another approved project (Ferrini Ranch) proposes to relocate and signalize the Torero Drive / Highway 68 intersection, and widen Highway 68 from two lanes to four lanes between the existing Highway 68 freeway section and Corral de Tierra Drive. All road network changes associated with these approved projects (including new traffic lanes and signal modifications) will therefore be assumed, pending confirmation, to be in place under the Background (10-Year) Conditions analysis scenario. This will be confirmed with the appropriate agencies as part of this Memorandum of Assumptions. To the extent these assumptions are not correct, adjustments to the analysis will be made, as appropriate.

In addition, the implementation of a second westbound Highway 68 left-turn lane (and second southbound Corral de Tierra Road receiving lane) are programmed for construction at the Highway 68 / Corral de Tierra Road intersection in fiscal year 2016-17. As a result, these

improvements will also be assumed, pending confirmation as indicated above, to be in place under the Background (10-Year) Conditions analysis scenario.

TAMC is currently working on the Highway 68 Scenic Highway Plan, which will consider long-term operational and capacity improvements to the Highway 68 corridor. Study alternatives include converting Highway 68 to a roundabout corridor and the use of an Advanced Traffic Management System to maximize multi-modal capacity, efficiency and safety. This study is in the planning stage; therefore, improvements associated with the Highway 68 Scenic Highway Plan will not be included as road network modifications under any of the analysis scenarios, including those with and without the proposed project or its development alternatives.

9) **Level of Service Standards**

The study area covers the jurisdictions of multiple public agencies, including the Cities of Monterey, Del Rey Oaks, and Seaside, the California Department of Transportation (Caltrans), and Monterey County. Most of the study intersections are located on State Highways 68 and 218 and all of the study road segments are located on State Highway 68. Therefore, the Caltrans level of service standard (i.e., the transition from LOS C to LOS D) is the level of service standard for these facilities. The only facilities in the study area that are not under the jurisdiction of Caltrans are the following three intersections, which are under the jurisdiction of the City of Monterey. The City of Monterey level of service standard for these intersections is LOS D.

- Garden Road/Olmsted Road
- Airport Road/Euclid Avenue
- N. Fremont Street/Airport Road

10) **Analysis methodology**

The following methodologies will be used to analyze the study intersections and study segments.

1. The Synchro© traffic analysis software will be used for the intersection analysis. Study intersection geometries and signal timings will be verified. Intersection levels of service will be performed using the 2010 Highway Capacity Manual (HCM) methodologies, where possible. For intersections that cannot be analyzed using 2010 HCM methodologies (e.g., certain combinations of shared lanes or the application of non-standard signal phasing), 2000 HCM methodologies will be used.
2. A saturation flow rate of 1,600 vehicles per lane per hour will be used for the eastbound through and westbound through movements along Highway 68, as has been requested in the past by Caltrans District 5 staff. As the saturation flow rate cannot be adjusted in the Synchro software using the 2010 Highway Capacity Manual methodologies, the 2000 Highway Capacity Manual methodologies will be used to analyze the study intersections along Highway 68.
3. All of the signalized study intersections allow right turns on red (RTOR), and these right turns can have an effect on the intersection LOS calculations. There are several options

to model right turns on red with different traffic analysis software packages, but the only method prescribed by the HCM for modeling RTOR is to reduce the input volumes to account for vehicles turning right on red. Where an exclusive right turn lane movement runs concurrent with a protected left turn phase from the cross street, the HCM allows for the right turn volume to be reduced by the number of shadowed left turners. However, the length of the right turn lane affects the number of vehicles that can turn right on red. This is because a short right turn lane can result in right turning vehicles being trapped in the queue with vehicles in the through lane. Due to the already-congested conditions on Highway 68, it will be assumed that no vehicles would be able to turn right on red at the study intersections on Highway 68 between Josselyn Canyon Road and San Benancio Road.

4. Roadway segment levels of service will be referenced from the Highway 68 Scenic Highway Plan study (currently in progress) and the 2010 Monterey County General Plan. The 2010 Monterey County General Plan reported deficient LOS F operations on all 11 of the study segments under 2008 conditions. It is therefore anticipated that all 11 study segments currently operate below their level of service standard. Based on these levels of service, the addition of any project traffic on Highway 68 would represent a potentially significant impact.

11) **Significant Impact Criteria**

Per California Environmental Quality Act (CEQA) guidelines, a project may have a significant effect on the environment if it would cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system. In accordance with CEQA, the following impact criteria will be applied to determine if the project-specific increase in traffic is substantial in relation to the existing traffic load and capacity of the street system.

Caltrans Impact Criteria

Caltrans perceives an impact when there is any degradation in the performance measure below the cusp of C/D. If a facility is currently operating at or below LOS D, then any trips added represent a potential impact, and the performance measure should be brought back to predevelopment conditions. While a single trip added to a degraded facility is not usually reflected in the performance measure, Caltrans reserves the ability to consider a single trip as an impact.

Monterey County Impact Criteria

An impact at a signalized study intersection is defined to occur under the following conditions:

- An impact would occur if an intersection operating at LOS A, B, C, or D degrades by one or more letter grades to LOS E or F. For intersections already operating at LOS E, an impact would occur if operations degrade to LOS F. For intersections already operating at LOS F, the addition of any project traffic to the facility is considered an impact.

An impact at an unsignalized study intersection is defined to occur under the following conditions:

- An impact would occur if an all-way stop controlled or roundabout controlled intersection, based on the average delay, operates at LOS F or any traffic signal warrant is met.
- An impact would occur if a two-way stop controlled intersection, based on the worst approach delay, operates at LOS F or any traffic signal warrant is met.

An impact at a study road segment is defined to occur under the following conditions:

- An impact would occur if a roadway segment operating at LOS A through LOS E degrades to a lower level of service E or F. If a segment is already operating at LOS F any increase during the peak hour (one vehicle) is considered an impact.

City of Monterey Impact Criteria

The City of Monterey has not adopted a formal set of significant impact criteria. The Monterey County significant impact criteria will therefore be used to identify potentially significant project impacts at intersections and road segments under the jurisdiction of the City of Monterey.

12) **Project Access and Internal Circulation**

Site access and internal circulation for the project will be reviewed in the EA TIA document and incorporated into this traffic study. Up to three alternative site plans will be evaluated for internal traffic circulation of vehicular and pedestrian traffic. This will include pedestrian access between parking areas and the primary access points to the terminal and other airport buildings as well as connectivity between the terminal, other airport buildings, the public street system, and transit facilities. Recommendations will be made to correct any identified deficiencies.

13) **Mitigation Measures**

Potential project impacts will be identified for each traffic analysis scenario. Possible potential impacts may include the impacts to the quality of life for the residents of the neighborhoods in the vicinity of the Airport. Feasible mitigation measures, which may include traffic calming measures, will be considered and may be recommended.

In addition to the possibility of implementing or contributing to intersection and/or roadway improvements to offset potential project-related traffic impacts, the study project will be responsible for mitigating potentially significant cumulative impacts through the payment of traffic impact fees (i.e., the TAMC Regional Traffic Impact Fee and the Monterey County Traffic Impact Fee). Reasonable and feasible mitigation measures will be identified and analyzed in the traffic study.

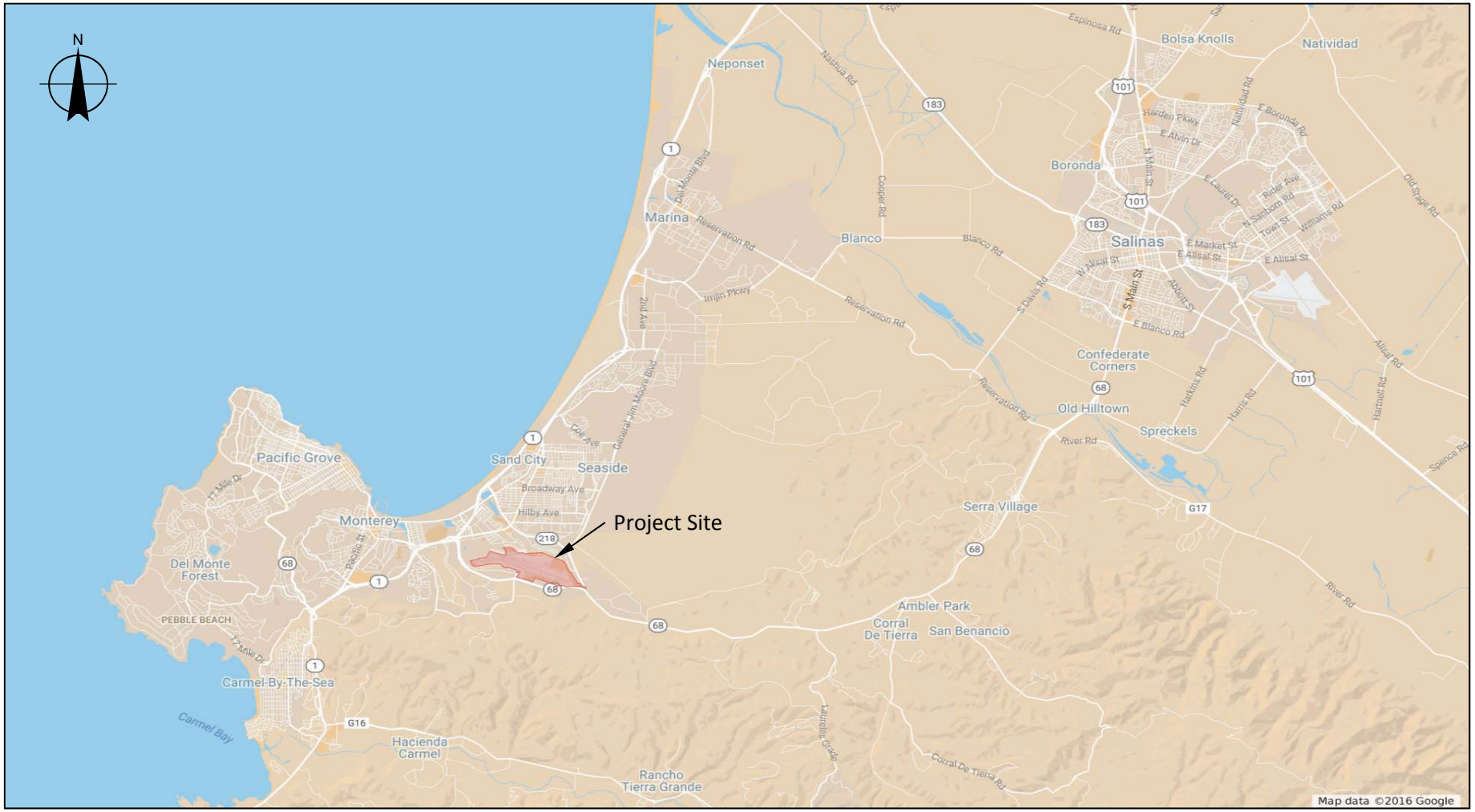
14) **Construction Impacts**

The traffic analysis will document the anticipated number of daily truck trips and truck routes associated with the project's construction activities. It should be noted that construction impacts

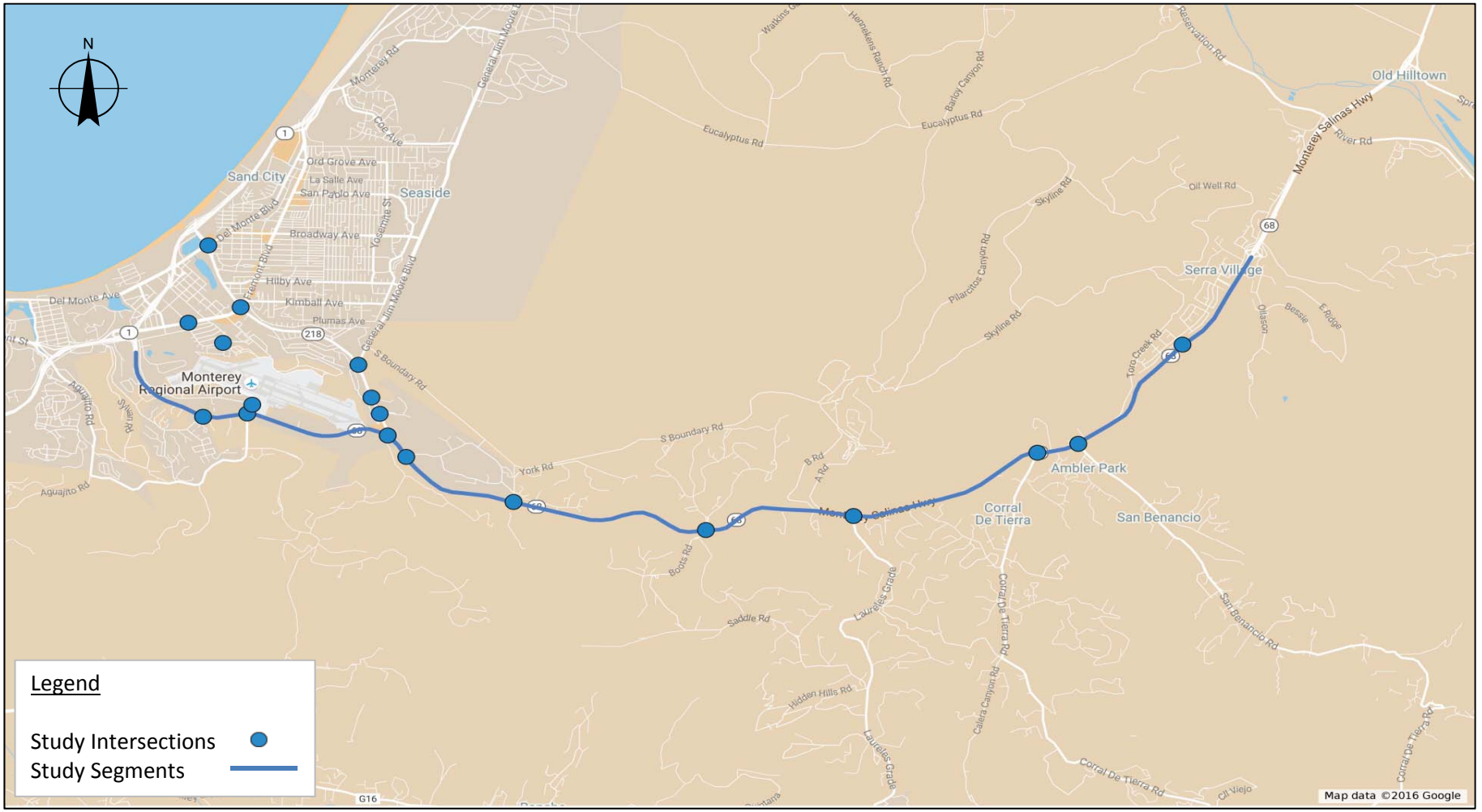
will be temporary in nature. Reasonable and feasible mitigation measures will be recommended to reduce any identified significant short-term construction traffic impacts to less than significant, if possible.

15) **Parking Adequacy**

Mott MacDonald will confirm the adequacy of the proposed project's parking supply based on industry standards and information provided in the draft Airport Master Plan.


N
Project Site
Neponset
Bolsa Knolls
Natividad
Boronda
Marina
Blanco
Salinas
Confederate Corners
Old Hilltown
Spreckels
Serra Village
Ambler Park
Corral De Tierra
San Benancio
Pacific Grove
Sand City
Seaside
Monterey
Del Monte Forest
PEBBLE BEACH
Carmel-By-The-Sea
Carmel Bay
Hacienda Carmel
Rancho Tierra Grande
Map data ©2016 Google

Non-Aviation Development (Low Density)
Wash Facility Maintenance Bay
Maintenance Building/Yard
Fuel Island
Service Road
Future North Side Access Point
Aviation Hangars
Runway 10L - 28R (3,504' x 60')
Runway 10R - 28L (7,175' x 150')
EMAS 390' x 170' WITH 35' LEAD-IN
Arrival RPZ
Departure RPZ
Retaining Wall
ARFF Option 1
ARFF Option 2
Terminal Apron
Surface Parking
Rental Car
Parking Structure
Potential Roadway Easement Acquisition
Existing Airport Traffic Control Tower
Potential Surface Parking
Parking Structure
Close two Highway 68 access points.
Monterey Salinas Highway
N. Fremont St.
Airport Rd.
Euclid Ave.
Canyon Del Rey Blvd.
General Jim Moore Blvd.
Ryan Ranch Rd.
Fred Kane Dr.
Skypark Dr.
Garden Rd.
Olmsted Rd.
68
218
LEGEND
Airport Property Line
Future Airfield Pavement
Future Building
Future Parking/Road
Non-Aviation Development
Non-Aviation Redevelopment
Potential New Tower Location
To Be Removed/Abandoned
Potential Property Acquisition
Potential RPZ Property Acquisition
Potential RPZ Easement Acquisition
Runway Protection Zone (RPZ)
NOTE: Future roadway locations are approximate and will be refined during environmental review and project design
SCALE IN FEET
Photo Source: Google Earth 5-6-2012
FLY MONTEREY
DRAFT
Exhibit 2
RECOMMENDED DEVELOPMENT ALTERNATIVE


N
Legend
Study Intersections
Study Segments
Monterey Regional Airport
Sand City
Seaside
Del Monte Blvd
Broadway Ave
Hilby Ave
Kimball Ave
Plumas Ave
Ord Grove Ave
La Salle Ave
San Pablo Ave
Del Monte Ave
Monterey Rd
Eucalyptus Rd
Skyline Rd
Oil Well Rd
Old Hilltown
Monterey Salinas Hwy
River Rd
Serra Village
Ambler Park
Corral De Tierra
San Benancio
S Boundary Rd
York Rd
Boots Rd
Saddle Rd
Hidden Hills Rd
Laureles Grade
Corral De Tierra Rd
San Benancio Rd
Map data ©2016 Google

TRIP GENERATION FOR APPROVED PROJECTS

PROJECT	SIZE	DAILY TRIP RATE	DAILY TRIPS	AM PEAK HOUR PEAK HOUR VOL.	AM PEAK HOUR (% OF DAILY)	AM PEAK HOUR IN	AM PEAK HOUR OUT	PM PEAK HOUR PEAK HOUR VOL.	PM PEAK HOUR (% OF DAILY)	PM PEAK HOUR IN	PM PEAK HOUR OUT
City of Marina:											
1. The Dunes on Monterey Bay [2]											
Phase 1 (Remainder)	- -	-	34,135	1,619	(5%)	850	769	3,050	(9%)	1,604	1,446
2. CSUMB North Campus Housing [3]	492 Units	-	2,188	172	(8%)	34	138	211	(10%)	139	72
3. Veterans Hospital [4]	100,000 sq. ft.	13.22	1,322	95	(7%)	60	35	93	(7%)	35	58
City of Seaside:											
4. Seaside Resort [5]	- -	-	5,672	267	(5%)	145	122	362	(6%)	180	182
City of Sand City											
5. The Collection at Monterey Bay [6]	- -	-	3,669	194	(5%)	112	82	279	(8%)	141	138
6. Monterey Bay Shores [7]	- -	-	2,032	117	(6%)	51	66	155	(8%)	76	79
City of Monterey:											
7. Ryan Ranch Road (Storage Buildings)	14,280 sq. ft.	3.56	51	4	(8%)	3	1	5	(10%)	1	4
Unincorporated Monterey County:											
8. East Garrison [8]	- -	-	12,391	975	(8%)	247	728	1,315	(11%)	793	522
9. Monterra Ranch	151 Homes	9.57	1,445	113	(8%)	28	85	153	(11%)	103	50
10. Pasadera	43 Homes	9.57	412	32	(8%)	8	24	43	(10%)	29	14
11. Harper 14 Lots of Record	14 Homes	9.57	134	11	(8%)	3	8	14	(10%)	9	5
12. Oaks Subdivision	11 Homes	9.57	105	8	(8%)	2	6	11	(10%)	7	4
13. Laguna Seca Business Park											
York Road Office Building [9]	20,000 S.F.	11.01	220	31	(14%)	27	4	30	(14%)	5	25
Jessen Office Building [10]	16,388 S.F.	-	345	31	(9%)	26	5	39	(11%)	10	29
Laguna Seca Villas (Condominiums) [11]	104 Units	-	664	53	(8%)	9	44	62	(9%)	42	20
14. Monterey Airport Expansion (Project 2) [12]	355,000 S.F.	-	1,082	154	(14%)	115	39	185	(17%)	62	123
15. Corral De Tierra Shopping Center [13]	Mixed Use	-	5,100	95	(2%)	63	32	235	(5%)	108	127
16. Ferrini Ranch [14]	- -	-	1,999	165	(8%)	49	116	226	(11%)	138	88
TOTAL APPROVED PROJECTS			72,966	4,136	(6%)	1,832	2,304	6,468	(9%)	3,482	2,986

Notes:

1. Traffic volumes are based on trip generation rates quoted by the Institute of Transportation Engineers, *Trip Generation* , 6th Edition, 1997, 7th Edition, 2003, 8th Edition, 2008, and 9th Edition, 2012, unless otherwise noted.
2. Trip generation from *Marina University Villages Mixed Use Development Traffic Impact Study Report* , Higgins Associates, December 17, 2004.
3. Trip generation from *CSUMB 2007 Master Plan Traffic Impact Analysis* , Higgins Associates, November 5, 2007.
4. Trip generation for "Veterans Hospital" uses trip rates for "Hosptial" (ITE Land Use #610), as a conservative estimate.
5. Trip generation from *Transportation Impact Analysis for Seaside Resort* , Fehr & Peers, May 2004.
6. Trip generation from *The Collection at Monerey Bay Transportation Impact Analysis,* Fehr & Peers, April 2012. The project consists of 234 Condo Hotel units, 108 Resort Hotel Units and three restaurants.
7. Trip generation from *Focused Transportation Impact Analysis for the Propsed Monterey Bay Shores Resort Project in Sand City, California* , Fehr & Peers, August 2008. The project consists of 56 Condo Hotel units, 162 Hotel units, 42 visitor serving condo hotel unitsand 96 residential condominiums.
8. Trip generation represents trips external to the development itself.
9. Size of building unknown -- square footage used to derive trip generation is assumed, based upon other buildings within business park.
10. Trip generation from Letter to J. Jessen, "Trip Generation Study for Jessen Office Building Project, Laguna Seca Office Park Lot #13," Higgins Associates, June 6, 2006. Project includes both standard and medical office space.
11. Daily, AM peak hour, and PM peak hour trip generation for the Laguna Seca Villas project taken from Laguna Seca Villas Initial Study, Monterey County Planning and Building Inspection Department, March 2006. Inbound and outbound distributions derived from ITE's *Trip Generation* (Source #1), above.
12. Trip generation from *Airport Road Extension & Monterey Peninsula Airport North-side Development Project Traffic Impact Study Report,* Higgins Associates, January 28, 2005.
13. AM and PM peak hour trip generation from *Corral De Tierra Mixed Use Devlopment Final Traffic Report* , Hexagon Transportation Consultants, April 8, 2005. Daily trip generation estimated, based upon trip generation assumptions utilized in peak hour trip generation derivation in said report.
14. Trip generation from *Ferrini Ranch Subdivision Traffic Impact Analysis* , Higgins Associates, October 29, 2008.

TRIP GENERATION FOR CUMULATIVE PROJECTS

PROJECT	SIZE	DAILY TRIP RATE	DAILY TRIPS	AM PEAK HOUR PEAK HOUR VOL.	AM PEAK HOUR (% OF DAILY)	AM PEAK HOUR IN	AM PEAK HOUR OUT	PM PEAK HOUR PEAK HOUR VOL.	PM PEAK HOUR (% OF DAILY)	PM PEAK HOUR IN	PM PEAK HOUR OUT
City of Marina:											
17. The Dunes on Monterey Bay [2]											
Phases 2 & 3	- -	-	45,662	2,896	(6%)	1,762	1,134	4,561	(10%)	2,127	2,434
18. CSUMB Students (2014-2025) [3]	6,107 students	-	5,918	524	(9%)	419	105	524	(9%)	158	366
City of Seaside:											
19. The Projects at Main Gate [4]	- -	-	26,067	716	(3%)	437	279	1,931	(7%)	934	997
20. Veterans Cemetery	164 Acres	4.73	776	28	(4%)	20	8	138	(18%)	46	92
21. West Broadway Corridor [5]	- -	-	3,783	350	(9%)	191	159	362	(10%)	134	228
22. In-N-Out Restaurant [6]	159 seats	-	2,251	22	(1%)	19	3	172	(8%)	83	89
23. Dadwal proposed hotel and restaurant							0				
Hotel	110 rooms	-	611	58	(9%)	34	24	66	(11%)	32	34
Restaurant	8,000 sq. ft.	127.15	1,017	86	(8%)	47	39	79	(8%)	47	32
24. Monterey Downs and Horse Park											
Horse Park [7]	- -	-	1,507	151	(10%)	132	19	204	(14%)	20	184
Single-Family Dwelling Units	1,280 homes	-	10,963	906	(8%)	227	679	1,042	(10%)	656	386
Commercial Center	330,000 sq. ft.	-	14,756	317	(2%)	197	120	1,333	(9%)	640	693
Hotel (Extended Stay)	256 rooms	7.27	1,861	148	(10%)	87	61	159	(9%)	95	64
Office Park	100,000 sq. ft.	-	1,451	261	(18%)	232	29	218	(15%)	31	187
Hotel	200 rooms	-	1,417	106	(7%)	63	43	120	(8%)	59	61
Tennis and Swim Club	5,000 sq. ft.	43.00	215	15	(7%)	9	6	15	(7%)	9	6
Internal Reduction (10%)			-3,217	-190		-95	-95	-309		-151	-158
Unincorporated Monterey County:											
25. Wang Subdivision [8]											
Single-Family Homes	23 Units	9.57	220	17	(8%)	4	13	23	(10%)	14	9
Inclusionary Housing	6 Units	5.86	35	3	(9%)	1	2	3	(9%)	2	1
26. Harper Canyon / Encina Hills Subdivision [9]	17 Units	9.57	163	13	(8%)	3	10	17	(10%)	11	6
Carmel Valley:											
27. September Ranch	110 Units	9.57	1,053	83	(8%)	21	62	111	(11%)	70	41
28. Rancho Canada	281 Units	9.57	2,689	211	(8%)	53	158	284	(11%)	179	105
TOTAL CUMULATIVE PROJECTS			119,198	6,721		3,863	2,858	11,053		5,196	5,857
TOTAL APPROVED PROJECTS (FROM **EXHIBIT 4**)			72,966	4,136		1,832	2,304	6,468		3,482	2,986
TOTAL APPROVED AND CUMULATIVE PROJECTS			192,164	10,857		5,695	5,162	17,521		8,678	8,843

Notes:

1. Traffic volumes are based on trip generation rates quoted by the Institute of Transportation Engineers, *Trip Generation* , 6th Edition, 1997, 7th Edition, 2003, 8th Edition, 2008, and 9th Edition, 2012, unless otherwise noted.
2. Trip generation from *Marina University Villages Mixed Use Development Traffic Impact Study Report* , Higgins Associates, December 17, 2004.
3. Trip generation from *CSUMB 2007 Master Plan Traffic Impact Analysis* , Higgins Associates, November 5, 2007. Linearly adjusted to project 2014 enrollment.
4. Trip generation from *Seaside Main Gate Retail Development Traffic Impact Analysis* , Hexagon Transportation Consultants, March 26, 2008.
5. Trip generation from *West Broadway Urban Village Specific Plan Transportation Study* , Fehr & Peers, May 2004. Includes proposed library opportunity site.
6. Trip generation from *In-N-Out Burger Drive-Through Restaurant Traffic Impact Analysis* , LSA Associates, March 2011.
7. Letter to D. Munn, *Monterey Horse Park, Monterey County, California - Estimated Trip Generation of Proposed New Facility* , Higgins Associates, January 14, 2004.
8. Trip generation from *Wang Subdivision Traffic Impact Analysis* , Higgins Associates, December 21, 2005.
9. Trip generation from *Harper Canyon / Encina Hills Subdivision Traffic Impact Analysis* , Hatch Mott MacDonald, December 15, 2009.

MONTEREY
REGIONAL AIRPORT

Appendix N

FAA REVENUE DIVERSION INFORMATION

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

[Docket No. 28472]

Policy and Procedures Concerning the Use of Airport Revenue

AGENCY: Federal Aviation Administration (FAA) DoT

ACTION: Policy statement.

SUMMARY: This document announces the final publication of the Federal Aviation Administration policy on the use of airport revenue and maintenance of a self-sustaining rate structure by Federally-assisted airports. This statement of policy (''Final Policy'') was required by the Federal Aviation Administration Authorization Act of 1994, and incorporates provisions of the Federal Aviation Administration Reauthorization Act of 1996. The Final Policy is also based on consideration of comments received on two notices of proposed policy issued by the FAA in February 1996, and December 1996, which were published in the **Federal Register** for public comment. The Final Policy describes the scope of airport revenue that is subject to the Federal requirements on airport revenue use and lists those requirements. The Final Policy also describes prohibited and permitted uses of airport revenue and outlines the FAA's enforcement policies and procedures. The Final Policy includes an outline of applicable record-keeping and reporting requirements for the use of airport revenue. Finally, the Final Policy includes the FAA's interpretation of the obligation of an airport sponsor to maintain a self-sustaining rate structure to the extent possible under the circumstances existing at each airport.

DATES: This Final Policy is effective February 16, 1999.

FOR FURTHER INFORMATION CONTACT: J. Kevin Kennedy, Airport Compliance Specialist, Airport Compliance Division, AAS–400, Office of Airport Safety and Standards, 800 Independence Avenue, SW., Washington, DC 20591, telephone (202) 267–8725; Barry L. Molar, Manager, Airport Compliance Division, AAS–400, Office of Airport Safety and Standards, 800 Independence Avenue, SW., Washington, DC 20591, telephone (202) 267–3446.

SUPPLEMENTARY INFORMATION:

Outline of Final Policy

The Final Policy implements the statutory requirements that pertain to the use of airport revenue and the maintenance of an airport rate structure that makes the airport as self-sustaining as possible. The Final Policy generally represents a continuation of basic FAA policy on airport revenue use that has been in effect since enactment of the Airport and Airway Improvement Act of 1982 (AAIA), currently codified at 49 U.S.C. § 47107(b). The FAA issued a comprehensive statement of this policy in the Notice of Proposed Policy dated February 26, 1996 (Proposed Policy), and addressed four particular issues in more detail in the Supplemental Notice of Proposed Policy dated December 18, 1996 (Supplemental Notice). The Final Policy includes provisions required by the Federal Aviation Administration Authorization Act of 1994, Public Law 103–305 (August 23, 1994) (FAA Authorization Act of 1994), and the Airport Revenue Protection Act of 1996, Title VIII of the Federal Aviation Administration Reauthorization Act of 1996, Public Law 104–264 (October 9, 1996), 110 Stat. 3269 (FAA Reauthorization Act of 1996). The Final Policy also includes changes adopted in response to comments on the Proposed Policy and Supplemental Notice.

The Final Policy contains nine sections. Section I is the Introduction, which explains the purpose for issuing the Final Policy and lists the statutory authorities under which the FAA is acting.

Section II, ''Definitions,'' defines federal financial assistance, airport revenue and unlawful revenue diversion.

Section III, ''Applicability of the Policy,'' describes the circumstances that make an airport owner or operator subject to this Final Policy.

Section IV, ''Statutory Requirements for the Use of Airport Revenue,'' discusses the statutes that govern the use of airport revenue.

Section V, ''Permitted Uses of Airport Revenue,'' describes categories and examples of uses of airport revenue that are considered to be permitted under 49 U.S.C. 47107(b). The discussion is not intended to be a complete list of all permitted uses but is intended to provide examples for practical guidance.

Section VI, ''Prohibited Uses of Airport Revenue,'' describes categories and examples of uses of airport revenue not considered to be permitted under 49 U.S.C. 47107(b). The discussion is not intended to be a complete list of all prohibited uses but is intended to provide examples for practical guidance.

Section VII, ''Policies Regarding Requirement for a Self-Sustaining Airport Rate Structure,'' describes policies regarding the requirement that an airport maintain a self-sustaining airport rate structure. This is a new section of the policy, which provides more complete guidance on the subject than appeared in either the Proposed Policy or Supplemental Notice.

Section VIII, ''Reporting and Audit Requirements,'' addresses the requirement for the filing of annual airport financial reports and the requirement for a review and opinion on airport revenue use in a single audit conducted under the Single Audit Act, 31 U.S.C. §§ 7501–7505.

Section IX, ''Monitoring and Compliance,'' describes the FAA's activities for monitoring airport sponsor compliance with the revenue-use requirements and the requirement for a self-sustaining airport rate structure and the range of actions that the FAA may take to assure compliance with those requirements. Section IX also describes the sanctions available to FAA when a sponsor has failed to take corrective action to cure a violation of the revenue-use requirement.

Background

Governing Statutes

Four statutes govern the use of airport revenue: the AAIA; the Airport and Airway Safety and Capacity Expansion Act of 1987; the FAA Authorization Act of 1994; and the FAA Reauthorization Act of 1996. These statutes are codified at 49 USC 47101, *et seq.*

Section 511(a)(12) of the AAIA, part of title V of the Tax Equity and Fiscal Responsibility Act, Public Law 97–248, (now codified at 49 USC 47107(b)) established the general requirement for use of airport revenue. As originally enacted, the revenue-use requirement directed public airport owners and operators to ''use all revenues generated by the airport * * * for the capital or operating costs of the airport, the local airport system, or other local facilities which are owned or operated by the owner or operator of the airport and directly related to the actual transportation of passengers or property.''

The original revenue-use requirement also contained an exception, or ''grandfather'' provision, permitting certain uses of airport revenue for non-airport purposes that predate the AAIA.

The Airport and Airway Safety and Capacity Expansion Act of 1987, Public Law 100–223 (December 30, 1987), narrowed the permitted uses of airport revenues to nonairport facilities that are ''substantially'' as well as directly related to actual air transportation; required local taxes on aviation fuel enacted after December 30, 1987, to be

spent on the airport or, in the case of state taxes on aviation fuel, state aviation programs or noise mitigation on or off the airport; and slightly modified the grandfather provision.

The FAA Authorization Act of 1994 Act included three sections regarding airport revenue.

Section 110 added a policy statement to Title 49, Chapter 471, ''Airport Development,'' concerning the preexisting requirement that airports be as self-sustaining as possible, 49 USC § 47101(a)(13).

Section 111 added a new sponsor assurance requiring airport owners or operators to submit to the Secretary and to make available to the public an annual report listing all amounts paid by the airport to other units of government, and the purposes for the payments, and a listing of all services and property provided to other units of government and the amount of compensation received. Section 111 also requires an annual report to the Secretary containing information on airport finances, including the amount of any revenue surplus and the amount of concession-generated revenue.

Section 112(a) requires the Secretary to establish policies and procedures that will assure the prompt and effective enforcement of the revenue-use requirement and the requirement that airports be as self-sustaining as possible.

Section 112(b) amends 49 USC § 47111, ''Payments under project grant agreements,'' to provide the Secretary, with certain limitations, to withhold approval of a grant application or a new application to impose a Passenger Facility Charge (PFC) for violation of the revenue-use requirement. Section 112(c) authorizes the Secretary to impose civil penalties up to a maximum of $50,000 on airport sponsors for violations of the revenue retention requirement. Section 112(d) requires the Secretary, in administering the 1994 Authorization Act's revenue diversion provisions and the AIP discretionary grants, to consider the amount being lawfully diverted pursuant to the grandfathering provision by the sponsor compared to the amount being sought in discretionary grants in reviewing the grant application. Consequently, in addition to the prohibition against awarding grants to airport sponsors that have illegally diverted revenue, the FAA considers the lawful diversion of airport revenues by airport sponsors under the grandfather provision as a factor militating against the distribution of discretionary grants to the airport, if the amounts being lawfully diverted exceed the amounts so lawfully diverted in the airport's first year after August 23, 1994.

Section 112(e), which amended the Anti-Head Tax Act, 49 USC § 40116(d)(2)(A), prohibits a State, political subdivision, or an authority acting for a State or political subdivision from collecting a new tax, fee, or charge which is imposed exclusively upon any business located at a commercial service airport or operating as a permittee of the airport, other than a tax, fee, or charge utilized for airport or aeronautical purposes.

Title VIII of the FAA Reauthorization Act of 1996 included new provisions on the use of airport revenue. Among other things, section 804 codifies the preexisting grant-assurance based revenue-use requirement as 49 U.S.C. § 47133. Section 804 also expands the application of the revenue-use restriction to any airport that is the subject of Federal assistance.

Section 805, codified as 49 U.S.C. § 47107(m) *et seq.*, requires recipients of Federal assistance for airports who are subject to the Single Audit Act to include a review and opinion on airport revenue use in single audit reports.

Under section 47107(n), the Secretary, acting through the Administrator of the FAA, will perform fact finding and conduct hearings in certain cases; may withhold funds that would have otherwise been made available under Title 49 of the U.S. Code to a sponsor including another public entity of which the sponsor is a member entity, and may initiate a civil action under which the sponsor shall be liable for a civil penalty, if the Secretary receives a report disclosing unlawful use of airport revenue. Section 47107(n) also includes a statute of limitations that prevents the recovery of funds illegally diverted more than six years after the illegal diversion occurs. The Secretary is also authorized to recover civil penalties in the amount of three times the unlawfully diverted airport revenue under 49 U.S.C. § 46301(n)(5).

Section 47107(o) requires the Secretary to charge a minimum annual rate of interest on the amount of any illegal diversion of revenues. Interest is due from the date of the illegal diversion.

Section 47107(l)(5) imposes a statute of limitation of six years after the date on which the expense is incurred for repayment of sponsor claims for reimbursement of past expenditures and contributions on behalf of the airport. A sponsor may claim interest on the amount due for reimbursement, but only from the date the Secretary determines that the airport owes a sponsor.

Procedural History

In response to provisions in the 1994 Authorization Act, the FAA issued the Proposed Policy. (61 FR 7134, February 26, 1996) After reviewing all comments received in response to the notice, the FAA issued the Supplemental Notice on December 11, 1996, and requested further public comment. (61 FR 66735, December 18, 1996) Although the FAA published both documents as proposed policies, both notices stated that the FAA would apply the policies in reviewing revenue-use issues pending publication of a final policy.

The Department received 32 comments on the Proposed Policy and received 50 comments on the Supplemental Notice. Comments were received from airport owners and operators, airline organizations, transit authorities, and affected businesses and organizations. Most of the commenters were airport owners and operators. The Airport Council International-North America and the American Association of Airport Executives also provided comments supporting the sponsor/operator positions. Two major groups commented on behalf of the airlines—the Air Transport Association of America and the International Air Transport Association.

The Aircraft Owners and Pilots Association and the National Air Transportation Association commented on behalf of the general aviation and private aircraft owners. AOPA was primarily concerned with sponsor/airport accountability and the prompt and effective enforcement of the revenue diversion prohibitions.

Several port authorities, transit authorities, environmental groups, other public interest groups, trade associations, private businesses and individuals commented on a variety of specific issues.

The following discussion of comments is organized by issue rather than by commenter. Issues are discussed in the order they arise in the Final Policy. Airport proprietors and their representatives who took similar positions on an issue are collectively referred to as ''airport operators.'' Airlines and airline trade associations are referred to as ''air carriers'' when the organizations took common positions. The summary of comments is intended to represent the general divergence or correspondence in commenters' views on various issues. It is not intended to be an exhaustive restatement of the comments received.

In addition, many comments on the original notice of proposed policy were addressed in the supplemental notice.

Those comments are not addressed again in this discussion.

The FAA considered all comments received, even if they are not specifically identified in this summary.

Discussion of Comments by Issue

1. Applicability

a. Applicability of Policy to Privately Owned Airports

In accordance with the statutes in effect at the time it was published, the Proposed Policy applied only to public agencies that had received AIP grants for airport development. The Proposed Policy included a specific statement that it did not apply to privately owned airports that had taken AIP grants while under private ownership. The Supplemental Notice did not modify these provisions.

The Comments: A public interest group concerned about reducing airport noise and mitigating its impacts recommended that the policy should apply to operators of privately owned airports.

Final Policy: The new statutory provision added by the Reauthorization Act of 1996, governing the restriction on the use airport revenue, 49 U.S.C. § 47133, does not differentiate between publicly or privately owned airports. The statute applies to all airports that have received Federal assistance. Under the AAIA certain privately-owned airports that are available for public use are eligible to receive airport development grants. As a result, any privately owned airport that receives an AIP grant after October 1, 1996, (the effective date of the FAA Reauthorization Act of 1996), is subject to the revenue use requirements. The applicability section of the Final Policy, Section III, is modified to reflect the expansion of the revenue-use requirement to include privately-owned airports.

b. Applicability of Policy to Publicly and Privately Owned Airports Subject to Federal Assistance

As a result of the same change in the law, recipients of Federal assistance provided after October 1, 1996, other than AIP grants, are also subject to the revenue-use restrictions. However, the Reauthorization Act of 1996 did not define Federal assistance, and the legislative history does not provide guidance on the meaning of this term. In addition, it did not explicitly address the status of airports that received Federal assistance other than AIP airport development grants before October 1, 1996, and therefore were not already bound by the revenue use restrictions. These issues are addressed in the Final Policy, based on the FAA's review of the statute, its legislative history and relevant judicial decisions.

Applicability of the revenue-use requirement under § 47133 depends on the definition of the term ''Federal assistance.'' In the absence of guidance in the statute and legislative history, the FAA has relied on the interpretation given to the similar term ''Federal financial assistance'' in Federal regulations and court decisions. 28 CFR part 41, ''Implementation of Executive Order 12250, Non-discrimination on the Basis of Handicap in Federally Assisted Programs,'' section 41.4(e) establishes the definition of ''Federal financial assistance'' for all Federal agencies implementing § 504 of the Rehabilitation Act of 1973, 29 U.S.C. § 794. That definition is in turn subject to the limitation of the Department of Transportation v. Paralyzed Veterans, 477 U.S. 597 (1986) (Paralyzed Veterans), which specifically addressed the issue of whether certain facilities and services provided by the FAA in managing the national airspace system constituted federal assistance. That decision held that the provision of air navigation services and facilities to airlines by the FAA did not make the commercial airline passenger service a Federally assisted program within the meaning of § 504.

The FAA's interpretation of the term ''Federal assistance'' is included in Section II of the Final Policy, Definitions. The Final Policy's definition of ''Federal assistance'' adapts the generalized language of 28 CFR § 41.4(e) to the specific circumstances of airports receiving Federal support and reflects the holding of the Paralyzed Veterans decision. The definition lists as Federal Assistance the following:

(1) Airport development and noise mitigation grants;

(2) Transfers, under various statutory provisions, of Federal property at no cost to the airport sponsors; and

(3) Planning grants related to a specific airport.

Under this definition, FAA installation and operation of navigational aids and FAA operation of control towers are not considered Federal assistance, based on the Supreme Court decision in Paralyzed Veterans. Similarly, the FAA does not consider passenger facility charges (PFCs) to be Federal assistance even though PFCs may be collected only with approval of the FAA.

Airport development and noise mitigation grants are considered Federal assistance because they apply to a specific airport, and that airport is, therefore, ''subject to Federal assistance'' under the statute. Transfers of Federal property to an airport are considered Federal assistance because they also apply to a specific airport. Planning grants may apply to a specific airport or may be more general in nature. Under § 47133, the FAA considers only planning grants related to a specific airport to be Federal assistance.

However, not all airports that are the subject of Federal assistance are necessarily bound to the revenue-use assurance simply by the passage of § 47133. Established Federal grant law prevents a statute from being construed to modify unilaterally the terms of preexisting grant agreements absent a clear showing of legislative intent to do so. *Bennett* v. *New Jersey* 470 U.S. 632 (1985), 84 L.Ed 2d 572, 105 S.Ct. 1555. Neither the statutory language nor its legislative history indicates an intent by Congress to apply § 47133 to impose the revenue-use requirement on airports that were not already subject to it. By contrast, a recent example of Congressional intent to modify preexisting grant agreements exists in § 511(a)(14) of the Airport and Airway Improvement Act of 1982, 49 USC App. 2210(a)(14), which was recodified at 49 USC 47107(c)(2)(B). That subsection, which was added to the AAIA in 1987, established requirements for the disposal of land acquired with Federal grants that is no longer needed for airport purposes. The statute by its terms applied to an ''airport owner or operator [who] receives a grant before on or after December 31, 1987'' for the purchase of land for airport development purposes. This language demonstrated a clear Congressional intent to modify preexisting grant agreements. The language of § 47133 and its legislative history lacks any such express direction.

Therefore, the FAA does not interpret § 47133 to impose the revenue-use requirements on an airport that was not already subject to the revenue-use assurance on October 1, 1996. An airport that had accepted Surplus Property from the Federal government, but did not have an AIP grant in place on October 1, 1996, would not be subject to the revenue-use requirement by operation of § 47133. If that airport accepted additional Federal property or accepted an AIP grant on or after October 1, 1996, the airport would be subject to the revenue-use requirement. As discussed below, by operation of § 47133, the revenue-use requirement would remain in effect as long as the airport functioned as an airport.

For airports that were already subject to the revenue-use requirement on October 1, 1996, and those that become subject to the requirement after that date, the effect of § 47133 is to extend the duration of the requirement indefinitely. This application is not explicit in the statute and reference to the legislative history of the statute is necessary to determine congressional intent and the specific meaning and application of the statutory language. The legislative history of § 47133 makes it clear that Congress enacted § 47133 to extend the duration of the revenue-use requirement for airports that are already subject to it. In describing an earlier version of § 47133, the Committee on Transportation and Infrastructure of the House of Representatives stated that the reason for the change was because ''revenue diversion burdens interstate commerce even if the airport is no longer receiving grants. In recognition of this fact, the bill applies the exact same revenue diversion prohibition to airports that have a FAA certificate [modified to airports that are subject to Federal assistance in conference] as now applied to airports that receive AIP grants. For the most part, these will be the same airports.'' H.R. Rep. 104–714 (July 26, 1996) at 38, reprinted at 1996 US Code, Congressional and Administrative News at 3675. The report further stated that broadening the prohibition would ''make it clear that an airport cannot escape this prohibition [on revenue diversion] by refusing to accept AIP grants[;]'' remove ''this perverse incentive to refuse AIP grants * * *[;].'' and ''once again [encourage] all airports to use available Federal money to increase safety, capacity, and reduce noise.'' *Id.*

Any airport that had an outstanding AIP grant agreement in effect on October 1, 1996, was already bound to the same revenue use assurance that is contained in § 47133. Because § 47133 is extending the duration of an existing obligation, there is no conflict with the principle of Federal grant law outlined above.

c. Relationship of Final Policy to Airport Privatization

In the applicability and definition section of the Proposed Policy, the FAA stated that proceeds from the sale of the entire airport as well as from individual parcels of land would be considered as airport revenue. The FAA also stated that it did not intend ''to effectively bar airport privatization initiatives,'' and that the FAA would take into account ''the special conditions and constraints imposed by the fact of a change in ownership of the airport.'' 61 Fed. Reg. at 7140. The FAA proposed to remain ''open and flexible in specifying conditions on the use of revenue that will protect the public interest and fulfill the requirements and objectives of § 47107(b) without unnecessarily interfering with the appropriate privatization of airport infrastructure.'' *Id.*

Airport operators: A number of airport operators expressed concern that the guidance in the Proposed Policy was too ambiguous to encourage privatization and might discourage privatization initiatives. One operator suggested that the FAA should take a flexible approach to the proceeds of a privatization transaction when an airport's concession revenues are sufficient to allow a public owner to use some sales proceeds for nonairport purposes without increasing fees charged to aeronautical users and without continuing a need for Federal subsidy. Another airport operator suggested that the financial terms of a transaction would reflect the local circumstances in which the transaction was negotiated and recommended that the FAA account for this fact in reviewing revenue diversion claims.

Air carriers: ATA adamantly opposed the sale or transfer of a public use airport in a situation when such an action would cause airport revenue to be taken off the airport. ATA believes that the FAA does not have the flexibility or the statutory authority to require anything less than 100% compliance under 49 USC § 47107(b).

General aviation: The AOPA is concerned that the policy gives the impression that airport privatization is a fully resolved issue. The AOPA believes that the policy must avoid any implication that the issue is resolved or that the FAA endorses privatization.

Other commenters: Three public interest organizations addressed the issue of privatization from different perspectives. A group concerned with preventing and mitigating airport noise suggests that the FAA must ensure that adequate funds remain available to meet current and future airport noise mitigation needs. This group recommended that, before approving a transfer, the FAA should conduct a thorough audit of the airport's compliance with noise compatibility requirements, plans, and promises, and that the FAA should assess the adequacy of resources to address noise compatibility problems. The FAA should also require enforcement mechanisms to ensure implementation of noise compatibility and mitigation measures as a condition of the sale or transfer.

Two other groups supported a policy that does not discourage airport privatization. One of these suggested that the FAA consider defederalization of airports. The comments regarding defederalization are beyond the scope of this proceeding, because they would require statutory changes.

Final Policy: The Final Policy adopts the basic approach of the Proposed Policy toward privatization, with some language changes for clarity and readability. In addition, the Final Policy explicitly acknowledges the Airport Privatization Pilot Program.

Guidance on the process for obtaining FAA approval of the sale or lease of an airport is contained in FAA Order 5190.6a, Airport Compliance Requirements. The Final Policy is not intended to modify the process in any way. FAA approval is required for any transfer, including those between government entities. The Final Policy makes clear, however, that in processing an application for approval the FAA will: (a) treat proceeds from the sale or lease as airport revenue; and (b) apply the revenue-use requirement flexibly, taking into consideration the special conditions and constraints imposed by a change in ownership of the airport. For example, as is noted in the Final Policy, if the owner of a single airport is selling the airport, it may be inappropriate to require the seller to simply return the proceeds to the private buyer to use for operation of the airport.

The FAA requires the transfer document to bind the new operator to all the terms and grant assurances in the sponsor's grant agreement. The FAA retains sufficient authority and power through its grant assurances to ensure compliance by the new owner with all of its obligations, including any grant-based obligations relating to mitigation of environmental impacts of the airport; to conduct sponsor audits and to take other appropriate action to ensure that the airport is self-sustaining.

The Final Policy's approach to privatization does not represent, as ATA suggests, less than 100 percent compliance with the revenue-use requirement. The FAA agrees with the ATA that we cannot waive that requirement. Rather, the FAA has committed to exercise its authority to interpret the requirement in a flexible way to account for the unique circumstances presented by a change of ownership.

The Final Policy is not an endorsement of privatization and it does not resolve the policy debate about privatization. FAA will continue to review the sale or lease of an airport on

a case-by-case basis, including transfers proposed under the Airport Privatization Pilot Program, 49 U.S.C. 47134, created by § 149 of the FAA Reauthorization Act of 1996. The demonstration program authorizes the FAA to exempt five airports from Federal statutory and regulatory requirements governing the use of airport revenue. Under the program, the FAA can exempt an airport sponsor from its obligations to repay Federal grants, to return property acquired with Federal assistance, and to use the proceeds of the sale or lease exclusively for airport purposes. The latter exemption is also subject to approval by the air carriers serving the airport.

The FAA notes the concerns that the revenue-use requirement may discourage privatization. Congress addressed this prospect by enacting the Privatization Pilot Program, which authorizes the FAA to grant exemptions from sections 47107(b) and 47133 to permit the sponsor to use sales or lease proceeds for nonairport purposes, on certain conditions. That exemption would not be required unless sales or lease proceeds were airport revenue. In addition, the FAA will consider the unique circumstances—financial and otherwise—of individual transactions in determining compliance with section 47107(b), and this should address to some degree the commenters' concerns about privatization.

d. Effect of § 47133 on Return on Investment for Private Airport Owners or Operators That Accept Federal Assistance

By extending the revenue-use requirement to privately-owned airports, § 47133 requires the FAA to consider a new issue—the extent to which a private owner that assumes the revenue-use obligation may be compensated from airport revenue for the ownership of the airport. Section 47133 prohibits all such private airport owners or operators from using airport revenue for any purpose other than the capital and operating costs of the airport. However, the FAA does not consider section 47133 to preclude private owners or operators from being paid or reimbursed reasonable compensation for providing airport management services. Private operators, presently, provide airport management services at a number of airports. In many cases, these airports are publicly owned and subject to the revenue-use requirement. The private operator is providing these services under some form of contract with the public owner. These services are considered part of the operating cost of the airport owner, and the fees can be paid from airport revenue.

It is reasonable to equate private operators managing publicly owned airports with private owner/operators managing privately owned or leased airports. To avoid any confusion of the issue, reasonable compensation for management services provided by the owner of a privately-owned airport is identified as a permitted use of airport revenue in the Final Policy.

Private airport owners may typically expect a return on their capital investment. Such investment could be considered a capital cost of the airport. In the case of private owners or operators of airports who have assumed the revenue-use obligation, that obligation would limit the ability to use the return on capital invested in the airport for nonairport purposes. In particular, the FAA expects private owners to be subject to the same requirements governing a self-sustaining airport rate structure and the recovery of unreimbursed capital contributions and operating expenses from airport revenue as public sponsors. Under section 47107(l)(5), private sponsors—like public sponsors—may recover their original investment within the six-year statute of limitation. In addition, they are entitled to claim interest from the date the FAA determines that the sponsor is entitled to reimbursement under section 47107(p). Any other profits generated by a privately-owned airport subject to section 47133 (after compensating the owner for reasonable costs of providing management services) must be applied to the capital and operating costs of the airport.

This interpretation is required by provisions of 49 U.S.C. 47134, the airport privatization pilot program. Section 47134 authorizes the FAA to grant exemptions from the revenue-use requirement to permit the private operator to ''earn compensation from the operations of the airport.'' This exemption would not be necessary if section 47133 did not restrict the freedom of the private owner of a Federally-assisted airport to use the profits from the investment in the airport for nonairport purposes. This interpretation does not unreasonably burden private owners, because they receive a benefit (in the form of either Federal property added to the airport or Federal grant funds) in exchange for assuming the restrictions on the use of their profit.

e. Grandfather Provisions

The Proposed Policy included a discussion of the grandfather provisions of section 47107(b) in the section on permitted uses of airport revenue. That discussion included a list of examples of financing obligations and statutory provisions that had been previously found by the Department of Transportation to confer grandfather status.

The Comments: Two airport operators commented on this issue. One is an airport operator whose status under the grandfather provisions was under consideration by the FAA when the Proposed Policy was published. Its concerns were addressed by the FAA's consideration of its individual situation.

The second commenter is airport operator already established as a grandfathered airport operator. This commenter recommends that the Final Policy continue to recognize the rights of grandfathered airports.

Final Policy: The Final Policy continues to recognize the rights of grandfathered airport owners set forth at title 49 U.S.C. 47107(b)(2) and 47133. To qualify an airport for grandfathered status, the statute requires that local covenants, assurances or governing laws pre-dating September 2, 1982, must specifically pledge the use of airport generated revenues to support not only the airport but also the general debt obligations or other facilities of the owner or operator. However, the Final Policy is modified to reflect the requirement in the 1996 FAA Reauthorization Act that the FAA consider the increase in grandfathered payments of airport revenue as a factor militating against the award of discretionary grants.

f. Applicability to Non-municipal Airport Authorities

Lehigh-Northampton Airport Authority (LNAA): LNAA asserted that the airport revenue-use requirement does not allow FAA to regulate airport transactions with non-governmental parties and does not empower FAA to override state and local laws governing the use of airport revenue for airport marketing and promotional activities. The commenter advanced a number of arguments as to why FAA does not have authority to restrict such transactions. First, Congress has shaped the revenue diversion statute to identify financial irregularities in dealings between an airport enterprise account and another unit of government. The statute does not contemplate FAA regulation of airport financial relationships with non-government parties. Second, Congress did not intend the ''capital or operating costs'' language in the revenue diversion statute to authorize a new Federal regulatory scheme to narrow the types or levels of airport expenditures beyond

what is legal under applicable state and local law. Third, there is not a statutory requirement for FAA to regulate airport expenditures for community events or charitable contributions in the absence of facts suggesting that such expenditures are the result of undue influence by a governmental unit.

The LNAA currently has a case pending before the FAA under FAR Part 13, in which certain expenditures that LNAA characterizes as marketing and promotional expenses are being examined for consistency with the revenue-use requirement. LNAA's assertions with respect to its own promotional activities will be addressed by the FAA in that proceeding. To the extent that LNAA's practices were inconsistent with this Final Policy, LNAA will have an opportunity to argue that the Final Policy should not be applied to its situation.

The general issues of the use of airport revenue for marketing and promotional expenses and charitable donations are discussed separately below.

The FAA is not modifying the applicability of the Final Policy based on LNAA's other concerns. The language of section 47107(b) explicitly states that revenue generated by the airport may only be expended for the capital or operating costs of the airport or local airport system; it contains no limiting language concerning ''financial irregularities.'' The statute further defines expenditures for general economic development and promotion as unlawful use of airport revenue, providing specific authority over transactions that do not involve transfers of airport revenue to other governmental entities. See 49 U.S.C. 47107(l)(2). This provision grants authority for regulation of expenditures for charitable and community-use purposes.

In addition, the Congressional mandate to establish policies and procedures to ''assure the prompt and effective enforcement'' of the revenue use and self-sustainability requirements (49 U.S.C. 47107(l)(1)) provides statutory authority to adopt more detailed guidance on permitted and prohibited uses of airport revenue. Many airport operators have expressed concern over the difficulty of responding to OIG findings of unlawful revenue use without clear and specific FAA guidance on permitted and prohibited practices.

Finally, the grandfathering provision establishes Congressional intent to prohibit certain airport revenue practices authorized by state or local law that do not satisfy the specific requirements of the grandfather provisions of the AAIA.

2. Definition of Airport Revenue

a. Proceeds From Sale of Airport Property

The Proposed Policy included proceeds from the sale of airport property in the proposed definition of airport revenue. No distinction was made between property acquired with airport revenue and property acquired with other funds provided by the sponsor. In the explanatory statement, the FAA discussed alternatives it had considered, including limiting the definition to property acquired with airport revenue. (61 FR 7138) The FAA also stated that a sponsor would be able to recoup any funds it contributed to finance the acquisition of airport property as an unreimbursed capital contribution.

Airport operators: Airport operators objected to defining proceeds from the sale of airport property as airport revenue. ACI/AAAE argued that the definition would reduce incentives for airport sponsors to pursue legitimate airport endeavors. One airport operator argued that the definition constitutes a transfer of wealth from the taxpayers to the airport users, and that cities would be less willing to contribute to future airport projects. Another individual operator argued that the policy should not apply to property acquired with the sponsor's own funds and to property acquired with airport revenue before 1982. This airport operator further argues that application of the policy to property acquired before 1982 amounts to a taking of airport property without just compensation and without Congressional authorization. Finally, this operator argued that the proposed definition appears to contradict a portion of the FAA Compliance Handbook, Order 5190.6A (October 2, 1989), Paragraph 7–18, that states there is no required disposition of net revenues from sale or disposal of land not acquired with Federal assistance.

Air carriers: The ATA commented that the use of airport revenue for repayment of contributions from prior years should be limited. According to ATA, reimbursements should be permitted only when the sponsor and airport enter into a written agreement concerning the terms of reimbursement before the service or expenditure is provided.

Other commenters: A public interest organization opposed the treatment of proceeds from the sale of airport property as airport revenue. This commenter argued that the sponsor, as the principal provider of airport's land and capital, has a legitimate claim to cash-out the value of its investments and to use the proceeds for other purposes.

The Final Policy: The Final Policy does not modify the treatment of proceeds from the sale, lease or other disposal of airport property. Proceeds from the sale lease or other disposal of all airport property are considered airport revenue subject to the revenue-use requirement and this policy, unless the property was acquired with Federal funds or donated by the Federal government. While proceeds from disposal of Federally-funded and Federally-donated property are also airport revenue, these proceeds are subject to separate legal requirements that are even more restrictive than the revenue-use requirement.

As discussed in the Proposed Policy, this definition is consistent with the language of the original version of section 47107(b), which applies to ''all revenues generated by the airport.''

In addition, the Airport Privatization Pilot Program, 49 U.S.C. 47134, permits the FAA to grant exemptions from the revenue-use requirements to permit a sponsor to keep the proceeds from a sale or lease transaction, but only to the extent approved by 65 percent of the air carriers. An exemption would not be required unless the proceeds from the sale or lease of the entire airport were airport revenue within the meaning of section 47107(b) and 47133. Since the proceeds from the sale of an entire airport are airport revenue, it follows that the proceeds from the sale of individual pieces of airport property are also airport revenue.

Further, section 47107(l)(5)(A) establishes a six-year period during which sponsors may claim reimbursement for their capital and operating contributions. This limitation on seeking reimbursement could be avoided through the process of disposing of airport property, if the proceeds of sales were not themselves considered airport revenue. Through section 47107(l)(5)(A) Congress has defined the rights of airport owners and operators to recover their investments in airport property for use for nonairport purposes. Subject to the six-year statute of limitations, the sponsor is entitled to use airport revenues for reimbursement of such contributions. Section 47107(p) provides that a sponsor may also claim interest if the FAA determines that a sponsor is entitled to reimbursement, but interest runs only from the date on which the FAA makes the determination. As discussed below, the Final Policy provides flexibility to

structure future contributions to permit reimbursement over a longer period of time in order to promote the financial stability of the airport. The six-year limitation, which is incorporated in the Final Policy, also addresses ATA's request for a time limit on the airport owner or operator's ability to claim recoupment for past unreimbursed requests.

The FAA does not accept the suggestion that the definition is an unauthorized taking of sponsor property without just compensation. First, as noted, the definition is supported by the 1996 FAA Reauthorization Act, which included an express provision for an exemption from the revenue use restriction for sale and lease proceeds. Second, all airport sponsors, including the airport commenters, voluntarily agreed to their restrictions on the use of airport revenue when they accepted grants-in-aid under the AIP program. Finally, the definition does not deprive the commenter of its property. The proceeds from the disposal will still flow to the commenter sponsor to be used for a legitimate local public purpose—operation and development of the commenter's airport.

The FAA acknowledged in the Proposed Policy that existing FAA internal orders contain provisions on the status of proceeds from the disposal of airport property that are inconsistent with this Final Policy. As stated in the Proposed Policy, this inconsistency does not preclude the FAA from defining proceeds from the disposal of airport property as airport revenue in this Final Policy. Rather, ''the Policy takes precedence, and the orders will be revised to reflect the policies in this statement.'' 61 FR 7138. In addition, the provisions in the FAA internal orders are in conflict with the 1996 FAA Reauthorization Act. Because of this statutory conflict, the FAA cannot continue to apply them.

b. Revenue Generated by Off-airport Property

The Proposed Policy defined as airport revenue the revenue received for the use of property owned and controlled by a sponsor and used for airport-related purposes, but not located on the airport.

Airport operators: The ACI–NA/AAAE and two individual airport operators objected to this definition of airport revenue. The ACI–NA/AAAE stated that revenues received from off-airport activities should ordinarily not be counted as airport revenue. One airport operator argued that this definition is inconsistent with the statutory definition of airport in the AAIA. The other airport operator (the State of Hawaii) is especially concerned about revenue generated by off-airport duty fee shops.

No other comments were received.

Final Policy: The Final Policy does not modify the definition of airport revenue as it pertains to off-airport revenue. This definition is consistent with FAA's prior interpretation, which has defined as airport revenue the revenues received by the airport owner or operator from remote airport parking lots, downtown airport terminals, and off-airport duty free shops.

After enactment of the original revenue-use requirement, the FAA initiated an administrative action to require the State of Hawaii to use its revenue from off-airport duty free sales in a manner consistent with section 47107(b). In response, Congress amended the revenue-use requirement to provide a specific and limited exemption to the State of Hawaii to permit up to $250 million in off-airport duty-free sales revenue to be used for construction of highways that are part of the Federal-Aid highway system and that are located in the vicinity of an airport. See, 49 U.S.C. § 47107(j). The statutory exemption would only be necessary if the revenue from off-airport duty free shops is airport revenue within the meaning of the statute.

c. Royalties From Mineral Extraction

The Proposed Policy included royalties from mineral extraction on airport property earned by a sponsor as airport revenue.

Airport operators: One airport operator objected to including revenue from the sale of sponsor-owned mineral, natural, or agricultural products or water to be taken from the airport in the definition of airport revenue. The operator stated that the retention of mineral rights as airport property would represent a windfall to the airport at the sponsor's expense; that the Proposed Policy is contrary to congressional intent and that it would take, without compensation, valuable property rights from the sponsor. The operator also cited a prior decision where FAA concluded the production of natural gas at Erie, Pennsylvania, does not serve either the airport or any air transportation purpose. The royalties generated by such production were determined to be outside the scope of the revenue-use requirement.

Final Policy: The Final Policy retains the proposed definition of airport revenue to include the sale of sponsor-owned mineral, natural, agricultural products or water to be taken from the airport. On further review of the Erie interpretation in this proceeding, the FAA no longer considers the analogy drawn in that interpretation—between mineral extraction and operation of a convention center or water treatment plant—to be appropriate. Rather, mineral and water rights represent a part of the airport property and its value. Just as proceeds from the sale or lease of airport property constitute airport revenue, proceeds from the sale or lease of a partial interest in the property—i.e. water or mineral rights—should also be considered airport revenue. The FAA will not require an airport owner or operator to reimburse the airport for past mineral royalty payments used for nonairport purposes based on the Erie interpretation. However, all airport owners and operators will be required to treat these payments as airport revenue prospectively, starting on the publication date of the Final Policy.

With respect to agricultural products, the FAA has always treated lease revenue from agricultural use of airport property as airport revenue, even if that revenue is calculated as a portion of the revenue generated by the crops grown on the airport property. The definition in the Final Policy will assure that the airport gets the full benefit of agricultural leases of airport property, regardless of the form of compensation it receives for agricultural use of airport property.

The FAA does not consider this interpretation to create a taking of airport owner or operator property. As discussed in other contexts, the limitation on the use of airport revenue was voluntarily undertaken by the airport operator upon receiving AIP grants. In addition, the revenues generated by these activities will still flow to the sponsor for its use for a legitimate local governmental activity, the operation and development of its airport.

d. Other Issues

The Final Policy includes a discussion of the requirement of 49 U.S.C. § 40116(d)(2)(A). This provision requires that taxes, fees or charges first taking effect after August 23, 1994, assessed by a governmental body exclusively upon businesses at a commercial service airport or upon businesses operating as a permittee of the airport be used for aeronautical, as well as airport purposes. This addition is included, at the suggestion of a commenter, to comply with the statutory provision, which was enacted as section 112(d) of the 1994 FAA Authorization Act.

3. Permitted Uses of Airport Revenue

a. Promotion/marketing of the Airport

Congress, in the FAA Authorization Act of 1994, permitted the use of airport revenues for promotion of the airport by expressly prohibiting ''use of airport revenues for general economic development, marketing, and promotional activities unrelated to airports or airport systems.'' The Supplemental Proposed Policy cited this law and recognized that many airport sponsors engage in some form of promotional effort, to encourage use of the airport and increase the level of service. Accordingly, the Supplemental Notice provided that ''[a]irport revenue may be used for * * * [c]osts of activities directed toward promoting public and industry awareness of airport facilities and services, and salary and expenses of employees engaged in efforts to promote air service at the airport.'' 61 FR 66470.

However, the preamble to the Supplemental Notice stated that promotional/marketing expenditures directed toward regional economic development, rather than specifically toward promotion of the airport, would not be considered a permitted use of airport revenue. In addition, the FAA proposed to prohibit the use of airport revenue for a direct purchase of air service or subsidy payment to air carriers because the FAA does not consider these payments to be capital or operating costs of the airport.

Airport operators: In their comments to the original proposed policy, ACI–NA/AAAE requested that FAA establish a ''safe harbor,'' or a maximum dollar amount (perhaps based on a percentage of airport costs), under which an airport could spend airport revenue on certain promotional and marketing activities. Greater percentage amounts would be allowed for the costs of airport-specific activities, while lower amounts would be allowed for joint efforts for campaigns and organizations that have broader, regional marketing missions.

Several airport operators supported this ''safe harbor'' concept in their comments to the docket for the original Proposed Policy. One such commenter, without reference to ACI/AAAE's remarks, suggested a cap of 5% of an airport's budget as a ''safe harbor'' for marketing expenses that are not directly related to the airport or airport system. Furthermore, this commenter would limit the use of airport revenue to a maximum share of 20 percent of the overall cost of any joint-project budget.

ACI/AAAE did not pursue the concept of ''safe harbor'' in their comments to the docket for the Supplemental Policy, focusing instead on the discretion of the airport operator to use reasonable business judgment to determine potential benefits to the airport. Several airports concurred with the ACI–NA/AAAE position, and one airport operator added that joint-marketing expenses, if reasonable and clearly related to aviation, should be considered an operating cost of the airport.

The ACI/AAAE and several individual airport operators commented that an airport cannot be distinguished from the region served by the airport. ACI/AAAE commented that the policy should permit reasonable spending for marketing of communities and regions because airports are not ultimate destinations of passengers. Therefore, airport operators must be free to make a reasonable attempt to increase revenues by investing in the promotion of their community as a destination.

Some airports specifically opposed the ATA's suggestion of a cap, described below.

Air carriers: In its comments to the Supplemental Notice, the ATA mentioned the concept of a maximum or ''cap'' under which expenditures would be considered reasonable, but would apply it to efforts to promote the services of the airport itself. The ATA would have the policy prohibit entirely the use of airport revenue for the promotion of regional development, because ''expenditures by an airport to promote local or regional economic development—as opposed to the services and functionality of an airport—should not be considered legitimate airport costs.'' In regard to cooperative or joint-marketing expenses, the ATA focused on airport participation in joint-marketing of new airline services, suggesting that these activities be limited to a 60-day promotional period. ATA also warned against abuses of cooperative marketing, in particular programs that result in promotion of a particular airline.

The ATA rejected the airport position that use of airport revenue to fund regional promotional activities is acceptable, because airports themselves are not destinations. They stated, ''[l]ocal governments that are also airport sponsors should not be permitted to pass off local and regional promotional activities in order to charge such costs to an airport. Indeed, many civic organizations and chambers of commerce undertake such activities directly, since continued economic development directly benefits the local businesses that constitute such organizations.''

The Final Policy: The FAA has modified the provisions on permitted uses of airport revenue in regard to promotion and marketing in the Final Policy. The FAA has applied the sections 47107(b) and 47107(l) to determine to what extent various kinds and amounts of promotional and marketing activities can be considered legitimate operating costs of the airport. The permitted uses of airport revenue for marketing and promotion are split into two paragraphs, V.A.2 and V.A.3., in the Final Policy—one addressing costs that may be fully paid with airport revenue, and one addressing costs that may be shared. The issues of general economic development, direct subsidies of air carriers, the waiving of fees to airport users and airport participation in airline marketing and promotion is further addressed in Section VI.

The Final Policy provides, under V.A.2, that expenditures for the promotion of an airport, promotion of new air service and competition at the airport, and marketing of airport services are legitimate costs of an airport's operation. These expenditures may be financed entirely with airport revenue, and the expenditures may include the costs of employees engaged in the promotion of airport services. In addition, cooperative airport-airline advertising of air service at the airport may be financed with airport revenue, with or without matching funds. The FAA is prepared to rely on airport management to assure that the level of expenditures for such purposes would be reasonable in relation to the airport's specific financial situation. In addition, cooperative airport-airline advertising of air service must be conducted in compliance with applicable grant assurances prohibiting unjust discrimination in providing access to the airport.

For other advertising and promotional activities, such as regional or destination marketing, airport revenue may be used to pay a share of the costs only if the advertising or promotional material includes a specific reference to the airport. The share must be reasonable, based on the benefits to the airport of participation in the activity. The FAA construes the prohibition on ''use of airport revenues for general economic development, marketing, and promotional activities unrelated to airports or airport systems' to preclude the reliance on airport management judgment to support the use of airport revenue for general destination advertising containing no references to the airport. Likewise, the prohibition precludes adoption of a safe-harbor

provision for general promotional expenses.

Except as discussed above, the Final Policy does not limit the amounts of airport revenue that can be spent for all permitted promotional marketing and advertising activities. The FAA expects that expenditure of airport revenues for these purposes would be reasonable in relation to the airport's specific financial situation. Disproportionately high expenditures for these activities may cause a review of the expenditures on an *ad hoc* basis to verify that all expenditures actually qualify as legitimate airport costs. Examples of permissible and prohibited expenditures are included in the Final Policy itself.

b. Reimbursement of Past Contributions

The Proposed Policy permitted airport revenue to be used to reimburse a sponsor for past unreimbursed capital or operating costs of the airport. The Proposed Policy did not include a limit on how far back in time a sponsor could go to claim reimbursement, in accordance with the law in effect at the time. In addition, the Preamble noted that the FAA had not to date permitted a sponsor to claim reimbursement for more than the principal amount actually contributed to the airport. The FAA requested comment on whether the FAA should permit recoupment of interest or an inflationary adjustment or whether, in the case of contributed land, recoupment should be based on current land values.

Airport operators: ACI–NA/AAAE and a number of individual airport operators supported recoupment of interest or inflation adjustment on previous contributions or subsidies to the airport.

Air carriers: The ATA objected to the Proposed Policy and commented that recoupment should be subject to a number of requirements to prevent abuses.

The Final Policy: After the proposed policy was issued, Congress enacted legislation to limit the use of airport revenue for reimbursement of past contributions, and to limit claims for interest on past contributions. 49 U.S.C. §§ 47107(l)(5), 47107(p). The Final Policy incorporates these statutory provisions. Based on Congressional intent evidenced by the legislative history of these provisions, airport revenue may be used to reimburse a sponsor only for contributions or expenditures for a claim made after October 1, 1996, when the claim is made within six years of the contribution or expenditure. In addition, a sponsor may claim interest only from the date the FAA determines that the sponsor is entitled to reimbursement, pursuant to section 47107(p). The FAA interprets these statutory provisions to apply to contributions or expenditures made before October 1, 1996, so long as the claim is made after that date.

If an airport is unable to generate sufficient funds to repay the airport owner or operator within six years, the Final Policy permits repayment over a longer period, with interest, if the contribution is structured and documented as an interest bearing loan to the airport when it is made. The interest rate charged to the airport should not exceed a rate that the sponsor received for other investments at the time of the contribution.

c. Donations of Airport Revenue to Charitable/Community Service Organizations

The Supplemental Proposed Policy addressed the use of airport property for public recreational purposes, and addressed the use of airport funds to support community activities and for participation in community events. The FAA proposed that the use of airport revenue for such donations would not be considered a cost of operating the airport, unless the expenditure is directly related to the operation of the airport. For example, expenditures to support participation in the airport's federally approved disadvantaged business enterprise program would be considered permissible as supporting a use directly related to the operation of the airport. In contrast, expenditures to support a sponsor's participation in a community parade would not be considered to be directly related to the operation of the airport.

Airport operators: ACI–NA/AAAE contended that the expenditure of airport revenue for community or charitable purposes is appropriate and should be recognized as legitimate. Airports, regardless of their size, type, and certification or lack thereof, are important members of their local communities and, therefore, must be able to maintain their prominent, highly visible roles in their respective communities. Airports are regarded by their communities as local business enterprises and, consequently, are expected to contribute to local non-profit charitable concerns in the same manner as other local business enterprises.

Individual airport operators generally supported the position of ACI–NA/AAAE, although some individual operators acknowledged that some limitation on the expenditures may be appropriate. One suggested a *de minimis* standard; another proposed a ''safe harbor'' based on a percentage of the airport's total budget. Another urged that airport owners/operators be allowed leeway to make contributions of airport funds, in reasonable amounts and consistent with the local circumstances, and to use airport property for charitable purposes on the same basis.

Other airport operators commented that the Final Policy should give comparable treatment to the use of airport funds and airport property for community goodwill by recognizing the limited use of airport revenue to support charitable and community organizations as a legitimate operating cost of the airport.

Air carriers: Air carriers did not comment specifically on charitable contributions, although they commented extensively on the use of airport property for community or charitable purposes. Generally the air carriers suggested that use of airport property should be subject to strict conditions to avoid abuse.

Other commenters: An advocacy group in support of a particular airport commented that, in order for an airport to be as self-sustaining as possible, the use of each income dollar is critical, and that federally assisted airports must be fully responsive to the citizens of the community by providing information on the use of airport funds.

Final Policy: The Final Policy generally follows the approach of the Supplemental Notice. Airport funds may be used to support community activities, or community organizations, if the expenditures are directly and substantially related to the operation of the airport. In addition, the policy provides explicitly that where the amount of the contribution is minimal, the airport operator may consider the ''directly and substantially related to air transportation'' standard to be met if the contribution has the intangible benefit of enhancing the airport's acceptance in local communities impacted by the airport.

Expenditures that are directly and substantially related to the operation of the airport qualify inherently as operating costs of the airport. The FAA recognizes that contributions for community or charitable purposes can provide a direct benefit to the airport through enhanced community acceptance, but that benefit is intangible and not quantifiable. Where the amount of the contribution is minimal, the value of the benefit will not be questioned as long as there is a reasonable connection between the recipient organization and

the benefit of community acceptance for the airport.

However, if there is no clear relationship between the charitable or community expenditure and airport operations, the use of airport revenue may be an expenditure for the benefit of the community, rather than an operating cost of the airport. The different treatment of the use of airport funds (direct payments to charitable and community organizations) and the use of airport property (less than FMV leases for charitable or community purposes) is grounded in the applicable laws: the revenue-use requirement (section 47107(b)), which governs the use of airport funds, provides far less flexibility than the requirement for a self-sustaining rate structure (section 47107(a)(13)), which applies to the use of airport property.

Examples of permitted and prohibited expenditures are included in the Final Policy.

d. Use of Airport Revenue to Fund Mass Transit Airport Access Projects

The Supplemental Proposed Policy addressed in Part VII.C., the circumstances in which an airport sponsor could provide airport property at less than fair market value to a transit operator. The Supplemental Proposed Policy did not address the use of airport revenue to finance the construction of transit facilities. That issue, however, was raised in the comments.

Airport Operators: Two airport operators supported the use of airport revenue for the construction of transit facilities. One commenter stated that an airport should be permitted to use airport revenues and assets to provide mass transit service to on-airport commercial uses. Another commenter referred to the AIP Handbook, FAA Order 5100.38A § 555, which provides AIP project eligibility for rapid transit facilities.

Air carriers: Air carriers did not specifically discuss the use of airport revenue to finance transit facilities. However, as discussed below, they objected to providing airport property for transit facilities at nominal lease rates.

Other Commenters: Two commenters representing transit operator interests supported the expenditure of airport revenues to finance transit facilities. A transit operator stated that in order to create a better balance between transit and highway interests, transit facilities should be totally eligible expenses, paid for in the same manner as other road and parking enhancements. A transit trade association urged the FAA to take appropriate actions to ensure that passenger fees and other airport revenues are widely eligible to fund a range of airport surface transportation modes, including public transportation.

The FAA also received extensive comments on providing airport property for use by transit providers at less than FMV rents. These comments are addressed separately below.

Final Policy: The Final Policy has been modified to provide guidance on the use of airport revenues to finance airport ground access projects. The Final Policy states that airport revenue may be used for the capital or operating costs of such a project if it can be considered an airport capital project, or is part of a facility owned or operated by the airport sponsor and directly and substantially related to air transportation of passengers or property, relying directly on the statutory language of § 47107(b).

As an example, the Final Policy summarizes the FAA's decision on the use of airport revenue to finance construction of the rail link between San Francisco International Airport and the Bay Area Rapid Transit (BART) rail system extension running past the airport. In that decision, the FAA approved the use of airport revenues to pay for the actual costs incurred for structures and equipment associated with an airport terminal building station and a connector between the airport station and the BART line. The structures and equipment were located entirely on airport property, and were designed and intended exclusively for use of airport passengers. The BART extension was intended for the exclusive use of people travelling to or from the airport and included design features to discourage use by through passengers. Based on these considerations, the FAA determined that the possibility of incidental use by nonairport passengers did not preclude airport revenues from being used to finance 100 percent of the otherwise eligible cost items. For purposes of this analysis, the FAA considered ''airport passengers'' to include airport visitors and employees working at the airport.

4. Accounting Issues

a. Principles for Allocation of Indirect Costs

Based on the comments to the Proposed Policy, the FAA addressed the principles of indirect cost allocation in its Supplemental Notice. The Supplemental Notice made clear that the allocation of indirect costs is allowable under 49 USC § 47107(b), and that no particular method of cost allocation will be required, including OMB Circular A–87. To ensure, however, that indirect costs are limited to allowable capital and operating costs, the FAA proposed to apply certain general principles and prohibitions to the allocation of costs. The Supplemental Notice did not limit significantly the development of local cost allocation methodologies, or interfere with the application of Generally Accepted Accounting Principles (GAAP) and other accounting industry recognized standards.

In the Supplemental Notice, the FAA stated that it would expect that a Federally approved cost allocation plan that complied with OMB Circular A–87 or other Federal guidance and was consistent with GAAP would be reasonable and transparent, and would generally meet the requirements of section 47107(b). However, the use of a Federally approved cost allocation plan does not rule out the possibility that a particular cost item allowable under that guidance would be in violation of the airport revenue retention requirement if allocated to the airport.

The Supplemental Notice also required specifically that indirect cost allocations be applied consistently across departments to the sponsoring government agency, and not unfairly burden the airport account. The general sponsor cost allocation plan could not result in an over-allocation to an enterprise fund. In addition, the sponsor would have to charge comparable users, such as enterprise accounts, for indirect costs on a comparable basis.

Lastly, the Supplemental Notice proposed to prohibit the allocation of general costs of the sponsoring government to the airport. However, this prohibition would not affect direct or indirect billing for actual services provided to the airport by local government.

Airport Operators: Generally, airport operators agreed with the proposal to acknowledge that the allocation of indirect costs as allowable under 49 USC § 47107(b), and to provide that no particular allocation methodology, including OMB Circular A–87, be required.

One airport operator requested the FAA to further clarify that it is not imposing on airport sponsors all of the specific elements of OMB CircularA–87. The operator was concerned that the statement in the Supplemental Notice that the FAA ''believe[s] the specific principles identified by the OIG are an appropriate construction of the revenue retention requirement'' may lead to confusion over whether adherence to OMB Circular A–87 is mandatory for

allocating costs to be paid by airport revenue.

Several airport operators were concerned that the FAA would not accept the allocation of costs in accordance with a Federally-approved cost allocation plan, but could review the plan to ensure that allocation of specific cost items meet the special revenue retention requirements. For example, one airport operator commented that the FAA's approach would impose on airport sponsors burdens and requirements in excess of the detailed requirements of OMB-Circular A–87, which are designed to ensure a reasonable and consistent cost allocation system. The airport proprietor proposed that such compliance with a federally-approved cost allocation plan be considered sufficient to satisfy the revenue retention requirement.

Another airport operator proposed that the FAA revise the policy to clarify that a specific cost, as opposed to a type of cost, cannot be treated as both a direct and an indirect cost. The airport operator offered as an example a city-owned and operated airport at which some police services are provided by officers assigned exclusively to the airport and other services are provided by general duty police officers. The commenter suggested that it should be permissible to charge the airport for the officers assigned exclusively to the airport as a direct cost and to charge for the general duty officers as an indirect cost allocation.

Additionally, this commenter proposed revising the policy to clarify that costs that are chargeable to one city department on a direct basis may be charged to other city departments on an indirect basis. The airport operator offered an example in which police are exclusively assigned to a city-owned airport, but are not exclusively assigned to other city departments. The commenter argued that it would be reasonable to charge the airport for police services as a direct cost, and to charge the other departments as an indirect cost allocation.

Several airport operators were also concerned that the supplemental policy implied that a local cost allocation plan must provide that all users for a service be billed equally. For example, ACI-NA and AAAE suggested that the requirement for consistent application should be interpreted to require the local government to go through the exercise of assessing indirect costs against all governmental departments, including those wholly funded by that governmental entity. Likewise, an airport operator requested that the FAA clarify that the supplemental policy does not mean that an airport sponsor must actually bill all of its General Fund agencies for certain municipal costs in order to be able to charge such costs to its airports. All of those airport proprietors that expressed concern over this proposed policy generally commented that this issue was considered and rejected by the Department of Transportation in the Second Los Angeles International Airport Rates Proceeding, Docket OST–95–474. According to the airport proprietors, the DOT recognized that in many cases sponsor agency operations are paid from a common General Fund. Under those circumstances, it is illogical and unnecessary for one General Fund agency to bill another General Fund agency for municipal services.

One airport operator proposed that the word ''equally'' be removed from VII.B.4 of the proposed policy. The commenter urged that the FAA allow airport sponsors the flexibility to allocate costs to various users on a reasonable, equitable basis relative to the benefits received, even though specific users may sometimes be treated differently. Returning to its example of police services, the commenter suggested that if the sponsor chooses not to charge a housing authority for costs of a special police unit assigned to that authority, it should be of no concern to the FAA as long as those costs are not then charged to the airport.

Another airport operator argued that each of its proprietary departments are unique and governed by different City Charter provisions; that they make different uses of city services; and have different financial arrangements with the sponsor's general fund. This commenter argued that treating the departments the same for cost allocation purposes because the departments are enterprise funds would, therefore, serve no valid purpose.

Several airport operators disagreed with FAA's proposed policy to prohibit the indirect cost allocation of general costs of government. Several commenters stated that the proposed policy would reverse longstanding practice at many airports and could be inconsistent with federally-approved cost allocation plans, which provide for the allocation of a share of indirect costs of various local government functions. One airport operator argued that there is no statutory basis for prohibiting the allocation of general costs of government, other than costs for particular identified services.

Finally, one airport operator commented that the proposed policy does not sufficiently clarify the appropriate allocations for fire and police stations that do not serve the airport exclusively. The airport operator proposed that policy explicitly permit a sponsor to allocate costs based on the intended purpose and value of the station to the airport, not its actual use. The airport operator argues that a more flexible approach could better implement the applicable statutory provision that prohibits ''direct payments or indirect payments, other than payments reflecting the value of services and facilities provided to the airport.''

Airlines: ATA supports the proposed policy clarification that no particular cost allocation methodology for indirect costs is preferred.

The Final Policy: The Final Policy reflects a different and simplified approach to indirect cost allocation that is intended to facilitate development of permissible cost allocation plans and the review of those plans in the single audit process. The Final Policy specifies that the cost allocation plans must be consistent with Attachment A of OMB Circular A–87. Attachment A sets forth general principles for developing cost allocation plans. Those principles are essentially a restatement of the principles proposed in the Supplemental Policy. By referring to Attachment A, the Final Policy establishes a standard that is well understood by airport cost accountants and by airport operators' independent auditors. The Final Policy does not require compliance with the other attachments to OMB Circular A–87, which include more rigid requirements and defines categories of grant recipient costs that are eligible and ineligible for reimbursement with Federal grant funds.

The Final Policy continues to specify that the costs allocated must themselves be eligible for expenditure of airport revenue under section 47107(b). Attachment A to OMB Circular A–87 provides principles for cost allocation methodologies. The cost items that may be charged to airport revenue are determined by the requirements of section 47107(b). Therefore, sponsors, and the FAA, cannot rely solely on compliance with OMB Circular A–87 to assure that the costs items charged to the airport in a Federally approved cost allocation plan are consistent with section 47107(b).

The Final Policy continues to specify that the airport must not be charged directly and indirectly for the same costs. The FAA is not persuaded that the example of police services offered by an airport sponsor requires a modification of this requirement. This

provision is not intended to preclude both the direct and indirect billing in the situation cited by the commenter—where police services are provided to the airport on both an exclusive-use and a shared-use basis. In the cited example, it would be preferable to bill for police exclusively assigned to the Airport on a direct cost basis. It would be impossible, however, to bill for the shared-use police without engaging in some form of indirect cost allocation. The FAA did not intend the supplemental policy to preclude treatment of police services as both direct and indirect costs in these circumstances, only to preclude double billing on both a direct and indirect basis, for the same police costs.

Similarly, with respect to the second example of police services where the airport receives exclusive-use police services and other sponsor departments receive shared-use police services, the FAA did not intend the Supplemental Notice to preclude disparate billing methodologies. Inherent in Attachment A is that comparable units of a sponsoring government making comparable uses of the sponsor's services should have costs allocated and billed in a comparable fashion. The clarification noted above should address this situation as well. In the second example sited, the FAA would consider the sponsor departments receiving shared-use police services not to be comparable to the airport receiving exclusive use police services.

The Final Policy also provides that the allocation plan must not burden the airport with a disproportionate share of allocated costs, and requires that all comparable units of the airport owner or operator be billed for indirect costs billed to the airport. The FAA is unwilling to accept the suggestion that comparable users of a service may sometimes be treated differently for billing purposes, so long as the costs attributed to one unit of government are not then charged to the airport. The FAA believes that such practices would result in an unfair burden being placed upon the airport simply because of the airport's ability to pay.

This provision, however, is not intended to require a sponsor's General Fund activities to bill other General Fund activities for indirect costs that are properly allocable to those activities, if the airport is billed. The policy is clear that comparable billing for services is required only for comparable users.

Enterprise funds need not be treated as comparable to units of a sponsoring government financed from the sponsor's general fund, and comparable billing between enterprise funds and other units of government is not required. While the FAA may presume that enterprise funds are comparable to each other, an airport sponsor is free to demonstrate that particular enterprise funds are sufficiently different in material ways—such as the way they consume sponsor services or their overall financial relationships with the sponsor—to justify different practices in charging for indirect costs. The Final Policy does not further define comparability because decisions on comparability will depend on the specific circumstances of a sponsor. The Final Policy also explicitly permits the allocation of general costs of government and central services costs to the airport, if the cost allocation plans meets the Final Policy's requirements. As specified in the Final Policy, however, the allocation of these costs to the airport may require special scrutiny to assure that the airport is not being burdened with a disproportionate share of the allocated costs.

In addition, the FAA continues to recognize that use of airport revenue to pay some expenses not normally considered to be allowable pursuant to OMB Circular A–87, such as fire and police services, is consistent with the revenue retention requirement. If such costs are allocated as an indirect cost in accordance with the Final Policy, they will be considered by the FAA as acceptable charges.

The Final Policy is modified to permit the allocation of certain categories of a sponsor's general cost of government as an indirect charge to the airport. Such charges include indirect expenses of the Office of Governor of a State, State legislatures, offices of mayors, county supervisors, city councils, etc. An airport owner's or operator's central service costs may also be allocated to the airport. The Final Policy specifies that allocation of these categories of costs to the airport may require special scrutiny to assure that the airport is not being burdened with a disproportionate share of the costs.

The FAA proposed to prohibit the allocation of all general costs to the airport on the grounds that the payment of such costs with airport revenue would be inconsistent with the purpose of the revenue use restriction—to avoid subsidy of general sponsor governmental activity. It is clear from the comments that airports routinely pay for a share of the general costs the legislative and executive branches of the governmental unit of which the airport is a part under cost allocation plans prepared in accordance with GAAP. Further, the comments demonstrate that the payment of legislative and executive branch costs by airport revenue can be justified as a cost of the airport because the legislative and executive branches have direct, tangible oversight and control responsibilities for the airport, and their activities provide direct benefits to the airport, such as in the areas of funding, capital development, and marketing.

In addition, under the Final Policy, the costs of shared-use facilities must be allocated to all users of the facility, even if the original purpose of constructing the facility was to provide exclusive use or benefit to the airport. While a sponsor-owned facility may have originally been established for the benefit of the airport, the FAA believes that the purpose of the facility can change from time to time based on local circumstances and that allocation of costs should be based on current purpose, as well as use. The FAA may consider a number of factors in determining current purpose, including current use, design and functionality.

b. Standard of Documentation for the Reimbursement of Cost of Services and Contributions to Government Entities

In its administration of airport agreements, the FAA is not normally concerned with the internal management or accounting procedures used by airport owners. As a matter of policy and procedure, the FAA has consistently required that reimbursement of capital and operating costs of an airport made by a government entity must be clearly supportable and documented.

Neither the Proposed Policy nor the Supplemental Notice explicitly discussed a standard of documentation that must be achieved for a sponsor to claim reimbursement for services and/or contributions it provided to the airport. However, events subsequent to the issuance of both documents indicate a need for FAA to provide specific guidance on the standard of documentation that will support the expenditure of airport revenues.

In the examination of a possible diversion of airport revenue by the City of Los Angeles at Los Angeles International, Ontario, Van Nuys and Palmdale Airports (FAA Docket No. 16–01–96), the FAA reviewed the underlying documentation which the City of Los Angeles offered to support the payment of approximately $31 million in airport revenue to the Los Angeles' general fund as the reimbursement of sponsor contributions and services provided to the airport. In the Director's Determination dated March 17, 1997, the FAA stated its standard of documentation to justify such reimbursements. Accordingly, the

FAA is including that standard in the Final Policy.

The Final Policy requires that reimbursements for capital and operating costs of the airport made by a government entity, both direct and indirect, be supported by adequate documentary evidence. Adequate documentation consists of underlying accounting records and corroborating evidence, such as invoices, vouchers and cost allocation plans, to support all payments of airport revenues to other government entities. If this underlying accounting data is not available, the Final Policy allows reimbursement to a government entity based on audited financial statements, if such statements clearly identify the expenses as having been incurred for airport purposes consistent with the Final Policy statement. In addition, the Final Policy provides that budget estimates are not a sufficient basis for reimbursement of government entities. Budget estimates are just that—estimates of projected expenditures, not records of actual expenditures. Therefore, budget estimates cannot be relied on as documentary evidence to show that the funds claimed for reimbursement were actually expended for the benefit of the airport.

Indirect cost allocation plans, however, may use budget estimates to establish pre-determined indirect cost allocation rates. Such estimated rates must, however, be adjusted to actual expenses in the subsequent accounting period.

5. Prohibited Uses of Airport Revenue

a. Impact Fees/Contingency Fees

The Proposed Policy prohibited the payment of impact fees assessed by a nonsponsoring governmental body that the airport sponsor is not obligated to pay or that exceed such fees assessed against commercial or other governmental entities. The Supplemental Notice did not modify this provision. The term ''impact fees'' was not defined in the Proposed Policy.

Airport operators: One Florida airport sponsor stated that impact fees should be allowable to either a sponsoring or non-sponsoring governmental body. Another commented that the language referring to a ''non-sponsoring'' governmental body was vague and confusing. Within the state of Florida, impact fees are typically administered by a non-sponsoring government body. It was stated that the wording did not seem to prohibit impact fee payments when assessed by a ''sponsoring'' agency, or impact fees that an airport sponsor is obligated to pay.

The Final Policy: For clarity, the Final Policy is modified to delete the reference to ''non-sponsoring'' governmental body and to delete the reference to fees the sponsor is not obligated to pay. In addition, the FAA is adding a statement that in appropriate circumstances, airport revenue may be used to reimburse a governmental body for expenditures that the imposing government will incur as a result of on-airport development, based on actual expenses incurred.

The effect of the deletions is to broaden the prohibition to all impact fees, within the meaning of the term used in the policy statement. As such, the deletions are consistent with the statutory prohibition on payment of airport revenues that do not reflect the value of services or facilities actually provided to the airport. Until a governmental unit undertakes the activity for which the impact fee is intended to compensate, it is impossible to know with certainty whether the impact fee is an accurate reflection of the cost of the activity attributable to the airport or its value to the airport, or even that the activity will occur. This situation is true regardless of both the status of the governmental unit as airport sponsor and the status of the fee as discretionary. The FAA understands that many local laws or regulations authorizing impact fees do not require the fees to be spent to mitigate or accommodate the results of the airport action that triggers the fee. The FAA has no basis for assuring the payment of impact fees would be consistent with the purpose of section 47107(b)—to prevent an airport sponsor who received Federal assistance from using airport revenues for expenditures unrelated to the airports.

The broader prohibition is consistent with applicable FAA policies. Longstanding FAA policy has permitted a sponsor to claim reimbursement from airport revenue only for ''clearly supportable and documented charges, * * * supported by documented evidence.'' FAA Order 5190.6A, par. 4–20.a(2)(c)(ii). An impact fee assessed before the imposing government incurred any expenses to accommodate airport growth would not meet this standard.

In addition, a standard of documentation required by the Final Policy applies to all expenditures of airport revenues subject to section 47107(b), including impact fee payments. That standard requires that expenditures of airport revenues be supported by data on the actual costs incurred for the benefit of the airport, not by budget or other estimates, which impact fees essentially are. The Final Policy will allow submission of those assessed fees resulting from the proposed development when the amount of the fees become fully quantifiable, as provided for in Section IV of the Final Policy, following implementation by the imposing government of the mitigation measures for which the impact fee is assessed. At that time, the FAA can best determine whether the fees assessed against airport revenue satisfy the requirements of section 47107(b) and this policy. In unusual circumstances, the FAA may permit a prepayment of estimated impact fees at the commencement of a mitigation project, if the funds are necessary to permit the mitigation project to go forward, so long as there is a reconciliation process that assures the airport is reimbursed for any overpayments, based on actual project costs, plus interest.

However, the Final Policy does take into account the potential that an airport operator may be required by state or local law to finance the costs of mitigating the impact of certain airport development projects undertaken by the airport sponsor. Therefore, where airport development causes a government agency to take an action, such as constructing a new highway interchange in the vicinity of the airport, airport revenues may be used equal to the prorated share of the cost. In all cases, the action must be shown to be necessitated by the airport development. In the case of infrastructure projects, such impact mitigation must also be located in the vicinity of the airport. This proximity requirement is not being applied to all mitigation measures because some mitigation measures—especially certain environmental mitigation measures—may not occur in the vicinity of the airport.

The Final Policy also acknowledges the possibility that an airport operator may be bound by local or state law to use airport revenue to pay an impact fee that is prohibited by this policy. The Final Policy states that the FAA will consider any such local circumstances in determining appropriate corrective action.

b. Subsidy of Air Carriers

As discussed in Section V ''Permitted Uses,'' the Supplemental Notice acknowledged the fact that Congress, in the 1994 FAA Authorization Act, effectively authorized the use of airport revenue for promotion of the airport by expressly prohibiting ''use of airport revenues for general economic development, marketing, and

promotional activities unrelated to airports or airport systems.'' At the same time, that statutory provision also limited the scope of acceptable promotional activity.

In the Supplemental Notice, the FAA proposed new policy language that more clearly addressed the kinds of promotional and marketing activities that are and are not legitimate operating costs of the airport under 47107(b). In the Supplemental Notice, Section VIII(I), the FAA proposed that ''[d]irect subsidy of air carrier operations'' is a prohibited use of airport revenue because it is not considered a cost of operating the airport. The FAA drew a distinction between methods of encouraging new service. Supplemental Notice proposed to allow the use of airport revenue to encourage passengers to use the airport through promotional activities, including cooperative promotional activities with airlines and to allow airport operators to enhance the viability of new service through fee incentives, on the one hand. As noted, the FAA proposed to prohibit the use of airport revenue to simply buy increased use of the airport by paying an air carrier to operate aircraft, on the other. The FAA considered the former activities to be a permitted expenditure for the promotion and marketing of the airport and the latter to be a prohibited expenditure for general economic development. The FAA explained in the preamble to the Supplemental Notice that neither promotional activities nor promotional fee discounts would be considered a prohibited direct subsidy of airline operations. 61 FR at 66738.

Airport operators: In their comments on the Supplemental Notice, ACI–NA/AAAE state that, generally, an expenditure or activity should not be considered revenue diversion if there is a reasonable expectation that such an expenditure or activity will benefit the airport. Furthermore, they note that the law does not single out direct air carrier subsidy or fee waivers for more stringent scrutiny than other marketing activities. This argument in favor of the reasonable business judgement of the airport management should be applied to the use of airport revenue for promotion and marketing not unrelated to the airport, including direct air carrier subsidies and fee waivers. ACI/AAAE stated ''both forms of financial assistance should be permitted, if an airport has a reasonable expectation that the subsidy will benefit the airport and the subsidy or discount is made available on a non-discriminatory basis.''

ACI/AAAE further stated that there is no real distinction between direct subsidy and fee waivers, as well as none between direct subsidy and the residual airport costing methodologies, making the distinction in the policy illogical. They predicted that the proposed policy is likely to promote detrimental effects, including eliminating air service to some small airports, increasing congestion at dominant hubs at the expense of medium-sized airports, reducing potential competition and raising fares.

Several individual airport operators concurred with the ACI–NA/AAAE position. One operator commented that any subsidies should be permitted, as long as the airport remains self-sustaining and the subsidies are not included in airline costs in calculating landing fees, terminal rents and other user charges.

Another airport operator, the LNAA, which is engaged as a party in a 14 CFR Part 13 investigation regarding its former air carrier subsidy program, commented that there is no real difference between an airport making a direct subsidy to an air carrier or waiving fees.

Two airport operators expressed different views. One operator agreed that airport revenues should not be used to subsidize new air carrier service because the practice of subsidization could lead to destructive competition for air service among airports. Another airport operator stated that it ''does not currently engage in nor does it contemplate any form of direct subsidy to air carriers in exchange for air service.'' This operator considers the Supplemental Notice to provide adequate flexibility to airport operators to foster and promote air service development.

Air carriers: The ATA strongly opposed the assertion that direct subsidies of airline operations with airport revenue may be considered to be operating costs of the airport and would extend the prohibition to indirect subsidies. They argued that the distinction in the proposed policy that allows fee waivers under certain circumstances, but prohibits direct subsidy is illogical. Both result in revenue diversion, whether the beneficiary is ''a start up carrier, a new entrant in a market, or an existing carrier at an airport.'' The ATA further commented, in connection with joint marketing endeavors, that the permissible ''promotional period'' should be defined, as should the scope of permissible marketing activities.

The Final Policy: The FAA has clarified the policy provision on the direct subsidy of air carriers with airport revenue; however, the prohibition remains, as does the distinction between direct subsidy and the waiving of fees and the joint promotion of new service. The FAA has applied the test of section 47107(b) to determine to what extent various kinds and amounts of promotional and marketing activities can be considered legitimate operating costs of the airport.

In pursuit of uniformity, the FAA has integrated references to the section on the permitted uses of airport revenue, as well as to the section on self-sustainability, to assist airport operators in pursuing reasonable strategies to promote the airport and provide incentives to encourage new air service. Among other things, marketing of air service to the airport, and expenditures to promote the airport to potential air service providers can be treated as operating costs of the airport. Of course, support for marketing of air service to the airport must be provided consistently with grant assurances prohibiting unjust discrimination.

The setting of fees is a recognized management task, based on a number of considerations, including the airport management's assessment of the services needed by airport consumers, and the airport management's assessment of the financial arrangements necessary to secure that service. The FAA has consistently maintained that fee waivers or discounts involving no expenditure of airport funds raise issues of compliance with the self-sustaining rate structure requirement, not the revenue-use requirement. The Final Policy therefore, permits fee waivers and discounts during a promotional period. The waiver or discount must be offered to all users that are willing to provide the type and level of new service that qualifies for the promotional period. The Policy limits the fee waiver or discount to promotional periods because of the requirement that the airport maintain a self-sustaining airport rate structure. In addition, indefinite fee waivers or discounts could raise questions of compliance with grant assurances prohibiting unjust discrimination. The Final Policy does not define a permitted promotional period. There is too much variation in the circumstances of individual airports throughout the country to permit adoption of a single national definition of a suitable promotional period.

In contrast, the direct payment of subsidies to airline involves the expenditure of airport funds and hence raises questions under the revenue-use requirements. The FAA continues to believe that the costs of operating aircraft, or payments to air carriers to

operate certain flights, are not reasonably considered an operating cost of an airport. In addition, payment of subsidy for air service can be viewed as general regional economic development and promotion, rather than airport promotion. Use of airport revenue for these purposes is expressly prohibited under the terms of the 1994 FAA Authorization Act. The Final Policy does not preclude a sponsor from using funds other than airport revenue to pay airline subsidies for new service, and it does not preclude other community organizations— such as chambers of commerce or regional economic development agencies—from funding a program to support new air service. Therefore, the Final Policy maintains the distinction between direct subsidy of air carriers and the waiving of fees, and prohibits the former.

6. Policies Regarding the Requirement for a Self-Sustaining Rate Structure

As noted in the summary, the Final Policy contains a separate section on the requirement that an airport maintain a rate structure that makes the airport as self-sustaining as possible under the circumstances at the airport, to provide more comprehensive guidance in a single document. The 1994 FAA Authorization Act directed the FAA to adopt policies and procedures to assure compliance with both the revenue uses and self-sustaining airport rate structure requirement. The general guidance repeats the guidance appearing in the Department of Transportation Policy Statement Regarding Airport Rates and Charges, 61 FR 31994 (June 21, 1996). The Final Policy interprets the basic requirement and addresses exceptions to the basic rule for leases of airport property at nominal or less-than fair market value (FMV) to specific categories of users.

Each federally assisted airport owner/operator is required by statute and grant assurance to have an airport fee and rental structure that will make the airport as self-sustaining as possible under the particular airport circumstances, in order to minimize the airport's reliance on Federal funds and local tax revenues. The FAA has generally interpreted the self-sustaining assurance to require airport sponsors to charge FMV commercial rates for nonaeronautical uses of airport property. However, in the case of aeronautical uses, user charges are also subject to the standard of reasonableness. In applying the two standards together for aeronautical property, the FAA has considered it acceptable for an airport operator to charge fees to aeronautical users that are less than FMV, but more than nominal charges. The FAA defines ''aeronautical use'' as any activity which involves, makes possible, or is required for the operation of aircraft, or which contributes to or is required for the safety of such operations. Policy Statement Regarding Airport Fees, Statement of Applicability, 61 FR at 32017.

Many entities lease airport property for aeronautical and nonaeronautical uses at nominal lease rates. The FAA has determined that nominal leases to many of these entities is consistent with the requirement to maintain a self-sustaining airport rate structure. The Final Policy provides specific guidance regarding nominal leases for six categories of users. This guidance is discussed below.

a. Use of Property at Less Than FMV for Community/Charitable/Recreational Use

Airport operators: The ACI–NA/AAAE agree with the general conclusion that use of airport property for community and charitable purposes at less than FMV should be permissible. However, they argued that the criteria listed in the Supplemental Notice are too narrow. Other criteria should be considered, and an airport should be required to provide no more than one justification. The ACI–NA/AAAE specifically mentioned aeronautical higher education institutions and not-for-profit air and space museums as additional permitted uses, based on H.R. Rep. 104–714, 104th Cong. 2nd Sess. at 39 (1996) reprinted in 1996 USCC.A.N. 3676.

Individual airport operators also requested more flexibility in various forms. One operator suggested that the Supplemental Notice establishes an unnecessary two-part test which many community uses of airport property will fail to satisfy. Another operator argued that such airport property use should not be limited to temporary arrangements, e.g., parks and baseball fields, which indicates that only uses that allow property to be returned rather quickly to the airport inventory would be permitted.

In contrast, another airport operator suggested that, in order to place less burden on the airport operator, such uses should be limited in scope and that the below-market value amount that an airport operator could charge for such usage should be established as some percentage of the appraised value of the property.

Air carriers: The ATA agrees in principle with the concept of limited use of airport property for certain specified community purposes at less than FMV. However, ATA stated that the Supplemental Notice lacks specificity and that its application would consequently be inconsistent with the self-sustaining and revenue-use requirements. The ATA proposed to narrow the first element of the standard to permit contribution of property if the property is put to a general public use desired by the local community and the use does not adversely affect the capacity, safety or operations of the airport. The ATA would narrow the second test by permitting the use of property that is expected to generate no more than minimal revenue, which the ATA would define as minimal revenue equal to or less than 20 percent of revenue that could be earned by similar airport property in commercial or air carrier use. When the property could be expected to earn more than this defined minimal amount, the ATA would permit less than FMV rental if the revenue earned by the community use approximates the revenue that would otherwise be generated.

The ATA would also require that the community use be subject to periodic review and renewed justification and that the airport proprietor retain absolute discretion to reclaim the property for airport use.

Other commenters: A member of the United States House of Representatives expressed concern that the policy, if adopted as proposed, does not provide sufficient flexibility to airport operators to be good neighbors within their community. This commenter suggested that in rural areas, requiring community organizations to pay FMV could reduce airport revenue as paying community organizations are forced off of the airport by higher rents and no new tenants are found.

Final Policy: The Final Policy generally permits below-FMV-rental of airport property for community uses, but generally limits the uses to property that is not potentially capable of producing substantial income and not needed for aeronautical use. Consistent with the suggestions of the ATA, the permitted community uses of such property will be limited to those that are compatible with the safe and efficient operation of the airport and which are for general local use. In addition, the community use should not preclude reuse of the property for airport purposes, if the airport operator determines that such reuse will provide greater benefits to the airport than the continued community use. Leases to private, non-profit organizations generally will be required to be at market rates unless the sponsor can demonstrate a ''community goodwill''

purpose to the lease, or can demonstrate a benefit to aviation and the airport, as discussed below.

While the Final Policy states that property provided for community use at no charge should be expected to produce no more than minimal revenue, we are not adopting a definition of minimal. For property that is capable of generating more than minimal revenue, a sponsor could charge less than FMV rental rates for community use, if the revenue earned from the community use approximates that revenue that could otherwise be generated. Providing such property for community use at no charge would not be appropriate.

The FAA has determined that this approach to community use strikes an appropriate balance between the needs of the airport to be a good neighbor and the Federal requirements on the use of airport revenue and property. This formulation provides substantial flexibility to airport operators. At the same time, the self-sustaining requirement and the policy goal of the revenue-use requirement justify some limitation on local discretion in this area.

The requirement that community use not preclude reversion to airport use is based on both the self-sustaining requirement and the airport sponsor's basic AIP obligation to operate a grant-obligated airport as an airport.

Under the Final Policy, the lease of airport property to a unit of the sponsoring government for nonaeronautical use at less than fair market value is considered a prohibited revenue diversion unless one of the specific exceptions permitting below-market rental rates applies. If a sponsor's use of airport property qualifies as community use, and the other requirements for community-use leases are satisfied, the FAA would not object to a lease at less than fair market value. Qualified uses could include park or recreational uses or other public service functions. However, such use would be subject to special scrutiny to ensure that the requirements for below-FMV community use is satisfied. The community use provision of the Final Policy does not apply to airport property used by a department or subsidiary agency of the sponsoring government seeking an alternative site for the sponsor's general governmental purposes at less-than-commercial value. For example, a city cannot claim the community use exception for a nominal value lease of airport property for a municipal vehicle maintenance garage. Such usage, while beneficial to the taxpaying citizens of the sponsoring government, would be difficult to justify as benefiting the airport by improving the airport's acceptance in the community.

b. Not for Profit Aviation Museums

The DOT OIG has cited instances in which an aviation museum at a federally assisted airport is leasing airport property at less than a fair market rental rate. In clarifying the revenue diversion prohibitions recommended for inclusion in the FAA Authorization Act of 1996, the House Transportation and Infrastructure Committee urged the FAA to take a flexible approach to the lease of airport property at below-market rates to not-for-profit air and space museums located on airport property. H.R. Rep. No. 104–714, 104th Cong. 2nd Sess. at 39 (1996) reprinted in 1996 U.S.C.C.A.N. 3676 (House Report). The Committee recommended that this type of rental arrangement should not be considered revenue diversion because of the contribution that such museums make to the understanding and support of aviation.

One airport operator commented that long-term, less-than-market value rental arrangements, particularly for leaseholds encompassing permanent facilities, should be permitted when such arrangements serve a clear and valuable aviation-related purpose. This comment could include aviation museums.

One operator of a not-for-profit aviation museum urged the FAA to permit nominal rate leases. This operator stated that a FMV-based lease for its museum property would double its current operating budget.

The Final Policy: The Final Policy permits airport operators to charge reduced rental rates and fees, including nominal rates, to not-for-profit aviation museums, to the extent that the reduction is reasonably justified by the tangible and intangible benefits to the airport or civil aviation. This provision recognizes the potential for aviation museums to provide benefits to the airport by stimulating understanding and support of aviation, consistent with the suggestion contained in the House Report, U.S.C.C.A.N. 3676. Benefits to the airport may include any in-kind services provided to the airport and airport users by the aviation museum. The limitation to not-for profit museums is consistent with the requirement for a self-sustaining airport rate structure, because there is no reason to give for-profit aviation museums preferential treatment over other commercial aeronautical activities. All for-profit aeronautical activities provide some benefit to the airport, by making it more attractive for potential airport users. If this benefit were a sufficient reason to permit reduced rental rates to commercial aviation businesses on a routine basis, the requirement for a self-sustaining airport rate structure would be virtually unenforceable.

The Final Policy permits but does not require below-market rental rates, including nominal rates. The airport operator is free to treat a qualified aviation museum as it would any other aeronautical activity in setting rental rates and other fees to be paid by the museum.

c. Aeronautical Higher Education Programs

The DOT OIG has cited instances in which aeronautical secondary and post-secondary education programs at federally assisted airports are leasing airport property at less than a fair market rental rate.

In the House Report, 1996 U.S.C.C.A.N. 3676, the House Transportation and Infrastructure Committee also urged the FAA to take a flexible approach to aeronautical higher education programs located on airports. The Committee recognized that some federally obligated airports have leased property to non-profit, accredited collegiate aviation programs, and that facilitating these programs will help build a base of support for airport operations by giving students, who will be the future users of the national airspace system, easy access to aviation facilities.

The Final Policy: The Final Policy permits reduced rental rates, including nominal rates, to not-for-profit aeronautical secondary and post-secondary education programs conducted by accredited educational institutions, to the extent that the reduction is justified by tangible or intangible benefits to the airport or to civil aviation. This treatment is justified for the same reason that reduced rental rates and fees to certain aviation museums are permitted. Again, the benefits may include in-kind services provided to the airport and airport users. As with aviation museums, the educational institution and education program must be not-for-profit. For-profit aviation education, such as flight-training, is a standard commercial aeronautical activity at many airports. Permitting reduced rental rates and fees to for-profit aviation education programs would seriously undermine compliance with the self-sustaining requirement and could raise questions of compliance with the grant assurances prohibiting unjust discrimination.

The Final Policy permits but does not require below-market rental rates, including nominal rates. The airport operator is free to treat a qualified not-for-profit aeronautical education program as it would any other aeronautical activity in setting rental rates and other fees to be paid by the education program.

d. Civil Air Patrol Leases

Reduced-rental leases, including nominal leases, to the Civil Air Patrol/United States Air Force Auxiliary (CAP) at a number of airports have also been criticized in OIG audits. As a result of this criticism, some airport operators have been seeking higher rents from the CAP when leases have come up for renewal.

In its comments, the CAP contends that the current standard airport industry practice of permitting CAP use of airport property for a nominal rent confers substantial benefits to the airport and, in general, to the aviation community. The CAP, therefore, requests that a policy be adopted which would formally permit CAP units to continue to occupy facilities on federally obligated airports at a nominal rent, whether under formal lease arrangements, or otherwise, at the discretion of the airport owner/operator.

The Final Policy: The Final Policy permits reduced rental rates and fees to CAP units operating at the airport, in recognition of the benefits to the airport and benefits to aviation similar to those provided by not-for-profit aviation museums and aeronautical secondary education programs. As with other not-for profit-aviation entities, the reduction must be reasonably justified by benefits to the airport or to civil aviation. In-kind services to the airport and airport users may be considered in determining the benefits that the CAP unit provides. In addition, this treatment of the CAP, which has been conferred with the status of an auxiliary to the United States Air Force, is not identical to the treatment provided to military units in the Final Policy, as discussed below, but is consistent with that treatment.

The reduced rental rates and fees are available only to those CAP units operating aircraft at the airport. For CAP units without aircraft, a presence at the airport is not critical. The airport operator can accommodate those CAP units with property that is not subject to Federal requirements on maintaining a self-sustaining rate structure, without compromising the effectiveness of the CAP units. Of course, if such units provide in-kind services that benefit the airport, the value of those services may be recognized as an offset to FMV rates.

The Final Policy permits but does not require nominal rental rates. The airport operator is free to treat a qualified not-for-profit aeronautical CAP lease as it would any other aeronautical activity in setting rental rates and other fees to be paid by the education program.

e. Police/Firefighting Units Operating Aircraft at the Airport

Many airports host police or fire-fighting units operating aircraft (often helicopters). The OIG has frequently criticized reduced rate or no-cost leases to these units of government as inconsistent with the self-sustaining and revenue-use requirements.

The Final Policy requires the airport operator to charge reasonable rental rates and fees to these units of government. In effect, these units of government must be treated the same as other aeronautical tenants of the airport. This treatment is consistent with the policy's general approach toward dealings between units of government—fees should be set at the level that would be produced by arm's-length bargaining. The treatment is also justified because police and fire-fighting aircraft units provide benefits to the community as a whole, and not necessarily to the airport. However, as with other police and fire-fighting units located at an airport, the policy does allow rental payments to be offset to reflect the value of services actually provided to the airport by the police and fire-fighting aircraft units.

f. Use of Property by Military Units

The US Air Force Reserve and the Air National Guard both have numerous flying units located on federally obligated, public-use airports. The majority of these aircraft-operating units are located on leased property at civilian airports established on former military airport land transferred by the US Government to the airport owner/operator under the Surplus Property Act of 1944, as amended, or under other statutes authorizing the conveyance of surplus Federal property for use as a public airport. Frequently, the favorable lease terms were contemplated in connection with the transfer of the former military property and may have been incorporated in property conveyance documents as obligations of the civilian airport sponsor. As with other reduced-rate leases, these arrangements have been criticized in individual OIG audits.

The Final Policy: The Final Policy provides that leasing of airport property at nominal lease rates to military units with aeronautical missions is not inconsistent with the requirement for a self-sustaining rate structure. The Department of Defense (DOD) has a substantial investment in facilities and infrastructure at these locations, and its operating budgets are based on the existence of these leases. Moving those facilities upon expiration of a lease or the payment of FMV rent for facilities to support military aeronautical activities required for national defense and public safety would be beyond the capability of the DOD without additional legislation and enlargement of the DOD operating budget. In all of the enactments on the self-sustaining rate structure requirement and use of airport revenue and the accompanying legislative history, the FAA can find no indication that Congress intended the airport revenue requirements to be applied in a way to disrupt the United States' defense capabilities or add significantly to the cost of maintaining those capabilities. Moreover, Congress specifically charged the FAA, in 49 U.S.C. § 47103, with developing a national plan of integrated airport systems (NPIAS) to meet, among other things, the country's national defense needs. Inclusion in the NPIAS is a prerequisite for eligibility for AIP funding. Thus, Congress clearly contemplated a military presence at civil airports. Therefore, the FAA will not construe the requirement for a self-sustaining airport rate structure to prohibit nominal leases to military units operating aircraft at an airport.

The Final Policy permits but does not require nominal rental rates. The airport operator is free to treat a qualified military unit as it would any other aeronautical activity in setting rental rates and other fees to be paid by the military unit.

7. Lease of Airport Property at Less Than FMV for Mass Transit Access to Airports

The Supplemental Notice proposed that airport property could be made available at less than fair rental value for public transit terminals, rights-of-way, and related facilities, without being considered in violation of the requirements governing airport finances, under certain conditions. The transit system would have to be publicly owned and operated (or privately operated by contract on behalf of the public owner) and the transit facilities directly related to the transportation of air passengers and airport visitors and employees to and from the airport. Twenty-one responses addressed this issue.

Airport commenters: The airport operators concur with the principle of making airport land available for mass

transit at rates below fair market value. ACI–NA/AAAE stated that the determination to use airport property for a transit terminal, transit right-of-way, or related facilities at less than fair rental value is consistent with the grant assurance requiring airports to be self-sustaining.

Air carriers: The ATA asserted that FAA has exceeded its statutory authority in the proposal. ATA's considers transit facilities to be like commercial business enterprises, because they occupy airport property and charge their customers for their services. ATA also stressed that airport transit facilities are non-aeronautical facilities which are not ''directly and substantially related to the air transportation of passengers or property.''

Other commenters: Transit operators, including a transit operator trade association generally supported the position in the Supplemental Notice.

Another commenter stated that making airport property available at less than fair market rental value or making airport revenue available for transit facilities equates to the airport paying a hidden taxation. This commenter argued that it was not the intention of Congress, when it passed the AAIA, to have grant funds used to subsidize, either directly or indirectly, any activity that provides no benefit to air travel.

The Final Policy: The Final Policy incorporates the provision proposed in the Supplemental Notice, with a technical correction to include transit facilities use for the transportation of property to or from the airport. The FAA does not consider public transit terminals to be the equivalent of commercial business enterprises. Rather, they are more like public and airport roadways providing ground access to the airport. Generally speaking, the FAA does not construe the self-sustaining assurance to require an airport owner or operator to charge for roadways and roadway rights-of-way at FMV.

Moreover, even though publicly-owned transit systems charge passengers for their services, they generally operate at a loss and are subsidized by general taxpayer revenue. Charging fair market value for on airport facilities would thus burden general taxpayers with the costs of providing facilities used exclusively by transit passengers visiting the airport. Therefore, a requirement to charge FMV would not further the purpose of the self-sustaining assurance—to avoid burdening local taxpayers with the cost of operating the airport system.

a. Private Transit

ACI–NA/AAAE and four airport operators commented that private transit operators should have treatment equal to public transit operators. They argued that the concepts of public-private partnerships, and privatization of transportation facilities, may be realities in the not-too-distant future. Moreover, private ownership would not detract in the least from the functions identified in the Notice for these facilities, such as bringing passengers to and from the airport. They also noted that the language in the AIP Handbook (Order 5100.38A, Section 6) does not specifically exclude private operators. The language states transit facilities will be allowable provided they will primarily serve the airport.

One state Department of Transportation also urged that reduced rental rates should be offered to privately-owned and operated transit systems on the same basis as publicly-owned systems.

Final Policy. The Final Policy retains some distinctions between privately and publicly owned systems. In general, privately-owned systems are more analogous to other ground transportation providers—private taxis and limousine services, rental car companies—and even private parking lot operators. These entities are commercial enterprises that operate for profit and are a significant source of revenue for the airport. Most importantly, they are not supported by general taxpayer funds, and charging FMV would not raise questions of burdening local taxpayers with the cost of the airport.

However, the FAA is aware that, in many communities with no publicly-owned bus systems or very limited systems, privately-owned bus systems fulfill the role of providing public transit services to the airport. Accordingly, the FAA is revising the Final Policy to permit an airport operator to provide airport property at less than FMV rates to privately-owned systems in these limited circumstances.

b. Airport Passengers

Nine airport commenters addressed the proposed requirement that transit facilities be directly related to the transportation of air passengers and airport visitors and employees to and from the airport to qualify for less-than-FMV rentals. The commenters argue that the provision is too narrow by restricting the transit service to air-passengers and airport visitors and employees. One airport operator states that airport sponsors must have the flexibility to build airport transit systems that principally serve airport passengers, employees and other users but which may also secondarily transport some nonairport users. Two airport operators with general-use rail transit systems planned or operating on or near their airports argue that the airport benefits from improved ground access, reduced traffic congestion and improved air quality of general use systems and that rent-free property should, therefore, be provided to general use systems.

Final Policy: The Final Policy incorporates the language of the Supplemental Notice. That language does not preclude any use of transit facilities constructed on airport property by nonairport passengers if the property is to be leased at less-than-FMV. The requirement that the facilities be ''directly related'' to the airport does not equate to a requirement that the facilities be ''exclusively used'' for airport purposes. However, if the intended use of a facility is not exclusive airport use, some rental charge may be necessary to reflect the benefits provided to the general public. The determination on whether the facilities are ''directly related'' will be made on a case-by-case basis.

It appears that some of the concern about this issue was generated by the language in the preamble, which referred to transit facilities ''necessary for the transportation of air passengers, airport visitors and airport employees to and from the airport.'' The preamble offered a maintenance/repair facility as an example of facilities that would not qualify. The FAA is not convinced that the benefits to the airport of having such facilities on the airport is sufficient to justify less-than-FMV rental rates. However, as noted, the FAA does not construe the policy language ''facilities directly related the transportation of [airport passengers]'' to require that the facilities be used exclusively by airport passengers.

8. Military Base Conversions Issues

In its comments to the Proposed Policy, one airport operator argued that using airport revenue to assist in development of revenue-generating properties on former military bases that are converted to civil airports should not be considered a prohibited use of revenue.

In addition, ACI–NA/AAAE state that a base closure and conversion to civilian use often results in the existence of significant recreational facilities on property owned by an airport. In regard to these facilities on converted military bases, ACI/AAAE stated, ''[a] leasing

arrangement whereby a municipality assumes all liability and operating expenses in exchange for a no-revenue lease is beneficial to the airport and should not be prohibited.''

Final Policy: The Final Policy provides for no special treatment of converted military bases with respect to airport revenue use, and no special provisions are included in the final policy.

The FAA policy on the use of public and recreational use of property will be consistently applied to airports whether or not they are former military bases. Ordinarily, airport revenue may not be used to finance the costs of public and recreational facilities at the airport, just as airport revenue may not be used to develop other facilities not needed for the airport, even if those facilities will generate revenue for the airport. In addition, unless the recreational facilities qualify under the community-use exception, the airport operator would be expected to receive FMV-based rental payments for the recreational or public property. Operational costs borne by a municipality as a result of a base conversion can be considered in the analysis of whether a reduced rent is justified by tangible or intangible benefits to the airport.

9. Enforcement Policy, Whether to Impose Civil Penalty Even if Funds are Returned

The Proposed Policy provided that if the FAA received information that improper use of airport revenue had occurred, the FAA would investigate the matter and attempt to resolve the issue informally. The matter could be resolved if the sponsor persuaded the FAA that the use of airport revenue was not improper, or if the sponsor took corrective action (which usually would involve crediting the diverted amount to the airport account with interest). The proposed policy provided that the FAA would propose enforcement action only if the FAA made a preliminary finding of noncompliance and the sponsor had failed to take corrective action. The Proposed Policy outlined the enforcement actions available to the FAA as of the date of publication. The actions included: (1) withholding of new AIP grants and payments under existing grants (49 USC §§ 47111(e) and (d), respectively); (2) withholding of new authority to impose PFCs (49 USC 47111(e)); (3) withholding of all Federal transportation funds appropriated in Fiscal Years 1994 and 1995 (as provided in the Department of Transportation appropriation legislation for those years); (4) assessment of civil penalties not to exceed $50,000 (49 USC § 46301); and (5) initiation of a civil action to compel compliance with the grant assurances (49 USC § 47111(f)).

The Proposed Policy outlined the administrative procedural rules applicable to airport compliance matters at the time of publication, 14 C.F.R., Part 13 ''Investigation and Enforcement Procedures.''

Airport operators: ACI–NA and AAAE strongly urged the FAA to provide in the final policy that remittance of any diverted amounts, together with associated interest, should be sufficient to ''cure'' instances of revenue diversion, regardless of how those instances come to the attention of the FAA. In particular, a non-airport party should not be given the capacity, through the filing of a formal compliant, to eliminate an airport's ability to cure the problem.

Air carriers: ATA suggested that the proposed policy should be strengthened, backed up by a stronger enforcement policy and aggressive monitoring and vigorous enforcement action. ATA additionally argued that FAA should promulgate one rule that sets forth in detail the substantive requirements regarding revenue retention and diversion and a separate compliance and enforcement policy document.

ATA objected that the proposed policy continues to provide a passive monitoring procedure and this approach is not sufficient to provide prompt and efficient enforcement. IATA objected that the Proposed Policy does not promote prompt or effective enforcement.

ATA suggested that the FAA establish a formal compliance monitoring and inspection program that includes compliance monitoring and audits/inspections similar to those it conducts at certificated airlines, such as for drug and alcohol testing. Further, ATA stated that FAA's enforcement policy should result in civil penalties being assessed with the same vigor with which they are assessed against airlines for alleged regulatory violations. In addition, ATA urged that FAA should maintain the threat of assessing civil penalties for each day an airport or sponsor is in violation of the revenue-use requirement and for each day a sponsor fails to repay amounts determined to have been diverted unlawfully. IATA similarly supported assessment of the maximum civil penalty for each instance of unlawful revenue use.

The Final Policy: After publication of the Proposed Policy, the FAA Reauthorization Act of 1996 mandated new remedies for improper use of airport revenues and new compliance monitoring programs. The Final Policy has been modified to reflect the new requirements. Implementation of the requirements will result in more active and systematic monitoring of airport revenue use and more systematic resolution of questionable airport practices, as requested by the ATA and the IATA. It should be noted that the FAA had already assumed a more active role in monitoring through the implementation of the financial reporting requirements of the 1994 FAA Authorization Act.

In accordance with the requirements of the 1996 FAA Reauthorization Act, the Final Policy reflects the clear congressional intent that the FAA focus compliance efforts on the lawful use of airport revenue. The FAA will use all means at its disposal to monitor and enforce the revenue-use requirements and will take appropriate action when a potential violation is brought to the FAA's attention by any means. To detect whether airport revenue has been diverted from an airport, the FAA will use four primary sources of information: (1) the annual airport financial reports submitted by the sponsor; (2) findings from a single audit conducted in accordance with OMB Circular A–133 (including the audit review and opinion required by the 1996 Reauthorization Act); (3) investigation following a third-party complaint, and, (4) DOT Office of Inspector General audits.

The FAA will seek penalties for the diversion of airport funds if the airport sponsor is not willing to correct the diversion and make restitution, with interest, in a timely manner. This approach is consistent with the FAA's objective of achieving compliance with a sponsor's obligations. Moreover, it is consistent with section 805 of the 1996 Reauthorization Act, which provides for imposition of administrative and civil penalties only after a sponsor has been given an opportunity to take corrective action and failed to do so.

10. Form of Policy

As is reflected in the Proposed Policy and Supplemental Notice, the FAA proposed to implement section 112 of the 1994 Act by publishing a policy statement, rather than adopting a regulation.

The Comments: The ATA argued that the FAA should promulgate a regulation establishing substantive requirements for use of airport revenue and a separate enforcement policy. The ATA argued that a substantive regulation will provide more clarity on prohibited and permitted practices and be less

susceptible to conflicts over interpretation.

The AOPA also raised concerns over the prompt and effective enforcement of airport revenue diversion within the terms of this Proposed Policy.

The Final Policy: The FAA will publish policy guidance on airport revenue use and enforcement as a policy rather than as a regulation. Section 112 of the 1994 FAA Authorization Act directs the Secretary to ''establish policies and procedures'' to assure ''prompt and effective enforcement'' of the revenue retention grant assurances, which clearly contemplates the issuance of a policy statement for this purpose.

As discussed in connection with specific issues, the wide variation in airport situations makes it impractical for the FAA to promulgate standards with the specificity and inflexibility urged by ATA. Moreover, a regulation is not required to obtain compliance with the revenue-use requirement. Airports are obligated by the statutory assurance in AIP grant agreements pursuant to § 47107(b)(2), or directly under § 47133, and rulemaking is not required to implement those statutes.

On the issue raised by ATA and AOPA concerning the prompt and effective enforcement mechanism to address specific revenue diversion issues, the FAA had been using 14 CFR Part 13. However, on December 16, 1996, 14 CFR Part 16, Rules of Practice for Federally Assisted Airport Proceedings, took effect. Part 16 established new investigation and enforcement procedures for airport compliance matters, including compliance with the revenue-use requirement. Part 16 includes time deadlines and processes to assure that FAA promptly and effectively investigates and adjudicates specific airport compliance matters involving Federally Assisted Airports. The FAA considers the procedural requirements of the Reauthorization Act of 1996 to be self-executing and will apply the statutory provisions in the case of any conflict with Part 16. However, the FAA is in the process of revising Part 16 to incorporate those new procedural requirements.

Paperwork Reduction Act Requirements

The Office of Management and Budget (OMB) has previously approved, pursuant to the Paperwork Reduction Act, the annual airport financial reports described in Section VIII.A of the Final Policy under OMB Number 2120–0569.

Policy Statement

For the reasons discussed above, the Federal Aviation Administration adopts the following statement of policy concerning the use of airport revenue:

Policies and Procedures Concerning the Use of Airport Revenue

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Section I.—Introduction

The Federal Aviation Administration (FAA) issues this document to fulfill the statutory provisions in section 112 of the Federal Aviation Administration Authorization Act of 1994, Pub.L. No. 103–305, 108 Stat. 1569 (August 23, 1994), 49 USC 47107(l), and Federal Aviation Administration Reauthorization Act of 1996, Public Law 104–264, 110 Stat. 3213 (October 9, 1996), to establish policies and procedures on the generation and use of airport revenue. The sponsor assurance prohibiting the unlawful diversion of airport revenues, also known as the revenue-use requirement, was first mandated by Congress in 1982. Simply stated, the purpose of that assurance, now codified at 49 USC §§ 47107(b) and 47133, is to provide that an airport owner or operator receiving Federal financial assistance will use airport revenues only for purposes related to the airport. The Policy Statement implements requirements adopted by Congress in the FAA Reauthorization Acts of 1994 and 1996, and takes into consideration comments received on the interim policy statements issued on February 26, 1996, and December 18, 1996.

Section II—Definitions

A. Federal Financial Assistance

Title 49 USC § 47133, which took effect on October 1, 1996, applies the airport revenue-use requirements of § 47107(b) to any airport that has received ''Federal assistance.'' The FAA considers the term ''Federal assistance'' in § 47133 to apply to the following Federal actions:

1. Airport development grants issued under the Airport Improvement Program and predecessor Federal grant programs;

2. Airport planning grants that relate to a specific airport;

3. Airport noise mitigation grants received by an airport operator;

4. The transfer of Federal property under the Surplus Property Act, now codified at 49 USC § 47151 *et seq.*; and

5. Deeds of conveyance issued under Section 16 of the Federal Airport Act of 1946, under Section 23 of the Airport and Airway Improvement Act of 1970, or under Section 516 of the Airport and Airway Improvement Act of 1982 (AAIA).

B. Airport Revenue

1. All fees, charges, rents, or other payments received by or accruing to the sponsor for any one of the following reasons are considered to be airport revenue:

a. Revenue from air carriers, tenants, lessees, purchasers of airport properties, airport permittees making use of airport property and services, and other parties. Airport revenue includes all revenue received by the sponsor for the activities of others or the transfer of rights to others relating to the airport, including revenue received:

i. For the right to conduct an activity on the airport or to use or occupy airport property;

ii. For the sale, transfer, or disposition of airport real property (as specified in the applicability section of this policy statement) not acquired with Federal assistance or personal airport property not acquired with Federal assistance, or any interest in that property, including transfer through a condemnation proceeding;

iii. For the sale of (or sale or lease of rights in) sponsor-owned mineral, natural, or agricultural products or water to be taken from the airport; or

iv. For the right to conduct an activity on, or for the use or disposition of, real or personal property or any interest therein owned or controlled by the sponsor and used for an airport-related purpose but not located on the airport (e.g., a downtown duty-free shop).

b. Revenue from sponsor activities on the airport. Airport revenue generally includes all revenue received by the sponsor for activities conducted by the sponsor itself as airport owner and operator, including revenue received:

i. From any activity conducted by the sponsor on airport property acquired with Federal assistance;

ii. From any aeronautical activity conducted by the sponsor which is directly connected to a sponsor's ownership of an airport subject to 49 U.S.C. §§ 47107(b) or 47133; or

iii. From any nonaeronautical activity conducted by the sponsor on airport property not acquired with Federal assistance, but only to the extent of the fair rental value of the airport property. The fair rental value will be based on the fair market value.

2. State or local taxes on aviation fuel (except taxes in effect on December 30, 1987) are considered to be airport revenue subject to the revenue-use requirement. However, revenues from state taxes on aviation fuel may be used to support state aviation programs or for noise mitigation purposes, on or off the airport.

3. While not considered to be airport revenue, the proceeds from the sale of land donated by the United States or acquired with Federal grants must be used in accordance with the agreement between the FAA and the sponsor. Where such an agreement gives the FAA discretion, FAA may consider this policy as a relevant factor in specifying the permissible use or uses of the proceeds.

C. Unlawful Revenue Diversion

Unlawful revenue diversion is the use of airport revenue for purposes other than the capital or operating costs of the airport, the local airport system, or other local facilities owned or operated by the airport owner or operator and directly and substantially related to the air transportation of passengers or property, when the use is not ''grandfathered'' under 49 U.S.C. § 47107(b)(2). When a use would be diversion of revenue but is grandfathered, the use is considered lawful revenue diversion. See Section VI, Prohibited Uses of Airport Revenue.

D. Airport Sponsor

The airport sponsor is the owner or operator of the airport that accepts Federal assistance and executes grant agreements or other documents required for the receipt of Federal assistance.

Section III—Applicability of the Policy

A. Policy and Procedures on the Use of Airport Revenue and State or Local Taxes on Aviation Fuel

1. With respect to the use of airport revenue, the policies and procedures in the Policy Statement are applicable to all public agencies that have received a grant for airport development since September 3, 1982, under the Airport and Airway Improvement Act of 1982 (AAIA), as amended, recodified without substantive change by Public Law 103–272 (July 5, 1994) at 49 § U.S.C. 47101, et seq., and which had grant obligations regarding the use of airport revenue in effect on October 1, 1996 (the effective date of the FAA Authorization Act of 1996). Grants issued under that statutory authority are commonly referred to as Airport Improvement Program (AIP) grants. The Policy Statement applies to revenue uses at such airports even if the sponsor has not received an AIP grant since October 1, 1996.

2. With respect to the use of state and local taxes on aviation fuel, this Policy Statement is applicable to all public agencies that have received an AIP development grant since December 30, 1987, and which had grant obligations regarding the use of state and local taxes on aviation fuel in effect of October 1, 1996.

3. Pursuant to 49 U.S.C. § 47133, this Policy Statement applies to any airport for which Federal assistance has been received after October 1, 1996, whether or not the airport owner is subject to the airport revenue-use grant assurance, and applies to any airport for which the airport revenue-use grant obligation is in effect on or after October 1, 1996. Section 47133 does not apply to an airport that has received Federal assistance prior to October 1, 1996, and does not have AIP airport development grant assurances in effect on that date.

4. Requirements regarding the use of airport revenue applicable to a particular airport or airport operator on or after October 1, 1996, as a result of the provisions of 49 U.S.C. § 47133, do not expire.

5. The FAA will not reconsider agency determinations and adjudications dated prior to the date of this Policy Statement, based on the issuance of this Policy Statement.

B. Policies and Procedures on the Requirement for a Self-Sustaining Airport Rate Structure

1. These policies and procedures apply to the operators of publicly owned airports that have received an AIP development grant and that have grant obligations in effect on or after the effective date of this policy.

2. Grant assurance obligations regarding maintenance of a self-sustaining airport rate structure in effect on or after the effective date of this policy apply until the end of the useful life of each airport development project or 20 years, whichever is less, except obligations under a grant for land acquisition, which do not expire.

C. Application of the Policy to Airport Privatization

1. The Airport Privatization Pilot Program, codified at 49 U.S.C. § 47134, provides for the sale or lease of general aviation airports and the lease of air carrier airports. Under the program, the FAA is authorized to exempt up to five airports from Federal statutory and regulatory requirements governing the use of airport revenue. The FAA can exempt an airport sponsor from its obligations to repay Federal grants, in the event of a sale, to return property acquired with Federal assistance and to use the proceeds of the sale or lease exclusively for airport purposes. The exemptions are subject to a number of conditions.

2. Except as specifically provided by the terms of an exemption granted under the Airport Privatization Pilot

Program, this policy statement applies to a privatization of airport property and/or operations.

3. For airport privatization transactions not subject to an exemption under the Pilot Program:

FAA approval of the sale or other transfer of ownership or control, of a publicly owned airport is required in accordance with the AIP sponsor assurances and general government contract law principles. The proceeds of a sale of airport property are considered airport revenue (except in the case of property acquired with Federal assistance, the sale of which is subject to other restrictions under the relevant grant contract or deed). When the sale proposed is the sale of an entire airport as an operating entity, the request may present the FAA with a complex transaction in which the disposition of the proceeds of the transfer is only one of many considerations. In its review of such a proposal, the FAA would condition its approval of the transfer on the parties' assurances that the proceeds of sale will be used for the purposes permitted by the revenue-use requirements of 49 U.S.C. §§ 47107(b) and 47133. Because of the complexity of an airport sale or privatization, the provisions for ensuring that the proceeds are used for the purposes permitted by the revenue-use requirements may need to be adapted to the special circumstances of the transaction. Accordingly, the disposition of the proceeds would need to be structured to meet the revenue-use requirements, given the special conditions and constraints imposed by the fact of a change in airport ownership. In considering and approving such requests, the FAA will remain open and flexible in specifying conditions on the use of revenue that will protect the public interest and fulfill the objectives and obligations of revenue-use requirements, without unnecessarily interfering with the appropriate privatization of airport infrastructure.

4. It is not the intention of the FAA to effectively bar airport privatization initiatives outside of the pilot program through application of the statutory requirements for use of airport revenue. Proponents of a proposed privatization or other sale or lease of airport property clearly will need to consider the effects of Federal statutory requirements on the use of airport revenue, reasonable fees for airport users, disposition of airport property, and other policies incorporated in Federal grant agreements. The FAA assumes that the proposals will be structured from the outset to comply with all such requirements, and this proposed policy is not intended to add to the considerations already involved in a transfer of airport property.

Section IV—Statutory Requirements for the Use of Airport Revenue

A. General Requirements, 49 U.S.C. §§ 47107(b) and 47133

1. The current provisions restricting the use of airport revenue are found at 49 U.S.C. §§ 47107(b), and 47133. Section 47107(b) requires the Secretary, prior to approving a project grant application for airport development, to obtain written assurances regarding the use of airport revenue and state and local taxes on aviation fuel. Section 47107(b)(1) requires the airport owner or operator to provide assurances that local taxes on aviation fuel (except taxes in effect on December 30, 1987) and the revenues generated by a public airport will be expended for the capital or operating costs of—

a. The airport;

b. The local airport system; or

c. Other local facilities owned or operated by the airport owner or operator and directly and substantially related to the air transportation of passengers or property.

B. Exception for Certain Preexisting Arrangements (Grandfather Provisions)

Section 47107(b)(2) provides an exception to the requirements of Section 47107(b)(1) for airport owners or operators having certain financial arrangements in effect prior to the enactment of the AAIA. This provision is commonly referred to as the ''grandfather'' provision. It states:

> Paragraph (1) of this subsection does not apply if a provision enacted not later than September 2, 1982, in a law controlling financing by the airport owner or operator, or a covenant or assurance in a debt obligation issued not later than September 2, 1982, by the owner or operator, provides that the revenues, including local taxes on aviation fuel at public airports, from any of the facilities of the owner or operator, including the airport, be used to support not only the airport but also the general debt obligations or other facilities of the owner or operator.

C. Application of 49 U.S.C. § 47133

1. Section 47133 imposes the same requirements on all airports, privately-owned or publicly-owned, that are the subject of Federal assistance. Subsection 47133(a) states that:

Local taxes on aviation fuel (except taxes in effect on December 30, 1987) or the revenues generated by an airport that is the subject of Federal assistance may not be expended for any purpose other than the capital or operating costs of—

(a) the airport;

(b) The local airport system; or

(c) Other local facilities owned or operated by the person or entity that owns or operates the airport that is directly and substantially related to the air transportation of persons or property.

2. Section 47133(b) contains the same grandfather provisions as section 47107(b).

3. Enactment of section 47133 resulted in three fundamental changes to the revenue-use obligation, as reflected in the applicability section of this policy statement.

a. Privately owned airports receiving Federal assistance (as defined in this policy statement) after October 1, 1996, are subject to the revenue-use requirement.

b. In addition to airports receiving AIP grants, airports receiving Federal assistance in the form of gifts of property after October 1, 1996, are subject to the revenue-use requirement.

c. For any airport or airport operator that is subject to the revenue-use requirement on or after October 1, 1996, the revenue-use requirement applies indefinitely.

4. This section of the policy refers to the date of October 1, 1996, because the FAA Authorization Act of 1996 is by its terms effective on that date.

D. Specific Statutory Requirements for the Use of Airport Revenue

1. In section 112 of the FAA Authorization Act of 1994, 49 U.S.C. § 47107(l)(2) (A–D), Congress expressly prohibited the diversion of airport revenues through:

a. Direct payments or indirect payments, other than payments reflecting the value of services and facilities provided to the airport;

b. Use of airport revenues for general economic development, marketing, and promotional activities unrelated to airports or airport systems;

c. Payments in lieu of taxes or other assessments that exceed the value of services provided; or

d. Payments to compensate non-sponsoring governmental bodies for lost tax revenues exceeding stated tax rates.

2. Section 47107(l)(5), enacted as part of the FAA Authorization Act of 1996, provides that:

(A) Any request by a sponsor to any airport for additional payments for services conducted off of the airport or for reimbursement for capital contributions or operating expenses shall be filed not later than 6 years after the date on which the expense is incurred; and

(B) Any amount of airport funds that are used to make a payment or

reimbursement as described in subparagraph (a) after the date specified in that subparagraph shall be considered to be an illegal diversion of airport revenues that is subject to subsection (n).

3. 49 U.S.C. § 40116(d)(2)(A) provides, among other things, that a State, political subdivision of a State or authority acting for a State or a political subdivision may not: ''(iv) levy or collect a tax, fee or charge, first taking effect after August 23, 1994, exclusively upon any business located at a commercial service airport or operating as a permittee of such an airport other than a tax, fee or charge wholly utilized for airport or aeronautical purposes.''

E. Passenger Facility Charges and Revenue Diversion

The Aviation Safety and Capacity Expansion Act of 1990 authorized the imposition of a passenger facility charge (PFC) with the approval of the Secretary.

1. While PFC revenue is not characterized as ''airport revenue'' for purposes of this Policy Statement, specific statutory and regulatory guidelines govern the use of PFC revenue, as set forth at 49 U.S.C. 40117, ''Passenger Facility Fees,'' and 14 CFR Part 158, ''Passenger Facility Charges.'' (For purposes of this policy, the terms ''passenger facility fees'' and ''passenger facility charges'' are synonymous.) These provisions are more restrictive than the requirements for the use of airport revenue in 49 U.S.C. 47107(b), in that the PFC requirements provide that PFC collections may only be used to finance the allowable costs of approved projects. The PFC regulation specifies the kinds of projects that can be funded by PFC revenue and the objectives these projects must achieve to receive FAA approval for use of PFC revenue.

2. The statute and regulations prohibit expenditure of PFC revenue for other than approved projects, or collection of PFC revenue in excess of approved amounts.

3. As explained more fully below under enforcement policies and procedures in Section IX, ''Monitoring and Compliance,'' a final FAA determination that a public agency has violated the revenue-use provision prevents the FAA from approving new authority to impose a PFC until corrective action is taken.

Section V—Permitted Uses of Airport Revenue

A. Permitted Uses of Airport Revenue

Airport revenue may be used for:

1. The capital or operating costs of the airport, the local airport system, or other local facilities owned or operated by the airport owner or operator and directly and substantially related to the air transportation of passengers or property. Such costs may include reimbursements to a state or local agency for the costs of services actually received and documented, subject to the terms of this policy statement. Operating costs for an airport may be both direct and indirect and may include all of the expenses and costs that are recognized under the generally accepted accounting principles and practices that apply to the airport enterprise funds of state and local government entities.

2. The full costs of activities directed toward promoting competition at an airport, public and industry awareness of airport facilities and services, new air service and competition at the airport (other than direct subsidy of air carrier operations prohibited by paragraph VI.B.12 of this policy), and salary and expenses of employees engaged in efforts to promote air service at the airport, subject to the terms of this policy statement. Other permissible expenditures include cooperative advertising, where the airport advertises new services with or without matching funds, and advertising of general or specific airline services to the airport. Examples of permitted expenditures in this category include: (a) a Superbowl hospitality tent for corporate aircraft crews at a sponsor-owned general aviation terminal intended to promote the use of that airport by corporate aircraft; and (b) the cost of promotional items bearing airport logos distributed at various aviation industry events.

3. A share of promotional expenses, which may include marketing efforts, advertising, and related activities designed to increase travel using the airport, to the extent the airport share of the promotional materials or efforts meets the requirements of V.A.2. above and includes specific information about the airport.

4. The repayment of the airport owner or sponsor of funds contributed by such owner or sponsor for capital and operating costs of the airport and not heretofore reimbursed. An airport owner or operator can seek reimbursement of contributed funds only if the request is made within 6 years of the date the contribution took place. 49 U.S.C. 47107(l).

a. If the contribution was a loan to the airport, and clearly documented as an interest-bearing loan at the time it was made, the sponsor may repay the loan principal and interest from airport funds. Interest should not exceed a rate which the sponsor received for other investments for that period of time.

b. For other contributions to the airport, the airport owner or operator may seek reimbursement of interest only if the FAA determines that the airport owes the sponsor funds as a result of activities conducted by the sponsor or expenditures by the sponsor for the benefit of the airport. Interest shall be determined in the manner provided in 49 U.S.C. 47107(o), but may be assessed only from the date of the FAA's determination.

5. Lobbying fees and attorney fees to the extent these fees are for services in support of any activity or project for which airport revenues may be used under this Policy Statement. See Section VI: Prohibited Uses of Airport Revenue.

6. Costs incurred by government officials, such as city council members, to the extent that such costs are for services to the airport actually received and documented. An example of such costs would be the costs of travel for city council members to meet with FAA officials regarding AIP funding for an airport project.

7. A portion of the general costs of government, including executive offices and the legislative branches, may be allocated to the airport indirectly under a cost allocation plan in accordance with V.B.3. of this Policy Statement.

8. Expenditure of airport funds for support of community activities, participation in community events, or support of community-purpose uses of airport property if such expenditures are directly and substantially related to the operation of the airport. Examples of permitted expenditures in this category include: (a) the purchase of tickets for an annual community luncheon at which the Airport director delivers a speech reviewing the state of the airport; and (b) contribution to a golf tournament sponsored by a ''friends of the airport'' committee. The FAA recognizes that contributions for community or charitable purposes can provide a direct benefit to the airport through enhanced community acceptance, but that a benefit of that nature is intangible and not quantifiable. Where the amount of contribution is minimal, the value of the benefit will not be questioned as long as there is a reasonable connection between the recipient organization and the benefit of local community acceptance for the airport. An example of a permitted expenditure in this category was participation in a local school fair with a booth focusing on operation of the airport and career opportunities in aviation. The expenditure in this example was $250.

9. Airport revenue may be used for the capital or operating costs of those

portions of an airport ground access project that can be considered an airport capital project, or of that part of a local facility that is owned or operated by the airport owner or operator and directly and substantially related to the air transportation of passengers or property, including use by airport visitors and employees. The FAA has approved the use of airport revenue for the actual costs incurred for structures and equipment associated with an airport terminal building station and a rail connector between the airport station and the nearest mass transit rail line, where the structures and equipment were (1) located entirely on airport property, and (2) designed and intended exclusively for the use of airport passengers.

B. Allocation of Indirect Costs

1. Indirect costs of sponsor services may be allocated to the airport in accordance with this policy, but the allocation must result in an allocation to the airport only of those costs that would otherwise be allowable under 49 U.S.C. § 47107(b). In addition, the documentation for the costs must meet the standards of documentation stated in this policy.

2. The costs must be allocated under a cost allocation plan that meets the following requirements:

a. The cost is allocated under a cost allocation plan that is consistent with Attachment A to OMB Circular A–87, except that the phrase ''airport revenue'' should be substituted for the phrase ''grant award,'' wherever the latter phrase occurs in Attachment A;

b. The allocation method does not result in a disproportionate allocation of general government costs to the airport in consideration of the benefits received by the airport;

c. Costs allocated indirectly under the cost allocation plan are not billed directly to the airport; and

d. Costs billed to the airport under the cost allocation plan must be similarly billed to other comparable units of the airport owner or operator.

3. A portion of the general costs of government, such as the costs of the legislative branch and executive offices, may be allocated to the airport as an indirect cost under a cost allocation plan satisfying the requirements set forth above. However, the allocation of these costs may require special scrutiny to assure that the airport is not paying a disproportionate share of these costs.

4. Central service costs, such as accounting, budgeting, data processing, procurement, legal services, disbursing and payroll services, may also be allocated to the airport as indirect costs under a cost allocation plan satisfying the requirements set forth above. However, the allocation of these costs may require special scrutiny to assure that the airport is not paying a disproportionate share of these costs.

C. Standard of Documentation for the Reimbursement to Government Entities of Costs of Services and Contributions Provided to Airports

1. Reimbursements for capital and operating costs of the airport made by a government entity, both direct and indirect, must be supported by adequate documentary evidence. Documentary evidence includes, but is not limited to:

a. Underlying accounting data such as general and specialized journals, ledgers, manuals, and supporting worksheets and other analyses; and corroborating evidence such as invoices, vouchers and indirect cost allocation plans, or

b. Audited financial statements which show the specific expenditures to be reimbursed by the airport. Such expenditures should be clearly identifiable on the audited financial statements as being consistent with section VIII of this policy statement.

2. Documentary evidence to support direct and indirect charges to the airport must show that the amounts claimed were actually expended. Budget estimates are not sufficient to establish a claim for reimbursement. Indirect cost allocation plans, however, may use budget estimates to establish pre-determined indirect cost allocation rates. Such estimated rates should, however, be adjusted to actual expenses in the subsequent accounting period.

D. Expenditures of Airport Revenue by Grandfathered Airports

1. Airport revenue may be used for purposes other than capital and operating costs of the airport, the local airport system, or other local facilities owned or operated by the sponsor and directly and substantially related to the air transportation of passengers or property, if the ''grandfather'' provisions of 49 U.S.C. § 47107(b)(2) are applicable to the sponsor and the particular use. Based on previous DOT interpretations, examples of grandfathered airport sponsors may include, but are not limited to the following:

a. A port authority or state department of transportation which owns or operates other transportation facilities in addition to airports, and which have pre-September 3, 1982, debt obligations or legislation governing financing and providing for use of airport revenue for non-airport purposes. Such sponsors may have obtained legal opinions from their counsel to support a claim of grandfathering. Previous DOT interpretations have found the following examples of pre-AAIA legislation to provide for the grandfather exception:

b. Bond obligations and city ordinances requiring a five percent ''gross receipts'' fee from airport revenues. The payments were instituted in 1954 and continued in 1968.

c. A 1955 state statute for the assessing of a five percent surcharge on all receipts and deposits in an airport revenue fund to defray central service expenses of the state.

d. City legislation authorizing the transfer of a percentage of airport revenues, permitting an airport-air carrier settlement agreement providing for annual payments to the city of 15 percent of the airport concession revenues.

e. A 1957 state statutory transportation program governing the financing and operations of a multi-modal transportation authority, including airport, highway, port, rail and transit facilities, wherein state revenues, including airport revenues, support the state's transportation-related, and other, facilities. The funds flow from the airports to a state transportation trust fund, composed of all ''taxes, fees, charges, and revenues'' collected or received by the state department of transportation.

f. A port authority's 1956 enabling act provisions specifically permitting it to use port revenue, which includes airport revenue, to satisfy debt obligations and to use revenues from each project for the expenses of the authority. The act also exempts the authority from property taxes but requires annual payments in lieu of taxes to several local governments and gives it other corporate powers. A 1978 trust agreement recognizes the use of the authority's revenue for debt servicing, facilities of the authority, its expenses, reserves, and the payment in lieu of taxes fund.

2. Under the authority of 49 U.S.C. § 47115(f), the FAA considers as a factor militating against the approval of an application for AIP discretionary funds, the fact that a sponsor has exercised its rights to use airport revenue for nonairport purposes under the grandfather clause, when in the airport's fiscal year preceding the date of application for discretionary funds, the FAA finds that the amount of airport revenues used for nonairport purposes exceeds the amount used for such purposes in the airport's first fiscal year ending after August 23, 1994, adjusted by the Secretary for changes in the Consumer Price Index of All Urban

Consumers published by the Bureau of Labor Statistics of the Department of Labor.

Section VI—Prohibited Uses of Airport Revenue

A. Lawful and Unlawful Revenue Diversion

Revenue diversion is the use of airport revenue for purposes other than the capital or operating costs of the airport, the local airport system, or other local facilities owned or operated by the airport owner or operator and directly and substantially related to the air transportation of passengers or property, unless that use is grandfathered under 49 U.S.C. § 47107(b)(2) and the use does not exceed the limits of the 'grandfather' clause. When such use is so grandfathered, it is known as lawful revenue diversion. Unless the revenue diversion is grandfathered, the diversion is unlawful and prohibited by the revenue-use restrictions.

B. Prohibited Uses of Airport Revenue

Prohibited uses of airport revenue include but are not limited to:

1. Direct or indirect payments that exceed the fair and reasonable value of those services and facilities provided to the airport. The FAA generally considers the cost of providing the services or facilities to the airport as a reliable indicator of value.
2. Direct or indirect payments that are based on a cost allocation formula that is not consistent with this policy statement or that is not calculated consistently for the airport and other comparable units or cost centers of government.
3. Use of airport revenues for general economic development.
4. Marketing and promotional activities unrelated to airports or airport systems. Examples of prohibited expenses in this category include participation in program to provide hospitality training to taxi drivers and funding an airport operator's float containing no reference to the airport, in a New Years Day parade.
5. Payments in lieu of taxes, or other assessments, that exceed the value of services provided or are not based on a reasonable, transparent cost allocation formula calculated consistently for other comparable units or cost centers of government;
6. Payments to compensate non-sponsoring governmental bodies for lost tax revenues to the extent the payments exceed the stated tax rates applicable to the airport;
7. Loans to or investment of airport funds in a state or local agency at less than the prevailing rate of interest.
8. Land rental to, or use of land by, the sponsor for nonaeronautical purposes at less than fair rental/market value, except to the extent permitted by SectionVII.D of this policy.
9. Use of land by the sponsor for aeronautical purposes rent-free or for nominal rental rates, except to the extent permitted by Section VII.E of this policy.
10. Impact fees assessed by any governmental body that exceed the value of services or facilities provided to the airport. However, airport revenue may be used where airport development requires a sponsoring agency to take an action, such as undertaking environmental mitigation measures contained in an FAA record of decision approving funding for an airport development project, or constructing a ground access facility that would otherwise be eligible for the use of airport revenue. Payments of impact fees must meet the general requirement that airport revenue be expended only for actual documented costs of items eligible for use of airport revenue under this Policy Statement. In determining appropriate corrective action for an impact fee payment that is not consistent with this policy, the FAA will consider whether the impact fee was imposed by a non-sponsoring governmental entity and the sponsor's ability under local law to avoid paying the fee.
11. Expenditure of airport funds for support of community activities and participation in community events, or for support of community-purpose uses of airport property except to the extent permitted by this policy. See Section V, Uses of Airport Revenue. Examples of prohibited expenditures in this category include expenditure of $50,000 to sponsor a local film society's annual film festival; and contribution of $6,000 to a community cultural heritage festival.
12. Direct subsidy of air carrier operations. Direct subsidies are considered to be payments of airport funds to carriers for air service. Prohibited direct subsidies do not include waivers of fees or discounted landing or other fees during a promotional period. Any fee waiver or discount must be offered to all users of the airport, and provided to all users that are willing to provide the same type and level of new services consistent with the promotional offering. Likewise prohibited direct subsidies do not include support for airline advertising or marketing of new services to the extent permitted by Section V of this Policy Statement.

Section VII—Policies Regarding Requirement for a Self-Sustaining Airport Rate Structure

A. Statutory Requirements

49 U.S.C. § 47107(a)(13) requires airport operators to maintain a schedule of charges for use of the airport: ''(A) that will make the airport as self-sustaining as possible under the circumstances existing at the airport, including volume of traffic and economy of collection.''

The requirement is generally referred to as the ''self-sustaining assurance.''

B. General Policies Governing the Self-Sustaining Rate Structure Assurance

1. Airport proprietors must maintain a fee and rental structure that in the circumstances of the airport makes the airport as financially self-sustaining as possible. In considering whether a particular contract or lease is consistent with this requirement, the FAA and the Office of the Inspector General (OIG) generally evaluate the individual contract or lease to determine whether the fee or rate charged generates sufficient income for the airport property or service provided, rather than looking at the financial status of the entire airport.
2. If market conditions or demand for air service do not permit the airport to be financially self-sustaining, the airport proprietor should establish long-term goals and targets to make the airport as financially self-sustaining as possible.
3. At some airports, market conditions may not permit an airport proprietor to establish fees that are sufficiently high to recover aeronautical costs and sufficiently low to attract and retain commercial aeronautical services. In such circumstances, an airport proprietor's decision to charge rates that are below those needed to achieve a self-sustaining income in order to assure that services are provided to the public is not inherently inconsistent with the obligation to make the airport as self-sustaining as possible in the circumstances.
4. Airport proprietors are encouraged, when entering into new or revised agreements or otherwise establishing rates, charges, and fees, to undertake reasonable efforts to make their particular airports as self sustaining as possible in the circumstances existing at such airports.
5. Under 49 U.S.C. § 47107(a)(1) and the implementing grant assurance, charges to aeronautical users must be reasonable and not unjustly discriminatory. Because of the limiting effect of the reasonableness requirement, the FAA does not consider the self-sustaining requirement to require airport sponsors

to charge fair market rates to aeronautical users. Rather, for charges to aeronautical users, the FAA considers the self-sustaining assurance to be satisfied by airport charges that reflect the cost to the sponsor of providing aeronautical services and facilities to users. A fee for aeronautical users set pursuant to a residual costing methodology satisfies the requirement for a self-sustaining airport rate structure.

6. In establishing new fees, and generating revenues from all sources, airport owners and operators should not seek to create revenue surpluses that exceed the amounts to be used for airport system purposes and for other purposes for which airport revenues may be spent under 49 U.S.C. § 47107(b)(1), including reasonable reserves and other funds to facilitate financing and to cover contingencies. While fees charged to nonaeronautical users are not subject to the reasonableness requirement or the Department of Transportation Policy on airport rates and charges, the surplus funds accumulated from those fees must be used in accordance with 49 U.S.C. § 47107(b).

C. Policy on Charges for Nonaeronautical Facilities and Services

Subject to the general guidance set forth above and the specific exceptions noted below, the FAA interprets the self-sustaining assurance to require that the airport receive fair market value for the provision of nonaeronautical facilities and services, to the extent practicable considering the circumstances at the airport.

D. Providing Property for Public Community Purposes

Making airport property available at less than fair market rental value for public recreational and other community uses, for the purpose of maintaining positive airport-community relations, can be a legitimate function of an airport proprietor in operating the airport. Accordingly, in certain circumstances, providing airport land for such purposes will not be considered a violation of the self-sustaining requirement. Generally, the circumstances in which below-market use of airport land for community purposes will be considered consistent with the grant assurances are:

1. The contribution of the airport property enhances public acceptance of the airport in a community in the immediate area of the airport; the property is put to a general public use desired by the local community; and the public use does not adversely affect the capacity, security, safety or operations of the airport. Examples of acceptable uses include public parks, recreation facilities, and bike or jogging paths. Examples of uses that would not be eligible are road maintenance equipment storage; and police, fire department, and other government facilities if they do not directly support the operation of the airport.

2. The property involved would not reasonably be expected to produce more than *de minimis* revenue at the time the community use is contemplated, and the property is not reasonably expected to be used by an aeronautical tenant or otherwise be needed for airport operations in the foreseeable future. When airport property reasonably may be expected to earn more than minimal revenue, it still may be used for community purposes at less than FMV if the revenue earned from the community use approximates the revenue that could otherwise be generated, provided that the other provisions of VII. D. are met.

3. The community use does not preclude reuse of the property for airport purposes if, in the opinion of the airport sponsor, such reuse will provide greater benefits to the airport than continuation of the community use.

4. Airport revenue is not to be used to support the capital or operating costs associated with the community use.

E. Use of Property by Not-for-Profit Aviation Organizations

1. An airport operator may charge reduced rental rates and fees to the following not-for-profit aviation organizations, to the extent that the reduction is reasonably justified by the tangible or intangible benefits to the airport or to civil aviation:

a. Aviation museums;

b. Aeronautical secondary and post-secondary education programs conducted by accredited educational institutions; or

c. Civil Air Patrol units operating aircraft at the airport;

2. Police or fire-fighting units operating aircraft at the airport generally will be expected to pay a reasonable rate for aeronautical use of airport property, but the value of any services provided by the unit to the airport may be offset against the applicable reasonable rate.

F. Use of Property by Military Units

The FAA acknowledges that many airports provide facilities to military units with aeronautical missions at nominal lease rates. The FAA does not consider this practice inconsistent with the requirement for a self-sustaining airport rate structure. Military units with aeronautical missions may include the Air National Guard, aviation units of the Army National Guard, U.S. Air Force Reserve, and Naval Reserve air units operating aircraft at the airport. Reserve and Guard units typically have an historical presence at the airport that precedes the Airport and Airway Improvement Act of 1982, and provide services that directly benefit airport operations and safety, such as snow removal and supplementary ARFF capability.

G. Use of Property for Transit Projects

Making airport property available at less than fair market rental for public transit terminals, right-of-way, and related facilities will not be considered a violation of 49 U.S.C. §§ 47107(b), 47133 or 47107(a)(13) if the transit system is publicly owned and operated (or operated by contract on behalf of the public owner), and the facilities are directly and substantially related to the air transportation of passengers or property, including use by airport visitors and employees. A lease of nominal value in the circumstances described in this section would be considered consistent with the self-sustaining requirement.

H. Private Transit Systems

Generally, private ground transportation services are charged as a nonaeronautical use of the airport. In cases where publicly-owned transit services are extremely limited and where a private transit service (i.e., bus, rail, or ferry) provides the primary source of public transportation, making property available at less than fair market rental to this private service would not be considered inconsistent with 49 U.S.C. §§ 47107(b), 47133 or 47107(a)(13).

Section VIII—Reporting and Audit Requirements

The Federal Aviation Administration Authorization Act of 1994 established a new requirement for airports to submit annual financial reports to the Secretary, and the Act required the Secretary to compile the reports and to submit a summary report to Congress. The Federal Aviation Reauthorization Act of 1996 established a new requirement for airports to include, as part of their audits under the Single Audit Act, a review and opinion on the use of airport revenue.

A. Annual Financial Reports

Section 111(a)(4) of the 1994 Authorization Act, 49 U.S.C. § 47107(a)(19), requires airport owners or operators to submit to the Secretary

and to make available to the public an annual financial report listing in detail (1) all amounts the airport paid to other government units and the purposes for which each payment was made, (2) all services and property the airport provided to other government units and compensation received for each service or unit of property provided. Additionally, Section 111(b) of the 1994 Authorization Act requires a report, for each fiscal year, in an uniform simplified format, of the airport's sources and uses of funds, net surplus/loss and other information which the Secretary may require.

FAA Forms 5100–125 and 126 have been developed to satisfy the above reporting requirements. The forms must be filed with the FAA 120 days after the end of the sponsor's fiscal year. Extensions of the filing date may be granted if audited financial information is not available within 120 days of the end of the local fiscal year. Requests for extension should be filed in writing with the FAA Airport Compliance Division, AAS–400.

B. Single Audit Review and Opinion

1. General requirement and applicability. The Federal Aviation Reauthorization Act of 1996, Section 805; 49 U.S.C. § 47107(m) requires public agencies that are subject to the Single Audit Act, 31 U.S.C. § 7501–7505, and that have received Federal financial assistance for airports to include, as part of their single audit, a review and opinion of the public agency's funding activities with respect to their airport or local airport system.

2. Federal Financial Assistance. For the purpose of complying with 49 U.S.C. § 47107(m), Federal financial assistance for airports includes any interest in property received, by a public agency since October 1, 1996, for the purpose of developing, improving, operating, or maintaining a public airport, or an AIP grant which was in force and effect on or after October 1, 1996, either directly or through a state block grant program.

3. Frequency. The opinion will be required whenever the auditor under OMB Circular A–133 selects an airport improvement program grant as a major program. In those cases where the airport improvement program grant is selected as a major program the requirements of 49 U.S.C. § 47107(m) will apply.

4. Major Program. For the purposes of complying with 49 U.S.C. § 47107(m), major program means an airport improvement program grant determined to be a major program in accordance with OMB Circular A–133, § 520 or an airport improvement program grant identified by FAA as a major program in accordance with OMB A–133 § 215(c); except additional audit costs resulting from FAA designating an airport improvement program grant as a major program are discussed at paragraph 9 below.

5. FAA Notification. When FAA designates an airport improvement program grant as a major program, FAA will generally notify the sponsor in writing at least 180 days prior to the end of the sponsor's fiscal year to have the grant included as a major program in its next Single Audit.

6. Audit Findings. The auditor will report audit findings in accordance with OMB Circular A–133.

7. Opinion. The statutory requirement for an opinion will be considered to be satisfied by the auditor's reporting under OMB Circular A–133. Consequently when an airport improvement program grant is designated as a major program, and the audit is conducted in accordance with OMB Circular A–133, FAA will accept the audit to meet the requirements of 49 USC § 47107(m) and this policy.

8. Reporting Package. The Single Audit reporting package will be distributed in accordance with the requirements of OMB Circular A–133. In addition when an airport improvement program grant is a major program, the sponsor will supply, within 30 days after receipt by the sponsor, a copy of the reporting package directly to the FAA, Airport Compliance Division (AAS–400), 800 Independence Ave. SW 20591. The FAA regional offices may continue to request the sponsor to provide separate copies of the reporting package to support their administration of airport improvement program grants.

9. Audit Cost. When an opinion is issued in accordance with 47107(m) and this policy, the costs associated with the opinion will be allocated in accordance with the sponsor's established practice for allocating the cost of its Single Audit, regardless of how the airport improvement program grant is selected as a major program.

10. Compliance Supplement. Additional information about this requirement is contained in OMB Circular A–133 Compliance Supplement for DOT programs.

11. Applicability. This requirement is not applicable to (a) privately-owned, public-use airports, including airports accepted into the airport privatization program (the Single Audit Act governs only states, local governments and non-profit organizations receiving Federal assistance); (b) public agencies that do not have a requirement for the single audit; (c) public agencies that do not satisfy the criteria of paragraph B.1 and 2; above; and Public Agencies that did not execute an AIP grant agreement on or after June 2, 1997.

Section IX—Monitoring and Compliance

A. Detection of Airport Revenue Diversion

To detect whether airport revenue has been diverted from an airport, the FAA will depend primarily upon four sources of information:

1. Annual report on revenue use submitted by the sponsor under the provisions of 49 U.S.C. § 47107(a)(19), as amended.

2. Single audit reports submitted, pursuant to 49 U.S.C. § 47107(m), with annual single audits conducted under 31 U.S.C. §§ 7501–7505. The requirement for these reports is discussed in Part IX of this policy.

3. Investigation following a third party complaint filed under 14 CFR. Part 16, FAA Rules of Practice for Federally Assisted Airport Proceedings.

4. DOT Office of Inspector General audits.

B. Investigation of Revenue Diversion Initiated Without Formal Complaint

1. When no formal complaint has been filed, but the FAA has an indication from one or more sources that airport revenue has been or is being diverted unlawfully, the FAA will notify the sponsor of the possible diversion and request that it respond to the FAA's concerns. If, after information and arguments submitted by the sponsor, the FAA determines that there is no unlawful diversion of revenue, the FAA will notify the sponsor and take no further action. If the FAA makes a preliminary finding that there has been unlawful diversion of airport revenue, and the sponsor has not taken corrective action (or agreed to take corrective action), the FAA may issue a notice of investigation under 14 CFR § 16.103.

If, after further investigation, the FAA finds that there is reason to believe that there is or has been unlawful diversion of airport revenue that the sponsor refuses to terminate or correct, the FAA will issue an appropriate order under 14 CFR § 16.109 proposing enforcement action. However, such action will cease if the airport sponsor agrees to return the diverted amount plus interest.

2. Audit or investigation by the Office of the Inspector General. An indication of revenue diversion brought to the attention of the FAA in a report of audit or investigation issued by the DOT Office of the Inspector General (OIG)

will be handled in accordance with paragraph B.1 above.

C. Investigation of Revenue Diversion Precipitated by Formal Complaint

When a formal complaint is filed against a sponsor for revenue diversion, the FAA will follow the procedures in 14 CFR Part 16 for notice to the sponsor and investigation of the complaint. After review of submissions by the parties, investigation of the complaint, and any additional process provided in a particular case, the FAA will either dismiss the complaint or issue an appropriate order proposing enforcement action.

If the airport sponsor takes the corrective action specified in the order, the complaint will be dismissed.

D. The Administrative Enforcement Process

1. Enforcement of the requirements imposed on sponsors as a condition of the acceptance of Federal grant funds or property is accomplished through the administrative procedures set forth in 14 CFR part 16. Under part 16, the FAA has the authority to receive complaints, conduct informal and formal investigations, compel production of evidence, and adjudicate matters of compliance within the jurisdiction of the Administrator.

2. If, as a result of the investigative processes described in paragraphs B and C above, the FAA finds that there is reason to proceed with enforcement action against a sponsor for unlawful revenue diversion, an order proposing enforcement action is issued by the FAA and under 14 CFR 16.109. That section provides for the opportunity for a hearing on the order.

E. Sanctions for Noncompliance

1. As explained above, if the FAA makes a preliminary finding that airport revenue has been unlawfully diverted and the sponsor declines to take the corrective action, the FAA will propose enforcement action. A decision whether to issue a final order making the action effective is made after a hearing, if a hearing is elected by the respondent. The actions required by or available to the agency for enforcement of the prohibitions against unlawful revenue diversion are:

a. Withhold future grants. The Secretary may withhold approval of an application in accordance with 49 USC § 47106(d) if the Secretary provides the sponsor with an opportunity for a hearing and, not later than 180 days after the later of the date of the grant application or the date the Secretary discovers the noncompliance, the Secretary finds that a violation has occurred. The 180-day period may be extended by agreement of the Secretary and the sponsor or in a special case by the hearing officer.

b. Withhold approval of the modification of existing grant agreements that would increase the amount of funds available. A supplementary provision in section 112 of the 1994 Authorization Act, 49 USC § 47111(e), makes mandatory not only the withholding of new grants but also withholding of a modification to an existing grant that would increase the amount of funds made available, if the Secretary finds a violation after hearing and opportunity to cure.

c. Withhold payments under existing grants. The Secretary may withhold a payment under a grant agreement for 180 days or less after the payment is due without providing for a hearing. However, in accordance with 49 USC § 47111(d), the Secretary may withhold a payment for more than 180 days only if he or she notifies the sponsor and provides an opportunity for a hearing and finds that the sponsor has violated the agreement. The 180-day period may be extended by agreement of the Secretary and the sponsor or in a special case by the hearing officer.

d. Withhold approval of an application to impose a passenger facility charge. Section 112 also makes mandatory the withholding of approval of any new application to impose a passenger facility charge under 49 USC § 40117. Subsequent to withholding, applications could be approved only upon a finding by the Secretary that corrective action has been taken and that the violation no longer exists.

e. File suit in United States district court. Section 112(b) provides express authority for the agency to seek enforcement of an order in Federal court.

f. Withhold, under 49 USC § 47107(n)(3), any amount from funds that would otherwise be available to a sponsor, including funds that would otherwise be made available to a State, municipality, or political subdivision thereof (including any multi-modal transportation agency or transit agency of which the sponsor is a member entity) as part of an apportionment or grant made available pursuant to this title, if the sponsor has failed to reimburse the airport after receiving notification of the requirement to do so.

g. Assess civil penalties.

(1) Under section 112(c) of Public Law 103–305, codified at 49 USC § 46301(a) and (d), the Secretary has statutory authority to impose civil penalties up to a maximum of $50,000 on airport sponsors for violations of the AIP sponsor assurance on revenue diversion. Any civil penalty action under this section would be adjudicated under 14 CFR Part 13, Subpart G.

(2) Under section 804 of Public Law 104–264, codified at 49 USC § 46301((a)(5), the Secretary has statutory authority to obtain civil penalties of up to three times the amount of airport revenues that are used in violation of 49 USC §§ 47107(b) and 47133. An action for civil penalties in excess of $50,000 must be brought in a United States District Court.

(3) The Secretary may, under 49 USC § 47107(n)(4), initiate a civil action for civil penalties in the amount equal to the illegal diversion in question plus interest calculated in accordance with 49 USC § 47107(o), if the airport sponsor has failed to take corrective action specified by the Secretary and the Secretary is unable to withhold sufficient grant funds, as set forth above.

(4) An action for civil penalties under this provision must be brought in a United States District Court. The Secretary intends to use this authority only after the airport sponsor has been given a reasonable period of time, after a violation has been clearly identified to the airport sponsor, to take corrective action to restore the funds or otherwise come into compliance before a penalty is assessed, and only after other enforcement actions, such as withholding of grants and payments, have failed to achieve compliance.

F. Compliance With Reporting and Audit Requirements

The FAA will monitor airport sponsor compliance with the Airport Financial Reporting Requirements and Single Audit Requirements described in this Policy Statement. The failure to comply with these requirements can result in the withholding of future AIP grant awards and further payments under existing AIP grants.

Issued in Washington, DC on February 8, 1999.

Susan L. Kurland,

Associate Administrator for Airports.

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Chapter 15. Permitted and Prohibited Uses of Airport Revenue

15.1. Introduction. This chapter discusses the sponsor's use of airport revenue. It supplements, but does not supersede, the guidance issued in FAA's *Policy and Procedures Concerning the Use of Airport Revenue*, 64 Fed. Reg. 7696, February 16, 1999, (*Revenue Use Policy*).

The U.S. Congress has established the general requirements for the use of airport revenue and has identified the permitted and prohibited uses of airport revenues. These statutory requirements are incorporated in the standard grant assurances and have been interpreted by the FAA and the General Counsel's Office, Office of the Secretary, in policy statements and compliance decisions. It is the responsibility of the FAA airports district offices (ADOs) and regional offices to advise sponsors on the statutes, grant assurances, and policies that outline the permitted and prohibited uses of airport revenue and to ensure that sponsors are not in violation of their federal obligations in the use of their airport revenue. This chapter describes the legislative history, defines airport revenue, and describes the allowable and prohibited uses of airport revenue.

15.2. Legislative History. Congress placed restrictions on the use of airport revenue in four separate acts:

a. Airport and Airway Improvement Act of 1982 (AAIA). Congress first placed restrictions on the use of airport revenue in the AAIA (Public Law (P.L.) No. 97-248) . The AAIA established the basic rules for the use of airport revenue, which are still largely in effect today:

"All revenues generated by the airport, if it is a public airport, will be expended for the capital or operating costs of the airport, the local airport system, or other local facilities which are owned or operated by the owner or operator of the airport and directly related to the actual transportation of passengers or property."

Congress first placed restrictions on the use of airport revenue in the Airport and Airway Improvement Act of 1982 (AAIA) (Public Law No. 97-248). The AAIA established the basic rules for using airport revenue, which are still largely in effect today. The general principle is that airport revenue is to be used for the capital and operating costs of the airport. (Photo: FAA)

See 49 U.S.C. §§ 47107(b) and 47133 for current provision.

b. Airport and Airway Safety and Capacity Expansion Act of 1987 (1987 Airport Act). In the 1987 Airport Act, (P.L. No. 100-223), Congress extended the restriction on the use of airport revenue to include any local taxes on aviation fuel. Consequently, the taxing authorities must use local aviation fuel taxes (except taxes in effect on December 30, 1987) for airport capital and operating costs or for a state aviation program or for noise mitigation purposes on or off the airport. The AAIA and the 1987 Airport Act do allow for some preexisting "nonoperating or noncapital" uses of airport revenue. The *Revenue Use Policy* refers to these preexisting arrangements as "grandfathered." Paragraph 15.10 of this chapter discusses requirements for airports with grandfathered status. With the general recodification of Title 49 of the U.S. Code in 1994, the revenue use provisions were codified as 49 U.S.C. § 47107(b).

c. FAA Authorization Act of 1994 (1994 Authorization Act). In the 1994 Authorization Act, (P.L. No. 103-305), Congress (i) defined certain unlawful uses of airport revenue, (ii) required airports to be as self-sustaining as possible, and (iii) required the FAA to publish a policy on the use of airport revenue. (The self-sustaining requirement is discussed in chapter 17 of this Order, *Self-sustainability*.)

d. FAA Reauthorization Act of 1996 (1996 Reauthorization Act). In the 1996 Reauthorization Act (P.L. No. 104-264), Congress extended the restrictions on the uses of airport revenue to private airports that have received federal assistance. The provision is codified at 49 U.S.C. §§ 47107(b) and 47133.

15.3. Privatization. Also under the 1996 Reauthorization Act, Congress adopted a new statute, § 47134, establishing the Pilot Program on Private Ownership of Airports (privatization pilot program). The program provides for up to five publicly owned airports to participate in the program. Of the five eligible airports, only one airport can be a large hub airport. (Air carrier airports can only be leased.) One of the five airports must be a general aviation airport. (General aviation airports can either be leased or sold.) As an incentive to participation in the program, the Secretary may grant a sponsor three exemptions: (a) an exemption from the revenue-use rules to permit the sponsor to recover a specified amount from the lease or sale if approved by a super majority of air carriers, (b) an exemption waiving the obligation to repay federal grants or return property transferred from the federal government, and (c) an exemption permitting the private operator to earn compensation from airport operations.

15.4. Grant Assurance. Under the AAIA, sponsors, as a condition of receiving Airport Improvement Program (AIP) grants, must agree to the grant assurance on the use of airport revenue. Grant Assurance 25, *Airport Revenues*, incorporates the requirements described in the above legislation.

The Revenue Use Policy defines airport revenue and describes the permitted and prohibited uses of airport revenue.

15.5. FAA Policy. The *Revenue Use Policy* implements the requirements of the above acts, and incorporates the public comments from two earlier proposed versions of the policy. In addition, the *Revenue Use Policy* defines airport revenue and describes the permitted and prohibited uses of airport revenue (The final policy, dated February 16, 1999, is available online.)

15.6. Airport Revenue Defined. Airport revenue generally includes those revenues paid to or due to the airport sponsor for use of airport property by the aeronautical and nonaeronautical users of the airport. It also includes revenue from the sale of airport property and resources and revenue from state and local taxes on aviation fuel.

a. Revenue Generated by the Airport. Revenue generated by the airport for the aeronautical and nonaeronautical use of the airport includes, but is not limited to, the fees, charges, rents, or other payments received by or accruing to the sponsor from air carriers, tenants, concessionaires, lessees, purchasers of airport properties, airport permit holders making use of the airport property and services, etc. (Note: Revenue generated by the tenant in the course of that tenant's business is the tenant's revenue and not airport revenue under the *Revenue Use Policy*. The airport sponsor's revenue from that tenant's occupancy and business rights would be paid in the form of fees, rentals, lease agreement, etc.)

b. Taxes assessed by a special taxing district surrounding the airport and dedicated for support of the airport, but not derived from the use of the airport, are generally not considered airport revenue subject to the *Revenue Use Policy*. These tax revenue funds should be kept separate from airport revenue accounts and may be used for purposes other than those listed in 49 U.S.C. § 47107(b) and § 47133.

c. Parking Fines. Under the Revenue Use Policy, "airport revenue" constitutes money received by the airport for the use of the airport. All of the revenues within the definition represent some form of payment for airport property or use of airport property, whether it is rent, concession fees, aeronautical fees, or mineral rights. However, parking fines and penalties result from law enforcement activity; they are designed to penalize and change behavior, not to serve as a source of revenue. They are assessed by an airport using its police powers, not its proprietary powers as owner of an airport. As a result, the FAA does not generally consider parking fines and penalties to be a revenue-producing activity. For example, the FAA would not consider fines or penalties from other types of law enforcement (such as fines levied for drug possession or intoxication) to constitute "airport revenue." Nor would the FAA consider fines levied for building code violations, improper food handling, or fees from city-issued permits for utility or building use to be "airport revenue."

15.7. Applicability of Airport Revenue Requirements.

a. Airport Revenue. The rules regarding the use of airport revenue are applicable to:

(1). Public Agencies that Receive AIP Grants. The rules on airport revenue apply to public agencies that have received an AIP grant since September 3, 1982, if the obligations of that grant were in effect on or after October 1, 1996.

(2). Public Agencies that Collect Taxes on Aviation Fuel. The rules on aviation fuel apply to state and local agencies that have received an AIP grant since December 30, 1987, and had federal grant obligations for the use of aviation fuel in effect on October 1, 1996.

(3). Any Airport that Received Federal Financial Assistance. The rules on airport revenue apply to a public or private airport that has received federal financial assistance (as defined in paragraph 15.8 of this chapter) and the federal obligations for use of airport revenue incurred as a result of that assistance were in effect on or after October 1, 1996.

15.8. Federal Financial Assistance. Federal financial assistance includes:

a. AIP development grants and other grants issued under predecessor programs.

b. Airport planning grants that relate to a specific airport.

c. Aircraft noise mitigation grants received by an airport operator.

d. The transfer of federal property under the Surplus Property Act; the transfer of federal nonsurplus property under deeds of conveyance issued under section 16 of the Federal Airport Act of l946 (1946 Airport Act), under section 23 of the Airport and Airway Development Act of l970 (1970 Airport Act), or under section 516 of the AAIA.

15.9. Permitted Uses of Airport Revenue.

a. General. Sponsors may use their airport revenue for the capital or operating costs of the airport, the local airport system, or other local facilities owned or operated by the airport owner or operator and directly and substantially related to the air transportation of passengers or property.

Such costs may include reimbursements to a state or local agency for the costs of services actually received and documented, subject to the terms of the *Revenue Use Policy*. Operating costs for an airport may be both direct and indirect and may include all of the expenses and costs that are recognized under the generally accepted accounting principles and practices that apply to the airport enterprise funds of state and local government entities.

b. Promotion of the Airport. Sponsors may use their airport revenue to promote public and industry awareness of the airport's facilities and services. Airport revenue may be used to promote new air service and competition at the airport, but it may not directly subsidize air carrier operations. A sponsor may use its revenue to pay the salary and expenses of airport or sponsor employees engaged in efforts to promote air service at the airport. The sponsor may participate in cooperative advertising where the airport advertises new services with or without matching funds. The name of the airport must be prominently featured in the marketing and promotional material. The sponsor may pay a share of promotional expenses designed to increase use of the airport. The promotion must include specific information about the airport. In addition, the sponsor may support promotional events, such as a Super Bowl hospitality tent for corporate aircraft at a sponsor-owned general aircraft terminal. The sponsor may use airport

revenue to pay for promotional items bearing airport logos distributed at various aviation industry events. The *Revenue Use Policy* does not prohibit a sponsor from spending airport revenue from one airport for promotion of another within that sponsor's airport system.

c. Repayment of the Sponsor. A sponsor may use its airport revenue to repay funds it contributed to the airport from general accounts or to repay loans from the general account to the airport provided the sponsor makes its request for reimbursement within six (6) years of the date on which it made the contribution. (See 49 U.S.C. § 47107(l).)

When the sponsor asks the airport to repay an interest-bearing loan, the airport may repay the loan with interest only if the sponsor clearly documented that the loan was interest-bearing at the time the loan was made. The interest rate may not exceed the interest rate on the sponsor's other investments for that time period.

For other contributions, the FAA must determine whether the sponsor made the contribution for the benefit of the airport. The FAA must determine the date from which the airport may commence payment of interest. The interest that the airport may pay for the other contributions is limited to the U.S. Treasury investment interest rate. (See 49 U.S.C. § 47107(o) and (p).)

d. Lobbying and Attorney Fees. A sponsor may use airport revenue to pay lobbying and attorney fees to the extent these fees are for services in support of airport capital or operating costs that are otherwise allowable.

e. Costs Incurred by Government Officials. A sponsor may pay for costs that government officials incur on the airport's behalf. For example, the cost of travel for city council members to meet with FAA officials about AIP funding is an allowable use of airport revenue.

f. General Government Costs. A sponsor may pay for a portion of the general costs of government, including executive offices and the legislative branches, provided the sponsor allocates such costs to the airport in accordance with an acceptable cost allocation plan. The FAA may require special scrutiny of allocated costs to assure that the airport is not paying a disproportionate share.

g. Central Service Costs. A sponsor may use airport revenue to pay for costs such as accounting, budgeting, data processing, procurement, legal services, disbursing, and payroll services that it bills to the airport through an acceptable cost allocation plan. The *Revenue Use Policy* and OMB Circular A-87 are our references for evaluating sponsor cost allocation plans. Such costs must meet the standard of being airport capital or operating costs. The allocation of these costs may require special scrutiny to assure that the airport is not paying a disproportionate share of these costs.

h. Community Activities. A sponsor may use airport revenue to support community activities and to participate in community events if such expenditures are directly and substantially related to the operation of the airport. For example, it may purchase tickets for an annual community luncheon at which the airport director delivers a speech reviewing the state of the airport. The airport may also contribute to a golf tournament sponsored by a "friends of the airport"

committee. The FAA also recognizes that contributions for community or charitable purposes can provide a direct benefit to the airport through enhanced community acceptance and that a benefit of that nature is intangible and not quantifiable. Consequently, where the amount of contribution is minimal, the FAA will not question the value of the benefit so long as there is a reasonable connection between the recipient organization and the benefit of local community acceptance for the airport. An example of a permitted expenditure in this category is a $250 fee for a booth focusing on the operation of the airport and career opportunities in aviation at a local school fair. An airport may use its revenue to support a community's use of airport property if the expenditures are directly and substantially related to the operation of the airport.

i. Ground Access Projects. It is the policy of the United States to encourage the development of intermodal connections on airport property between aeronautical and other transportation modes and systems to serve air transportation passengers and cargo efficiently and effectively and promote economic development. (See 49 U.S.C. § 47101(a)(5).) Consistent with this policy, a sponsor may use airport revenue to pay for the airport's share of a ground access project in two general cases: (1) if the project qualifies as an integral part of an airport capital project, and (2) if the project is owned or operated by the sponsor and is directly and substantially related to the air transportation of passengers or property.

(1). Airport capital project. An example of an airport capital project would be the construction of an airport transit station incorporated into a new airport passenger terminal to provide direct transit access to the airport terminal building. The station is designed and intended exclusively for airport ground access and is effectively part of the terminal building.

(2). Other facilities directly and substantially related to air transportation. A facility may extend for a distance off airport property or be used in part by nonairport passengers. Such cases can be complex, and a three-part analysis should be applied:

First, is the facility owned or operated by the airport sponsor?

Second, is the facility directly and substantially related to air transportation? The facility must be a primary means of ground access to the airport even if the facility will not be used exclusively by airport passengers, employees, and visitors. The facility must be designed and intended for airport use even if others will also make use of it once the project is built. Airport funding is limited to the portion (road or rail line) from the airport to the nearest line of mass capacity, typically a highway or rail line adjacent to or close to the airport boundary. City streets and local highways may be used by passengers on the way to the airport, but they are not designed or intended for airport access and are not directly and substantially related to air transportation.

Third, is the airport contribution prorated to the forecast use of the facility? If 50 percent (50%) of the passengers on a transit line with a stop at the airport will be airport passengers, then the airport can contribute up to 50 percent (50%) of the cost of the rail line across airport property. For example, where a transit line was designed to run through airport property in order to provide an airport station, the FAA has approved the use of airport revenue for 100 percent (100%) of the actual costs incurred for structures and equipment associated with the airport

terminal building station, as well as for a portion of the costs of the rail line through the airport, prorated for the percentage of airport passengers using the system in relation to total transit passengers using that segment of the line.
The permissibility of using airport revenue for a ground access project is reviewed and accepted or rejected on a case-by-case basis.

15.10. Grandfathering from Prohibitions on Use of Airport Revenue.

a. General. Certain airports may use airport revenue for otherwise impermissible expenditures when the airport qualifies as "grandfathered." An airport is deemed "grandfathered" when provisions establishing certain financial arrangements between the airport and sponsor exist that were in effect prior to the enactment of the AAIA on September 3, 1982. (See 49 U.S.C. § 47107(b)(2).) Grandfathered airports are grandfathered only as to what was in effect of September 3, 1982. A list of airports considered to be grandfathered is at the end of this chapter.

A grandfathered airport is permitted to pay the sponsor for costs that are for purposes other than the airport's capital and operating costs. However, under the authority of 49 U.S.C. § 47115(f), the FAA considers as a factor militating against the approval of an application for AIP discretionary funds the fact that a grandfathered airport has exercised its rights to use airport revenue for nonairport purposes when, in the airport's fiscal year preceding the date of application for discretionary funds, the FAA finds that the amount of airport revenues used for nonairport purposes exceeds the amount used for such purposes in the airport's first fiscal year ending after August 23, 1994, adjusted for changes in the Consumer Price Index (CPI). In making this determination, the FAA will evaluate the grandfathered payments for the fiscal year preceding the date of the application.

Payments made by an independent authority or state department of transportation that owns or operates other transportation facilities in addition to airports with debt obligations or legislation governing financing that predate AAIA may be grandfathered.

Grandfathered arrangements include:

(1). Debt. An independent authority or state department of transportation that owns or operates other transportation facilities in addition to airports and has debt obligations or legislation governing financing and providing for use of airport revenue for nonairport purposes predating the AAIA. (Such sponsors may have obtained legal opinions from their counsel to support a claim of grandfathering, which FAA would consider in its review.)

(2). DOT Interpretations. Previous Department of Transportation (DOT) interpretations have found the following legislation certifying financial arrangements predating the AAIA legislation to qualify for the grandfather exception:

(a). Bonds. Bond obligations and city ordinances requiring a five percent (5%) "gross receipts" fee from airport revenue. In this case, the city instituted the payments in 1954 and continued them in 1968.

(b). State Statute. A 1955 state statute assessing a five percent (5%) surcharge on all receipts and deposits in an airport revenue fund to defray central service expenses of the state.

(3). City Legislation. City ordinance authorizing the payment of a percentage of airport revenue. City legislation permitting an air carrier settlement agreement in which the airport pays to the city 15 percent (15%) of airport concession revenue.

(4). Multi Modal Authority. A 1957 state law establishing financing and operations of a multi modal state transportation program and authority – including airport, highway, port, rail, and transit facilities. State revenues (including airport revenue) support the state's transportation-related and other facilities. The funds flow from the airports to a state transportation trust fund comprising all "taxes, fees, charges, and revenues" collected or received by the state department of transportation.

(5). Enabling Provision. A port authority's 1956 enabling act provisions specifically permitting it to use port revenue, which includes airport revenue, to satisfy debt obligations and to use revenues from each project for the expenses of the authority. The act also exempts the authority from property taxes, requires annual payments in lieu of taxes to several local governments, and gives it other corporate powers. A 1978 trust agreement recognizes the use of the authority's revenue for servicing debt, for facilities of the authority, and for its expenses, reserves, and the payment in lieu of taxes.

(6). Aviation Fuel Tax. Grandfathered arrangements also include local taxes on aviation fuel that were in effect before the 1987 Airport Act (i.e., fuel taxes in effect on December 30, 1987).

15.11. Allocation of Indirect Costs. An airport may use its revenue to pay capital or operating costs that the sponsor charges the airport through a cost allocation plan. In an acceptable cost allocation plan, the sponsor allocates costs in a manner consistent with Attachment A to Office of Management and Budget (OMB) Circular A-87,[39] except substitute the phrase "airport revenue" for the phrase "grant award" wherever the latter phrase occurs in Attachment A. In addition, the sponsor may not disproportionately allocate general government costs to the airport and may not indirectly bill costs through the cost allocation plan that are also billed directly to the airport. The sponsor must bill its other comparable units of government in a similar manner for the same costs it allocates to the airport; such allocations must be in proportion to the benefit that each receives from the allocated costs.

15.12. Standard for Documentation. The airport must ensure that billings from government entities meet the FAA requirement for documentation. The standards require the entity to maintain evidence to support its direct and indirect charges to the airport. Such evidence may include the underlying accounting data (such as general and specialized journals, ledgers,

[39] OMB Circular A-87, Cost Principles Applicable to Grants and Contracts with States and Local Governments.

manuals, and supporting worksheets and other analyses) as well as corroborating evidence (such as invoices, vouchers, and indirect cost allocation plans).

The FAA accepts audited financial statements as supporting evidence. However, the statement's underlying accounting records must clearly show the amounts that the entity billed to the airport. The entity's budget estimates are not sufficient to establish a claim for reimbursement. The entity may use budget estimates to establish predetermined indirect cost allocation rates as part of an indirect cost allocation plan, provided estimates are adjusted to actual expenses in the subsequent accounting period.

15.13. Prohibited Uses of Airport Revenue.

a. Unlawful Revenue Diversion. Unlawful revenue diversion is the use of airport revenue for purposes other than airport capital or operating costs or the costs of other facilities owned or operated by the sponsor and directly and substantially related to air transportation. Revenue diversion violates federal law and AIP grant assurances unless: (1) it is grandfathered within the scope of grandfathered financial authority established before 1982, or, (2) it is authorized under an exemption issued by the FAA as part of the airport privatization pilot program.

Revenue diversion is the use of airport revenue for purposes other than airport capital or operating costs.

b. General. Prohibited uses of airport revenue include direct or indirect payments that exceed the fair and reasonable value of those services and facilities provided to the airport. The FAA generally considers the cost of providing the services or facilities to the airport as a reliable indicator of value. For example, the DOT Office of Inspector General (OIG) and the FAA found a city sponsor to be diverting revenue where the sponsor charged the airport for investment management at the rate that would have been charged for commercial services when services to the airport were actually provided by city employees at a much lower cost.

c. Cost Allocation. Payments under a plan are a prohibited use of airport revenue when the allocation is based on a formula that is not consistent with the *Revenue Use Policy* or when the payment is not calculated consistently and equitably for the airport and other comparable units or cost centers of government.

d. General Economic Development. Using airport revenue for general economic development is a prohibited use of airport revenue.

e. Market and Promotion. When unrelated to airport operations, marketing and promotion costs are prohibited uses of airport revenue Examples include participating financially in marketing as destinations city or regional attractions such as hotels, convention centers, sports arena, theaters, and other entertainment attractions having no connection to the promotion of the airport.

f. Payments in Lieu of Taxes (PILOTs). Payments in lieu of taxes or other assessments that exceed the value of services or are not based on an acceptable cost allocation formula (i.e., reasonable and transparent), are prohibited uses of airport revenue.

g. Lost Tax Revenues. Payments to compensate nonsponsoring governmental bodies for lost tax revenues, to the extent the payments exceed the stated tax rates applicable to the airport, are prohibited uses of airport revenue Note that many payments in lieu of taxes (PILOTs) by airports are voluntary, not assessed, and should be evaluated under the lost tax provisions of 49 U.S.C. § 47107(l)(2)(D) rather than § 47107(l)(2)(C), which pertains to "payments in lieu of taxes or other assessments…." In each case the nature of the payment, rather than its title, should determine the appropriate analysis.

h. Loans and Investments. Loans to, or investment of, airport funds in a state or local agency at less than the prevailing rate of interest are prohibited uses of airport revenue.

i. Sponsor Aeronautical Use. Use of land for free or nominal rental rates by the sponsor for aeronautical purposes (e.g., a sponsor-owned fixed-base operator[40]) – except to the extent permitted under the *Revenue Use Policy* section on the self-sustaining requirement – is prohibited use of airport revenue.

j. Sponsor Nonaeronautical Use. Rental of land to, or use of land by, the sponsor for nonaeronautical purposes at less than fair market value rent is considered a subsidy of local government and is a prohibited use of airport revenue.

k. Impact Fees. Impact fees assessed by any governmental body that exceed the value of services or facilities provided to the airport are prohibited uses of airport revenue. However, the airport may pay for environmental mitigation measures contained in an FAA record of decision approving funding for an airport development project or for constructing a ground access facility that would otherwise be eligible for the use of airport revenue. When such fees meet the other allowability and documentation requirements, the sponsor may use airport revenue to pay for impact fees. In determining appropriate corrective action for an impact fee payment that is not consistent with the revenue use requirements, the FAA will consider whether a nonsponsoring governmental entity imposed the fee and whether the sponsor has the ability under local law to avoid paying the fee.

l. Community Activities. Using airport funds to support community activities and to participate in community events or using airport property for community purposes – except to the extent permitted under the *Revenue Use Policy* – is a prohibited use of airport revenue.

m. Subsidy of Air Carriers. The direct subsidy of air carrier operations is a prohibited use of airport revenue. Prohibited direct subsidies do not include support for airline advertising or marketing of new services to the airport as described in paragraph 15.9.b above.

[40] A fixed-base operator (FBO) is a commercial entity providing aeronautical services such as fueling, maintenance, storage, ground and flight instruction, etc., to the public.

n. Airport Fee Waivers during Promotion Periods.

(1). Prohibited direct subsidies do not include waivers of fees or discounted landing or other fees during a promotional period. However, the airport must offer any promotional fee waiver or discount to all similarly situated users of the airport willing to provide the same type and level of new service consistent with the promotional offering.

(2). The cost of offering discounted fees or waivers cannot be shifted to other air carriers not participating in the promotional incentive program. When developing its rate base, the airport may not consider in its calculations the promotional discounted fees and waivers.

The airport may need a discretionary source of airport revenue – or revenue from another external source – to fund promotions. This requirement is consistent with the FAA's *Policy Regarding the Establishment of Airport Rates and Charges* (*Rates and Charges Policy*), which provides that airport sponsors may not recover the costs associated with one group of aeronautical users from fees of another aeronautical user or group of aeronautical users unless agreed to by all aeronautical users in that group**.** (See *Rates and Charges Policy*, section 3.1.)

Prohibited direct subsidies do not include waivers of fees or discounted landing or other fees during a promotional period. However, the airport must offer any promotional fee waiver or discount to all similarly situated users of the airport willing to provide the same type and level of new service consistent with the promotional offering.

15.14. through 15.19. reserved.

Fees that can be waived during a promotional period include all or a portion of landing fees or space rent for passenger or cargo processing services or for operational activities. When developing its rate base, the airport may not consider in its calculations the promotional discounted fees and waivers. The cost of offering the discounted fees and waivers cannot be shifted to other air carriers not participating in the promotional incentive program. That is, the airport may need a discretionary source of airport revenue – or revenue from another external source – to fund the promotion. (Photo: FAA)

Grandfathered Airport List

1. State of Maryland—Baltimore/Washington International and Martin State.
2. Massachusetts Port Authority—Boston-Logan and Hanscom Field.
3. Port Authority of New York and New Jersey—JFK, Newark, LaGuardia, and Teterboro.
4. City of Saint Louis, Missouri—Lambert-St. Louis.
5. State of Hawaii—all publicly owned/public use airports.
6. City and County of Denver—Denver International.
7. City of Chicago—Chicago O'Hare and Midway.
8. City and County of San Francisco—San Francisco International.
9. Port of San Diego—San Diego International.
10. Niagara Frontier Transportation Port Authority, NY—Greater Buffalo and Niagara Falls.
11. City and Borough of Juneau, AK—Juneau International.
12. Texarkana Airport Authority, AR—Texarkana Regional

MONTEREY
REGIONAL AIRPORT

Appendix O

MONTEREY REGIONAL AIRPORT
NORTH SIDE CONCEPT PLAN

MONTEREY REGIONAL AIRPORT
NORTH SIDE CONCEPT PLAN

Jurisdictional Context

For jurisdictional standards and code requirements, 3 potential jurisdictions were considered for comparison: (1) County of Monterey; (2) City of Monterey; and (3) City of Del Rey Oaks. Each of these jurisdictions has a different set of site development standards, so development of the Airport site under the code restrictions of each will yield different potential development results.

In light of the conclusions in the recent "North Side Market Analysis" report by Kosmont Companies, two main land uses were considered in this Concept Plan: Light Industrial Business Park and Office Park.

Following are brief descriptions of the three pertinent jurisdictions and comments regarding development under each jurisdiction's set of statutes.

County of Monterey

Monterey County has site development standards that would almost surely yield the highest maximum allowable square footages for office and light industrial parcels over equivalent uses under the other two city standards. Some of the key factors include:

- Both Business/Professional Office and Light Industrial uses are permitted under the "LI" (Light Industrial) Zone. (For more detailed list of uses permitted, not permitted, or conditional, consult the Zoning Ordinance)
- *Maximum Building Footprint Coverage:*
    - Allows 50% of site area (excluding parking and landscape) for one story
    - Allows 50% of site area for more than story
- *Parking Requirements:*
    - Light Industrial uses-- One space per each 500 sq. ft. of building area
    - Professional Office uses-- One space per each 500 sq.ft. of building area
    - R & D-- One space per each 500 sq.ft.
- *Landscape Coverage:*
    - 10% Minimum site area coverage (planting, walkways, rec areas, fountains, patios/plazas, etc.)
- *Building Height:* County allow a 35' building height, but has conditional provisions to go up to 50'.

City of Monterey

The City of Monterey appears to have the more specific and more detailed set of code standards, as well as more stringent requirements than the County's.

- Both Business/Professional Office and Light Industrial uses are permitted under the "IR" Zone, with the sub-Zone of "IR-40" (minimum 40,000 s.f. lot size) being most logical for the Airport site. However, smaller lots may be permitted with an approved development plan for a site with a minimum area of ten acres.
- *Lot Frontage:*
    - The City requires a 150' minimum lot frontage in the "IR-40" Zone.
- *Building Coverage:* City restricts maximum site building coverage to
    - 40% of site area (excluding parking and landscape) for one story
    - 30% of site area for more than story
- *Parking Requirements:*
    - Light Industrial uses-- One space per each 500 sq. ft. of building area for;
    - Professional Office uses-- One space per each 275 sq.ft. of building area
    - R & D-- One space per each 500 sq.ft.
- *Landscape Coverage:*
    - 20% Minimum site area coverage (planting, walkways, rec areas, fountains, patios/plazas, etc.)
- *Building Height:* City allows a 35' maximum building height.

City of Del Rey Oaks

Looking through their standards, they do not appear to have a specific light industrial zoning district. The closest zoning district they have is C-1, which allows for professional office uses and a limited number of light industrial oriented uses. Here are some of the C-1 zoning standards:

- *Professional Offices: Limit of two stories or 30' height;*
- *Parking requirement:* 1 space per 300 sq. ft. of building space (service commercial allows 1 space per 500 sq. ft.)
- *Landscaping Requirements:* landscape coverage is by Architectural Control Committee review. No specific coverage requirements shown.

Note: Given the limited zoning districts and standards for Del Rey Oaks, there is some question whether light industrial or the types of uses under consideration would be appropriate for Del Rey Oaks. Our initial response is to stick with either County or City standards. Therefore, we have restricted our comparison only to those two jurisdictions.

Additional Note for all Jurisdictions:

It should also be noted here that development codes are not the only criteria from which to determine development of the Airport site. Political, geographical and financial issues may also be key factors in determining which jurisdiction offers the most advantageous opportunity for a successful project. However, for the purposes of this Plan, mainly the jurisdictional standards were considered.

Site Plan Option Descriptions and Statistical Comparison

General Overview:

- Given the topographic constraints on the western development section—road access and circulation alternatives are greatly limited; so both schemes show the one most logical approach, which maximizes access to development areas. The "softer" topography on the eastern development area allows less grading and more parcel layout options to consider.
- Developable area on the western site can be improved by significant grading on the western end, creating "tiered" lots by moving dirt to the west and east. Each of the 2 options assumes that this level of grading would occur and approximates locations of graded slopes. However, no specific grading studies have yet been performed to confirm actual pad sizes.
- Use of roundabouts is shown on both options, as these allow easier secondary road intersections and any allowance for stacking distance.
- *Environmental:* All options assume that the environmental areas of Spine Flowers and Manzanita can be mitigated, rendering those areas completely developable. Also, all options assume significant grading and removal of trees and vegetation on the west end. If trees are later required to be preserved, then up to two parcels shown on the site plan options may not be feasible.
- The conceptual development depicted in this Plan is for concept purposes only. The completion of this Plan is not an approval of, or commitment to construct the development. Under current assumptions and/or requirements, the conceptual development depicted would need to be further evaluated and determinations made under both NEPA and CEQA and approved by the Federal Aviation Administration before the MPAD could complete design and construction.

- *"Sensitive Site":* Both options assume that the "Sensitive Site" shown on the plans is to be preserved. If any future access is required to this site, it can be provided between business park parcels.
- The existing berm on the north side of the site is assumed to be preserved as-is. Also, the property boundaries for the solar farm are also preserved as shown on base maps.

Statistical Comparison Chart (Attachment 1)

This chart--accompanying this report--is a matrix that compares potential site building square footage yields and parking requirements for parcels in both Options One and Two, using the City of Monterey and County of Monterey zoning standards. Though this matrix is conceptual only, it illustrates the differences in ultimate project square footage yields from one land use to another, from one-story to two-story building products, from varying parking requirements, and from varying landscape requirements. The components of this chart are based on 4 elements of each development parcel:

- Building Footprint—Maximum allowable building footprint onsite, excluding parking and open space. However, within this "*allowable*" footprint, there may be other elements, such as loading zones, storage and maintenance yards, trash collection areas, and other uses that may not be within a particular enclosed building and may reduce the ultimate amount of available land for the building.
- Parking Area—Minimum required number of parking spaces for the total conceptual building square footage—for both one and two-story buildings. For the purposes of this Plan, we have assumed an average site area need of 350 sq. ft. per parking space (assuming drive aisles, entry drives, inefficiencies, etc. Number of parking spaces achieved for actual parking layouts may vary, depending on site shapes and sizes, and other variables.
- Minimum Landscape Area—Expressed as a percentage of the overall parcel site square footage, and may include walkways, planting areas, plazas, rec areas, etc.
- Estimated Detention Area—For the purposes of this Plan, it is assumed that 5% of the site area will be required for storm drainage and detention uses.

Option One Description (Attachment 2)

Land Use Assumptions:

- All Light Industrial parcels, maximizing individual parcel depths.
- Development of 16 parcels, ranging from approximately 1.2 acre to 2.4 acres in size (with the exception of two parcels constrained on the north side of the "Sensitive Site")
- Set up so that parcels may be aggregated for larger users.
- This option assumes *all one-story buildings*, reflected in the Statistical Comparison chart. There is, however, the potential option for two-story buildings, depending on user needs; this would change the estimated square footage yield figures and the parking count requirements.

Roads:

- Eastern half improves existing dirt access road to provide access to parcels on north side of "Sensitive Site." (note: this access road could conceivably be reduced to a private drive, narrower and less expensive to build)
- Western half improves existing dirt road north of the main entry drive, and grades it as far to the south side as possible to maximize lot depths to the north.

Option Two (Attachment 3)

Land Use Assumptions:

- Mix of Light Industrial/Flex parcels and Office Park/Flex parcels
- This option maximizes the overall lot quantity by providing access to reduced lot depths and widths.
- Also set up so that parcels may be aggregated for larger users.
- Development of 11 Light Industrial "Flex" lots and 12 Office "Flex" lots, ranging from 0.6 to 1.4 acres in size.
- This option assumes both one and two-story building types for Light Industrial/Flex users, and all two-story building types for Office/Flex users, optimizing lot coverage efficiency.

Roads:

- Western half—See description in Option Two.
- Eastern half—creation of a one-way central loop access drive around the "Sensitive Site" to gain access to small interior lots.

- Existing northern dirt service road (shown in dashed lines) is left as-is, as maintenance access from entry roundabout.

END

Summary Chart : North Side Concept Plan - Preliminary Site Plan Options

Parcel Number	Land Use Category	Developable Acres(1)	Building Types	Est. Maximum Building coverage (City Code)(2)(4)(5)	Minimum Number of Parking spaces Required (City Code)(2)(4)	Est. Maximum Building coverage (County Code)(3)(4)(5)	Minimum Number of Parking spaces Required (County Code)(3)
Option One--All Light Industrial							
1.1	Lt. Industrial	1.2	One story	20,908 sf	42	27,040 sf	52
1.2	Lt. Industrial	1.6	One story	27,878 sf	56	34,848 sf	71
1.3	Lt. Industrial	2.0	One story	34,848 sf	70	43,560 sf	87
1.4	Lt. Industrial	2.2	One story	38,333 sf	77	47,916 sf	96
1.5	Lt. Industrial	1.7	One story	29,620 sf	59	37,026 sf	74
1.6	Lt. Industrial	1.4	One story	24,393 sf	49	30,492 sf	61
1.7	Lt. Industrial	1.0	One story	17,424 sf	35	21,780 sf	44
1.8	Lt. Industrial	1.3	One story	22,651 sf	45	28,314 sf	57
1.9	Lt. Industrial	1.3	One story	22,651 sf	45	28,314 sf	57
1.1	Lt. Industrial	2.4	One story	41,817 sf	84	52,272 sf	104
1.11	Lt. Industrial	2.2	One story	38,333 sf	77	47,916 sf	96
1.12	Lt. Industrial	1.5	One story	26,136 sf	52	32,670 sf	65
1.13	Lt. Industrial	1.5	One story	26,136 sf	52	32,670 sf	65
1.14	Lt. Industrial	1.9	One story	33,105 sf	66	41,382 sf	83
1.15	Lt. Industrial	0.5	One story	8,712 sf	18	10,890 sf	22
16	Lt. Industrial	1.0	One story	17,424 sf	35	21,780 sf	44
Sub Totals Option One		24.7 ac.		430,369 sf	862 spaces	538,870 sf	1,078 spaces

Parcel Number	Land Use Category	Developable Acres(1)	Assumed Building Types	Est. Maximum Building coverage (City Code)(2)(4)(5)	Minimum Number of Parking spaces Required (City Code)(2)(4)	Est. Maximum Building coverage (County Code)(3)(4)(5)	Minimum Number of Parking spaces Required (County Code)(3)
Option Two--Light Industrial and Office Flex Uses							
2.1	Lt. Industrial/Flex	1.2	One/Two Story	20,909/31,363 sf	42/63	27,600/36,960 sf	52/74
2.2	Lt. Industrial/Flex	1.3	One/Two Story	22,651/33,977 sf	45/68	28,314/40,040 sf	57/80
2.3	Lt. Industrial/Flex	1.4	One /Two Story	24,393/36,590 sf	49/73	30,492/43,120 sf	61/86
2.4	Lt. Industrial/Flex	1.2	One/Two Story	20,909/31,363 sf	42/63	27,600/30,800 sf	52/62
2.5	Lt. Industrial/Flex	1.0	One /Two Story	17,424/26,136 sf	35/53	21,780 /30,800 sf	44/62
2.6	Lt. Industrial/Flex	1.4	One/Two Story	24,393/36,590 sf	49/73	30,492/43,120 sf	61/86
2.7	Lt. Industrial/Flex	1.3	One/Two Story	22,651/33,977 sf	45/68	28,314/ 40,040 sf	57/80
2.8	Lt. Industrial/Flex	1.0	One/Two Story	17,424/26,136 sf	35/53	21,780/30,800 sf	44/62
2.9	Lt. Industrial/Flex	1.0	One /Two Story	17,424/26,136 sf	35/53	21,780/30,800 sf	44/62
2.10	Lt. Industrial/Flex	1.2	One/Two Story	20,909/31,363 sf	42/63	27,600/36,960 sf	52/74
2.11	Lt. Industrial/Flex	1.1	One/Two Story	19,166/28,750 sf	38/57	23,958/33,880 sf	49/68
2.12	Office/Flex	0.9	Two Story	16,587 sf	60	27,720 sf	59
2.13	Office/Flex	0.8	Two Story	14,744 sf	54	24,640 sf	49
2.14	Office/Flex	1.0	Two Story	18,430 sf	67	30,800 sf	62
2.15	Office/Flex	0.7	Two Story	12,901 sf	47	21,560 sf	43
2.16	Office/Flex	0.6	Two Story	11,058 sf	40	18,480 sf	37
2.17	Office/Flex	1.0	Two Story	18,430 sf	67	30,800 sf	62
2.18	Office/Flex	1.0	Two Story	18,430 sf	67	30,800 sf	62
2.19	Office/Flex	1.0	Two Story	18,430 sf	67	30,800 sf	62
2.20	Office/Flex	0.9	Two Story	16,587 sf	60	27,720 sf	56
2.21	Office/Flex	1.0	Two Story	18,430 sf	67	30,800 sf	62
2.22	Office/Flex	0.8	Two Story	14,744 sf	54	24,640 sf	49
2.23	Office/Flex	0.9	Two Story	16,587 sf	60	27,720 sf	56
Sub Totals Option Two		23.3 ac		423,611/537,739 sf	1167/1397 spaces	616,190/723,800 sf	1232/1455 spaces

NOTES

(1) Acreages and calculations shown are approximate, based on conceptual land use plans and represent only those portions of the parcels that would be buildable after grading. (2) Parking counts and building square footage estimates based on City of Monterey site development standards for Industrial and Office land uses under the "IR" Zone. Calculations are derived from maximum

allowable building footprint coverages (30% for office, 40% for Light Industrial), plus City parking standard standard of one space per 275 sf of office building space and one space per 500 sf of light industrial building space, and 20% minimum landscape coverage. (3) Parking counts and building square footage estimates based on County of Monterey site development standards for "LI" Zone. Calculations are based on this code--derived from 50% maximum allowable building coverages for *both* office and light industrial uses, plus County parking standard of one space per 500 s.f. of building space and 10% minimum landscape coverage (4) Parking coverage calculated at average 350 sf/space; actual areas may vary, depending on parking efficiency) (5) Note that "building coverages" shown above are *maximum possible* by Code, but may include added necessary loading, storage, trash, and maintenance areas, and other ancillary spaces, excluding required (6) Allowance for stormwater detention areas assumes approx. 5% of site coverage.

Exact location of identified resources is not disclosed to protect resource integrity.