CITY OF SOUTH PASADENA
MOBILITY AND TRANSPORTATION INFRASTRUCTURE COMMISSION
MEETING AGENDA

Council Chamber
1424 Mission Street, South Pasadena, CA 91030
February 20, 2024 at 6:30 p.m.

IN-PERSON

NOTICE ON PUBLIC PARTICIPATION & ACCESSIBILITY

Pursuant to Government Code Section 54953, subdivision (e) (3), meetings of the Mobility and Transportation Infrastructure Commission (MTIC) for Tuesday, February 20, 2024, will be conducted remotely and held by video conference.

The in-person/virtual meetings will maintain transparency and public access while protecting the health and safety of the public. Members of the public have the option to participate in-person or via Zoom using the following link:

Mobility and Transportation Infrastructure Commission
Zoom Meeting Information
Meeting ID: 869 6685 7059
Passcode: 236322

1. Go to the Zoom website, https://zoom.us/join and enter the Zoom Meeting information accordingly; or

2. Click on the following unique Zoom meeting link:
https://us02web.zoom.us/j/86966857059?pwd=K0EzcXR0YW5BT2NhNlF6ZUI5d3gwdz09

or
3. You may listen to the meeting by calling: +1-669-900-6833 and entering the Zoom Meeting ID and Passcode when prompted to do so.

For additional Zoom assistance with telephone audio, you may find your local number at:
https://us02web.zoom.us/u/ky9n7bhtz

PUBLIC COMMENT AND SUGGESTIONS ***(****Public Comments are limited to 3 minutes****)***
The MTIC welcomes public input. If you would like to comment on this agenda item, members of the public may participate by means of one of the following options:

Option 1: Participants will be able to "raise their hand" using the Zoom icon during the meeting, and they will have their microphone un-muted during the comment portion of the agenda to speak for up to 3 minutes; or

Option 2: Email public comment(s) to: mticpubliccomments@southpasadenaca.gov. **Public Comments received in writing will not be read aloud at the meeting, but will be part of the meeting record.** Written Public Comments will be uploaded online for public viewing under Additional Documents. There is no word limit on emailed Public Comment(s). `

Please make sure to indicate: 1) your name (optional), and 2) what agenda item you are submitting public comment on, and/or 3) Submit by no later than 12:00 pm., on Tuesday, February 20, 2024.

CALL TO ORDER:	Vice Chair Hughes
ROLL CALL:	Commissioners: Commissioner Abelson, Commissioner Dunlap, Commissioner Fisher, Vice Chair Hughes, and Commissioner Zavala.
CITY COUNCIL LIAISON:	Councilmember Evelyn Zneimer
STAFF PRESENT:	Ted Gerber, Public Works Director ("PWD"), David Pena, Transportation Program Manager ("TPM"), and Leaonna DeWitt, Public Works Assistant ("PWA")
PLEDGE OF ALLEGIANCE:	Commissioner Abelson

PUBLIC COMMENT

1. Public Comment – General

ACTION/DISCUSSION

2. Review of Development Project and Transportation Impact Analysis Methodology

3. Approval of Minutes of the Regular Mobility and Transportation Infrastructure Commission Meeting on January 16, 2024

INFORMATION REPORTS

4. Project Status Update

COMMUNICATIONS

5. City Council Liaison Communications

6. Commissioner Communications

7. Staff Liaison Communications

ADJOURNMENT

FUTURE MOBILITY AND TRANSPORTATION INFRASTRUCTURE COMMISSION MEETINGS

March 19, 2024	Council Chamber	6:30 P.M.
April 16, 2024	Council Chamber	6:30 P.M.
May 21, 2024	Council Chamber	6:30 P.M.

PUBLIC ACCESS TO AGENDA DOCUMENTS AND BROADCASTING OF MEETINGS

Commission Meeting agenda packets are available online at the City website: https://www.southpasadenaca.gov/government/boards-commissions/mobility-and-transportation-infrastructure-commission

ACCOMMODATIONS

The City of South Pasadena wishes to make all of its public meetings accessible to the public. If special assistance is needed to participate in this meeting, please contact the City Clerk's Division at (626) 403-7230. Upon request, this agenda will be made available in appropriate alternative formats to persons with disabilities. Notification at least 48 hours prior to the meeting will assist staff in assuring that reasonable arrangements can be made to provide accessibility to the meeting (28 CFR 35.102-35.104 ADA Title II).

I declare under penalty of perjury that I posted this notice of agenda on the bulletin board in the courtyard of City Hall at 1414 Mission Street, South Pasadena, CA 91030, and on the City website as required by law.

02/15/2024
Date

/s/
Leaonna DeWitt
Public Works Assistant

ITEM 2

Review of Development Project and Transportation Impact Analysis Methodology

Mobility and Transportation Infrastructure Commission Agenda Report

ITEM NO. 2

DATE: February 20, 2024

FROM: H. Ted Gerber, Director of Public Works

SUBJECT: **Review of Development Project and Transportation Impact Analysis Methodology**

Recommendation

It is recommended that the Commission receive information related to a recently reviewed development project in the City and a review of the City's adopted Traffic Impact Analysis Methodology.

Overview

The 2023-2024 Work Plan includes an item to review development projects and the related transportation impacts. The most recent development project reviewed through the planning process included a project named South Pasadena Seniors / The Raymond, located at 601/625 Fair Oaks and 704/712 Mound Avenue. The City adopted its Transportation Impact Analysis Methodology (TIA Guidelines) on May 20, 2020 (Attachment 1).

Background

In 2013, Governor Brown signed Senate Bill 743 (SB 743, Steinberg) to change the way transportation impacts are analyzed under CEQA. The goal of SB 743 was to better align transportation impacts analyzes with the state's goals of reducing greenhouse gas emissions and promoting multimodal transportation networks. In 2019, the State Office of Planning and Research (OPR) and the Natural Resources Agency issued new California Environmental Quality Act (CEQA) Guidelines for analyzing transportation impacts. The new rules required the measurement of transportation-related impacts using "Vehicles Miles Traveled" or VMT instead of "Level of Service" or LOS. VMT measures the per capita number of car trips generated by a project and distances cars will travel to and from a project, and is meant to measure the environmental impacts of related greenhouse gas emissions, for example, rather than traffic congestion or delays. In the past, transportation impacts were measured according to CEQA using the metrics of congestion by LOS, which evaluated impacts to street capacity, vehicle flow and delay, i.e. the ability of vehicles to move through the streets efficiently. VMT metrics are intended to evaluate the ability of a project to reduce vehicle traffic, create capacity, and incentivize alternative modes of travel such as transit, bicycle, and walking with the goal of reducing overall greenhouse gas emissions. In addition to the CEQA VMT criteria, the City's TIA Guidelines continue the practice of evaluating LOS when evaluating impacts of development projects.

Analysis & Discussion

This development consists of two 7-story independent living communities, one 6-story assisted living and memory care community, and a 5-story affordable seniors community building for a total of 306 multi-family dwelling units, totaling 363,162 square feet. The project site is currently developed with Shaker's restaurant and parking lot improvements, which will be demolished. Two houses will also be demolished or relocated. The existing office building will remain. Access to the site is currently provided by Fair Oaks Avenue to the east, Grevelia Street to the north, and Mound Avenue to the west.

A traffic impact study (Attachment 2) was conducted to analyze potential impacts of the project. The report addressed potential impacts to traffic circulation and levels of service (LOS) in addition to vehicular miles traveled (VMT). Field traffic counts were conducted and proximate intersections were analyzed. The report found that the proposed project is forecast to result in no significant traffic impact at the study intersections. The report also found that the project met the City's screening criteria for a determination that the project would be presumed not to have potential impacts to vehicle miles traveled (VMT), as it is located in a low VMT area as well as being in a Transit Priority Area. Per the TIA Guidelines, the project only needs to meet one criterion to screen out for a detailed VMT analysis. The future development of the Senior Housing is expected to bring an increase in pedestrian traffic in the area, as a result of the residents going on daily walks or visiting the shops and stores in the area which are located to the south of the project site within walking distance. The raised level of senior citizen pedestrian activity is expected to create a demand to enhance safety measures in the area. It is recommended to upgrade all pedestrian facilities such as sidewalks and curb ramps in the project and adjoining area to be compliant with ADA standards. Due to the possible increase in pedestrian traffic from the proposed senior facility to the shops located south of Hope Street, recommended mitigation measures for South Fair Oaks Avenue at Hope Street include updating the intersection to current State guidelines, including upgrading ADA ramps, countdown pedestrian heads, and new traffic signal poles. Typically, the City issues Conditions of Approval (COAs) attached to a project as it is approved, which will provide the opportunity to include any improvements that the developer must complete as a requirement of the project.

Public Notification of Agenda Item
The public was made aware that this item was to be considered this evening by virtue of its inclusion on the legally publicly noticed agenda, and posting of the same agenda and reports on the City's website.

Attachment
1. City of South Pasadena Transportation Impact Analysis Methodology Guidelines
2. Traffic Impact Study

Attachment 1

City of South Pasadena Transportation Impact Analysis Methodology Guidelines

City of South Pasadena

Transportation Impact Analysis Methodology Guidelines

May 6, 2020

Introduction

The following Transportation Impact Analysis Methodology was developed on behalf of the City of South Pasadena (City) to address the 2019 amendments to the California Environmental Quality Act (CEQA) Guidelines made by the Natural Resources Agency as required by Senate Bill 743 (SB 743).

The primary change to CEQA guidelines includes the prohibition of traditional traffic operations analysis metrics of roadway delay or capacity as described by "Levels of Service (LOS)" with a recommended metric of Vehicle Miles Traveled (VMT) indexed to population and/or employment. This transitions the environmental analysis of a Project's effect on the transportation system from how it affects congestion on facilities, such as intersection or roadway lanes, to the average distance traveled by vehicles. The change to VMT is tied to Greenhouse Gas (GHG) emissions and supports the GHG reduction goals of the California Global Warming Solutions Act of 2006 (Assembly Bill 32).

For the purposes of CEQA Transportation Impact Analysis the City will utilize measures of VMT per capita, per employee, and per service population (residents plus employees). However, the City will continue to maintain the use of LOS traffic analysis guidelines to assess project impacts and mitigation measures for all projects. This will require a separate traffic study, beyond the appropriate CEQA document.

The Transportation Impact Analysis Methodology is divided into two sections: one for CEQA Transportation Impact Analysis and one for Local Traffic Assessment and Mitigation Measures.

CEQA Transportation Impact Analysis Methodology

Section 15064.3 of the CEQA guidelines (Appendix G) required that projects be assessed for how they would affect the four criteria listed below:

> XVII. TRANSPORTATION
> Would the project:
> a. Conflict with a program plan, ordinance or policy-addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?
> b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?
> c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
> d. Result in inadequate emergency access?

SB 743 establishes updates to Section 15064.3 and includes the following requirements:

- Identifies vehicle miles traveled (amount and distance of automobile traffic attributable to a project) as the most appropriate measure of transportation impacts;
- Declares that a project's effect on automobile delay shall not constitute a significant environmental impact;
- Creates a rebuttable presumption of no significant transportation impacts for (a) land use projects within one-half mile of either an existing major transit stop[1] or a stop along an existing high quality transit corridor, (b) land use projects that reduce VMT below existing conditions, and (c) transportation projects that reduce or have no impact on VMT;
- Allows a lead agency to qualitatively evaluate VMT if existing models are not available; and
- Gives lead agencies discretion to select a methodology to evaluate a project's VMT, but requires lead agencies to document that methodology in the environmental document prepared for the project.

The following Transportation Impact Analysis Methodology for land use plans, land development projects, and transportation projects was established as a standard for the City to assess the transportation impacts of projects under CEQA.

Projects would be first reviewed to determine if there is potential for significant environmental impacts using screening criteria. Based on the screening analysis, the Director of Public Works will make the determination if a VMT transportation analysis is required as part of CEQA documentation.

Methodology for Land Use Plans

Transportation Impact Analysis

For plans that would change population and/or employment, the Southern California Association of Governments (SCAG) model will be used to forecast the change in VMT. The model parameters will be determined by the Director of Public Works prior to analysis. The total VMT of the land use plan area will be divided by population (per capita) and service population (population plus employees). The comparison will use the same model year for both scenarios (e.g., a land use plan with a buildout of 2040 would be compared to a baseline year 2040 no project scenario). The baseline model scenario VMT per population and service population will also be reported in the analysis, but will not be used to

[1] A "major transit stop" is a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

determine potential significant environmental impacts. However, the City will require projects to analyze LOS, apart from CEQA, to identify appropriate mitigation measures.

Threshold of Significance

A significant impact would occur if the VMT per capita or service population for the land use plan exceeds the VMT per population or service population of the baseline.

Cumulative Threshold of Significance

A cumulative significant impact would be the same as the project-level impact since the analysis includes all regional land use and transportation cumulative conditions.

Methodology for Land Development Projects

Screening Analysis

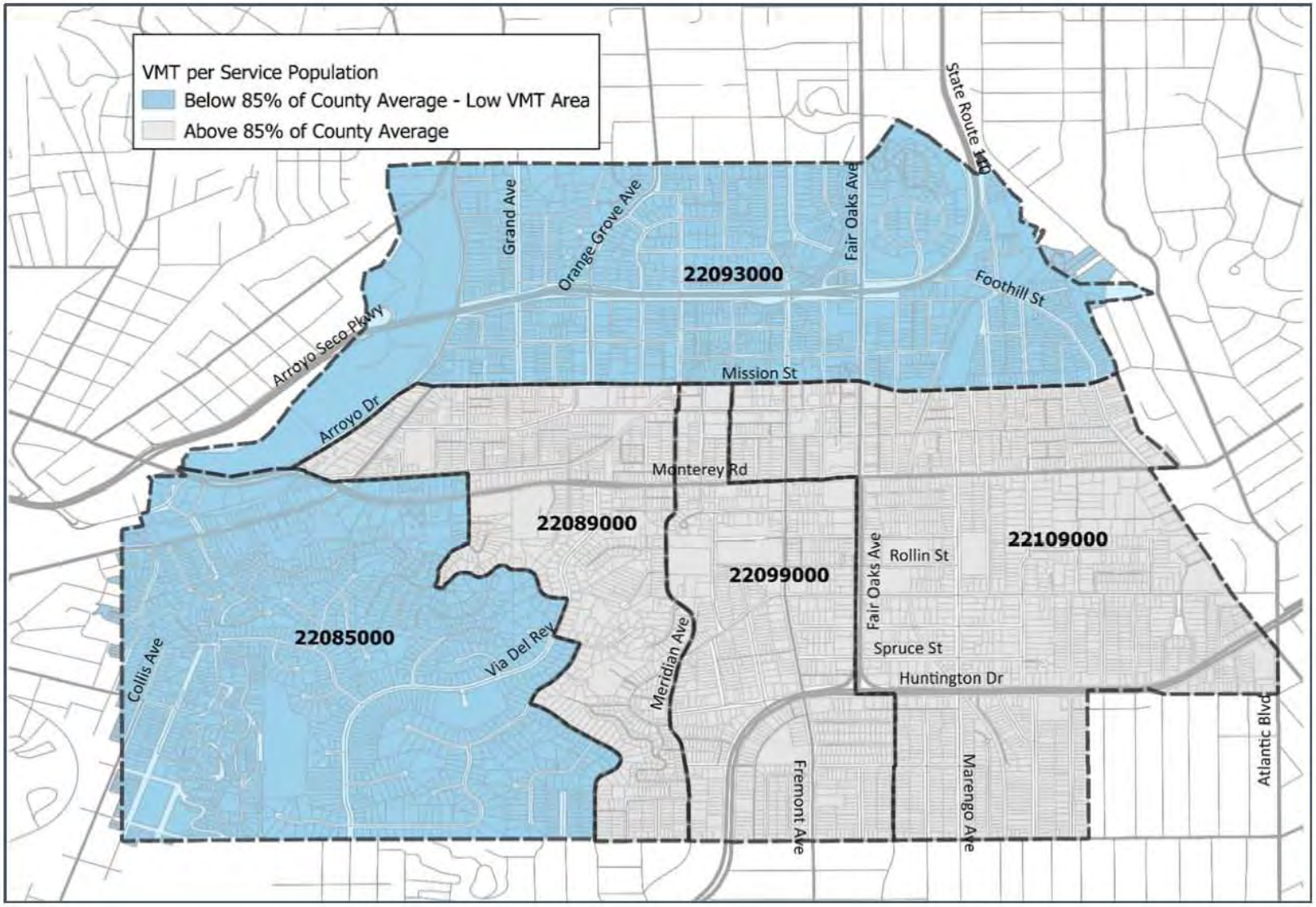
Land use development projects will use the below screening thresholds to determine if a detailed CEQA Transportation Impact Analysis is necessary. Projects that do not meet the screening thresholds will be presumed to cause a less than significant CEQA transportation impact and will not require a detailed transportation impact analysis. The project applicant will be required to submit their screening threshold findings to the Director of Public Works for concurrence.

Land Use Development Screening Thresholds:

a) **Small Project Size** – projects that would generate fewer than 100 trips per day. Applications may use the latest version of the Institute of Transportation Engineers (ITE) Trip Generation Manual to calculate the number of trips from their proposed project. For example, based on the latest ITE Trip Generation Manual, fewer than 100 daily trips would result from a 13-unit apartment building (ITE code 220), a 30 unit attached senior housing development (ITE code 252), or a 10,000 square foot office (ITE code 710). As with other types of transportation analysis, the trip generation of the current uses would be removed from the proposed project so only net trips are assessed for the screening determination.

b) **Low VMT Area** – projects consistent with the General Plan and any relevant Specific Plan and located in areas of the City calculated to have low VMT per capita or per service population. Based on an analysis using the SCAG Travel Demand Model, two Traffic Analysis Zones (TAZ) located in the western and northern parts of the City (shown in blue in Figure 1) have VMT per service population below 85 percent of the Los Angeles County averages (TAZs 22085000 and 22093000).

Figure 1: City of South Pasadena Low VMT TAZs



c) **Within a Transit Priority Area** – projects within ½ mile of the five major transit stops in the City would be screened from analysis unless they have a floor area ratio of less than 0.75, include more parking than required by the City, are inconsistent with the SCAG RTP/SCS, or replace affordable housing units with a smaller number of moderate or high income residential units. The five major transit stops in the City include:

1) Huntington Drive / Fair Oaks Avenue / Marengo Avenue intersection bus stops
2) Huntington Drive / Atlantic Boulevard / Garfield Avenue intersection bus stops
3) Fair Oaks Avenue / Mission Street intersection bus stops
4) Fair Oaks Avenue / Glenarm Street intersection bus stops (located within the City of Pasadena)
5) South Pasadena Metro Gold Line Station

The transit priority areas of the City form a contiguous area encompassing most of eastern South Pasadena including the Downtown Specific Plan areas along Mission Street and Fair Oaks Avenue and the Neighborhood Centers along Huntington Drive at Garfield Avenue, Fletcher Avenue, and Fremont Avenue. Figure 2 shows a map of the parcels within the transit priority areas of the City in blue.

Project applicants should include their specific location within the transit priority areas since CEQA guidelines require the City to consult with public transit agencies with facilities within one-half mile of the proposed project regardless of whether the project could affect those facilities and regardless of whether the agency is preparing a negative declaration or an environmental impact report.

A map combining the low VMT TAZs and the transit priority areas is shown in Figure 3.

Figure 2: City of South Pasadena Transit Priority Areas

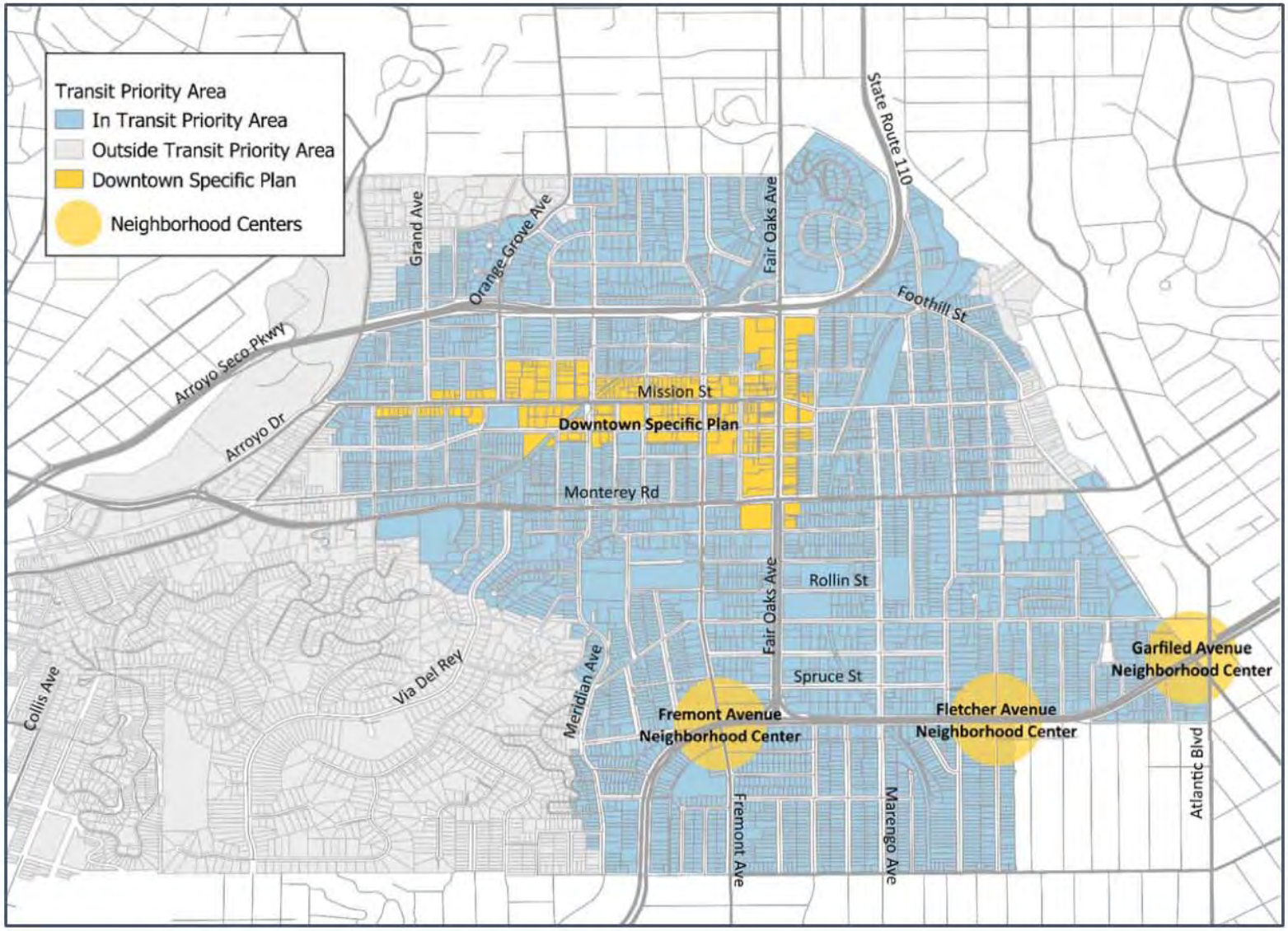
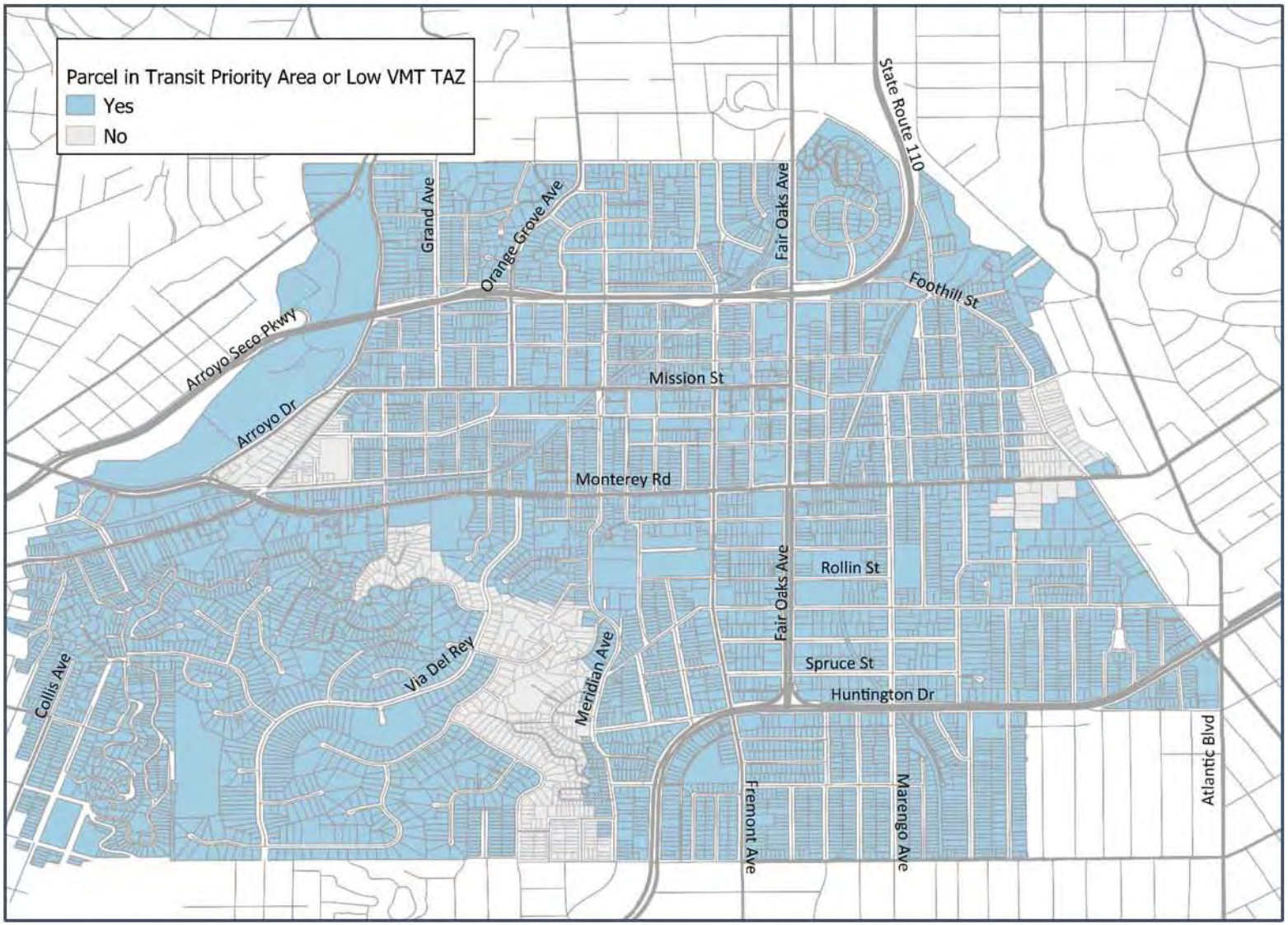


Figure 3: City of South Pasadena Transit Priority Areas and Low VMT TAZs



d) **Retail Projects** – Retail projects of less than 50,000 square feet. New neighborhood-serving retail typically redistributes shopping trips rather than creating new trips. Retail projects with less than 50,000 square feet outside of the Downtown Specific Plan are considered to be local serving retail for the adjacent community.
e) **Affordable Housing** – Portions of developments that include below market-rate housing. Adding affordable housing to transit-rich, infill areas generally improves job-housing balance and access. Therefore, the City will find a Less Than Significant-Impact for development projects with a majority of affordable housing (over fifty percent) and the portions of a development project with less than fifty percent affordable housing.
f) **Redevelopment Projects** – Replacement of an existing land use with a land use that generates less VMT than its previous use. Based on the average trip lengths within the project TAZ and the trip generation of the existing development and proposed project, a project applicant can demonstrate if their proposed project leads to a net overall increase or decrease in VMT. Demonstration of a net decrease in VMT would screen the project from CEQA Transportation Impact Analysis.
g) **Community Serving Projects** – Similar to the screening of retail projects, municipal projects such as schools, parks, community centers, libraries and other community-serving uses would be intended for local use and would be presumed to have a Less Than Significant Impact on transportation based on the discretion of the Public Works Department.

Transportation Impact Analysis

Projects not screened as Less Than Significant Transportation Impacts would be required to undergo a CEQA Transportation Impact Analysis. The SCAG Travel Demand Model or other similar models as approved by the Director of Public Works will be used to determine the project's VMT. The VMT will be presented as VMT per capita for residential projects, VMT per employee for employment projects (retail, office, industrial), and VMT per service population for mixed-use projects. Project VMT may be determined through new model runs or by using the VMT per capita, employee, or service population for the current land uses in the model TAZ that would contain the proposed project.

Notwithstanding above, projects that will produce 100 or more trips will be required to provide a LOS analysis of the roadways segments and interactions as defined by Director of Public Works to determine the operational impact as per City's LOS impact criterion, and the projects will be required to address the identified operational impacts. The LOS requirements and associated mitigation measures for projects producing less than 100 trips will be determined by Director of Public Works, and the projects will be required to address the identified operational impacts.

Projects will be required to pay for the LOS analysis and the traffic study to determine the project impacts on the roadways and required mitigation measures. The LOS studies will be managed by Public Works Department and the costs will include 15 percent administrative charges for staff time.

Threshold of Significance

A significant impact would occur if the project VMT index per capita, per employee, or per service population is higher than the Los Angeles County VMT index average.

Cumulative Threshold of Significance

Similar to the project significance determination, a significant cumulative impact would occur if the project VMT per capita, per employee, or per service population is higher than the Los Angeles County average. This is because analysis of a project's VMT is a cumulative analysis of the incremental effect of the project considered in connection with the effects on past, current and future projects.

Methodology for Transportation Projects

Screening Analysis

Transportation projects not expected to increase VMT (such as intersection turn lanes, signalization, bicycle, pedestrian, or transit projects), as determined by the City's Public Works Department, would be presumed to have a Less Than Significant CEQA Transportation Impact.

Transportation Impact Analysis

For transportation projects that the Director of Public Works anticipates will have a potential to increase VMT (such as roadway widening projects), a VMT analysis using the SCAG Travel Demand model to estimate the total VMT in the City before and after the project opening will be used. Transportation projects not expected to increase VMT (such as intersection turn lanes, signalization, bicycle, pedestrian or transit projects) would be presumed to have a Less Than Significant CEQA Transportation Impact.

Threshold of Significance

A significant impact would occur if the transportation project would result in an increase to the total baseline VMT in the City (not indexed to population nor employment).

Cumulative Threshold of Significance

Similar to the project significance determination, a significant cumulative impact would occur if the project would increase the total VMT in the City over cumulative baseline conditions. This is because analysis of a project's VMT is a cumulative analysis of the incremental effect of the project considered in connection with the effects on past, current and future projects.

Mitigation Measures

If a significant transportation impact is identified for a project, it will be the Project applicant's responsibility to submit a Transportation Demand Management Plan (TDM) a mitigation measure plan to reduce impacts to Less Than Significant. Options include provision of on-site transportation infrastructure, on-site transportation demand management, off-site infrastructure improvements including roadway improvements for active transportation and multimodal infrastructure, or off-site multimodal improvements. The Director Public Works will review, make necessary changes and approve the TDM plan. To ensure the plan is producing the desired VMT reduction goals, the property owner will be required to monitor the results of the plan, collect necessary data and submit annual updated TDM plan. If the TDM plan fails to reduce VMT, the plan will then be updated to include additional measures and submitted to Director Public Works for approval.

Local Traffic Assessment Methodology

Local Traffic Assessment is required by the Public Works Department based on its responsibility to provide safe and efficient public roadway infrastructure and facilities within the City. The assessment is separate from the environmental documentation required under CEQA.

The Local Traffic Assessment (Traffic Study) will include identification of the Project site and study area; the Project description; determination of daily, AM peak hour and PM peak hour trip generation; and applicable analysis and findings. The methodology and analysis will be documented in a Local Traffic Assessment Report. If adverse operational impacts are determined to occur through the local traffic assessment and study, the project applicant will be required to mitigate these impacts to less than adverse through additional project components. The mitigation measures will require approval from the Director of Public Works. The report will be reviewed by the Director of Public Works prior to submission to the Planning Commission or City Council.

The traffic study will be managed by Public Works Department. The property owner will be required to pay the costs associated with the actual study plus 15 percent administrative fees to cover the staff time.

Based on consultation with the Public Works Department, the following assessments may be required of project applicants.

Signalized Intersections

The intersection average control delay will be calculated using the most recent Highway Capacity Manual (HCM) methodology. **Table 1** presents the range of HCM average intersection delay associated with each grade for signalized intersections.

Table 1: Level of Service Definitions for Signalized Intersections

LOS	Control Delay in Seconds
A	≤ 10
B	> 10-20
C	> 20-35
D	> 35-55
E	> 55-80
F	> 80

A project-related local impact would occur at a signalized study intersection if the addition of project-generated trips reduces the peak hour LOS of the study intersection from an acceptable operation (LOS A, B, C, or D) to a deficient operation (LOS E or F). A local project-related impact would occur at a signalized study intersection already operating deficiently (LOS E or F) prior to project traffic if the addition of project traffic increases the critical movement delay by four (4) or more seconds. The project study area will be defined by the Director of Public Works. Typically, signalized intersections that would experience more than 10 peak hour project trips (total of all approaches) would be included as study locations.

Unsignalized Intersections

Local impacts occur with the addition of project traffic causes the average intersection delay for all-way stop controlled intersection or the worst movement for side-street stop-controlled intersections to degrade to LOS E or LOS F and the intersection satisfies any traffic signal warrant from the latest edition of the California Manual on Uniform Traffic Control Devices (CA-MUTCD). The delay (in seconds) will be calculated with the latest Highway Capacity Manual intersection analysis methodology. **Table 2** presents the range of HCM average intersection delay associated with each grade for unsignalized intersections.

Table 2: Level of Service Definitions for Unsignalized Intersections

LOS	Control Delay in Seconds
A	≤ 10
B	> 10-15
C	> 15-25
D	> 25-35
E	> 35-50
F	> 50

Signal Warrant

The addition of a traffic signal may be justified when traffic operations fall below acceptable thresholds or when one or more signal warrants are satisfied; through analysis using the warrants included in the CA-MUTCD.

Queuing

A local project-related impact would occur when the proposed project traffic causes the 95th percentile queue in a left or right turn lane/pocket to extend beyond the turn pocket by 25 feet or more into adjacent traffic lanes that operator separately from a left or right turn length. When the vehicle queue length already exceeds that turn lane/pocket length, a queuing deficiency would occur if project traffic lengthens the queue by 25 feet or more. Queuing analysis methodology must be approved the Public Works Department.

Attachment 2

625 Fair Oaks Traffic Impact Study
W.G. Zimmerman Engineering, Inc.

South Pasadena Seniors

Traffic Impact Study

DRAFT

Prepared for:

Stamps and Stamps

318 Fairview Ave

South Pasadena, CA 91030

Prepared by:

W.G. Zimmerman Engineering, Inc.

7812 Edinger Avenue, Suite 302

Huntington Beach, CA 92647

Phone: (714) 799 – 1700

May 2023

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I. INTRODUCTION

This traffic impact study evaluates the traffic circulation impacts associated with the proposed South Pasadena Seniors development project on South Fair Oaks Avenue. This study presents the scope, methodology, inputs, assumptions, and results of the traffic analysis. The project developer, Stamps & Stamps has contracted with W.G. Zimmerman Engineering, Inc. (WGZE) to develop and complete the traffic analysis for the South Pasadena Seniors development located at 625 S. Fair Oaks Avenue. The Project is located between Grevilia Street and Hope Street in the City of South Pasadena. Although this is a technical traffic analysis, every effort has been made to write the report clearly and concisely.

II. PROJECT DESCRIPTION

The South Pasadena Seniors project will provide an independent and assisted living community for senior citizens. The 363,162 square-foot project site is located at 625 S. Fair Oaks Avenue in the City of South Pasadena. Local access to the project area is provided via South Fair Oaks Avenue to the east, Mound Avenue to the west, Grevelia Street to the north, and Hope Avenue to the south. Regional access is available via the 110 Freeway, accessible from both the east and west of the subject site. The project site currently consists of a 3-story office building, a Shakers restaurant, and surface-level parking. Figure 1 shows the project location map.

The proposed project consists of re-developing the existing surface parking lot, the Shakers restaurant site, as well as two acquired residential lots. The development will consist of two 7-story independent living communities, one 6-story assisted living and memory care community, and a 5-story affordable seniors community building for a total of 306 multi-family dwelling units, totaling 363,162 square feet. The proposed site plan is shown in Figure 2.

Parking for the residential (217 spaces) and non-residential (112 spaces) uses would be provided within four sublevels accessed from Mound Avenue (two entrances), S. Fair Oaks Avenue (two entrances), and Grevelia Street (one entrance).

Figure 1: Project Location Map

III. EXISTING ROADWAY SYSTEM

South Fair Oaks Avenue is a four-lane divided street (two lanes each direction) oriented in the north-south direction serves as the connection route between U.S. Route 110 and the surrounding neighborhood. S. Fair Oaks Avenue is classified as a major arterial street per the City of South Pasadena's General Plan-Circulation Element. The posted speed limit on South Fair Oaks Avenue is 30 mph from Monterey Road to Grevelia Street. On-street parking is permitted on South Fair Oaks Avenue.

Fremont Avenue is a two-lane divided/undivided street oriented in the north-south direction. Fremont Avenue is classified as a minor arterial street per the City of South Pasadena's General Plan-Circulation Element. The posted speed limit on Fremont Avenue is 30 mph. On-street parking is permitted on Fremont Avenue.

Hope Street is a two-lane undivided street oriented in the east-west direction. Hope Street is classified as a local (Residential) street per the City of South Pasadena's General Plan-Circulation Element. The posted speed limit on Hope Street is 25 mph. On-street parking is permitted on Hope Street.

Grevelia Street is a two-lane undivided street west of South Fair Oaks Avenue and a four-lane divided street east of South Fair Oaks Avenue. Grevelia Street is oriented in the east-west direction. Grevelia Street is classified as a local (Residential) street east of South Fair Oaks Avenue and as a minor arterial street west of South Fair Oaks Avenue per the City of South Pasadena's General Plan-Circulation Element. The posted speed limit on Grevelia Street west of S. Fair Oaks Avenue is 25 mph and east of South Fair Oaks Avenue is 30 mph. On-street parking is permitted on Grevelia Street.

Mound Street is a two-lane undivided street oriented in the north-south direction. Mound Street is classified as a local (Residential) street per the City of South Pasadena's General Plan-Circulation Element. The posted speed limit on Mound Street is 25 mph. On-street parking is permitted on Mound Street.

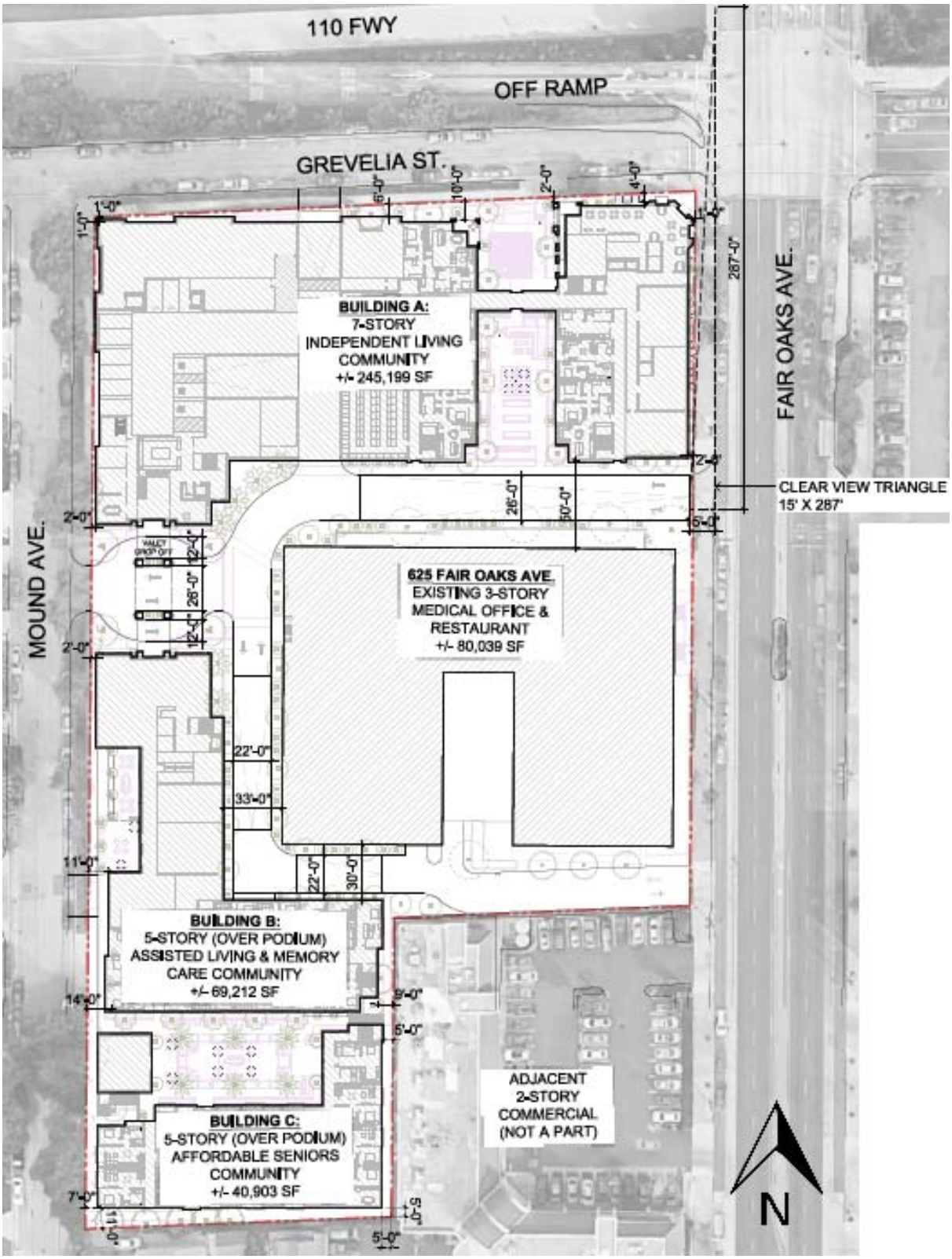

Figure 2: Proposed Site Plan

i. Study Intersections

A total of nine (9) intersections, as detailed in Table 1, may be directly impacted by the proposed development on 625 S. Fair Oaks Avenue. Their relative positions are shown in Figure 3.

Table 1: List of Intersections for Traffic Analysis

No.	Intersections	Intersection Type
1	Fremont Avenue and Grevelia Street	Signalized
2	Fremont Avenue and Magnolia Street	Unsignalized
3	Fremont Avenue and Hope Street	Unsignalized
4	Mound Avenue and Grevelia Street	Unsignalized
5	Mound Avenue and Magnolia Street	Unsignalized
6	Mound Avenue and Hope Street	Unsignalized
7	Fair Oaks Avenue and Grevelia Street	Signalized
8	Fair Oaks Avenue and Driveway	Unsignalized
9	Fair Oaks Avenue and Hope Street	Signalized

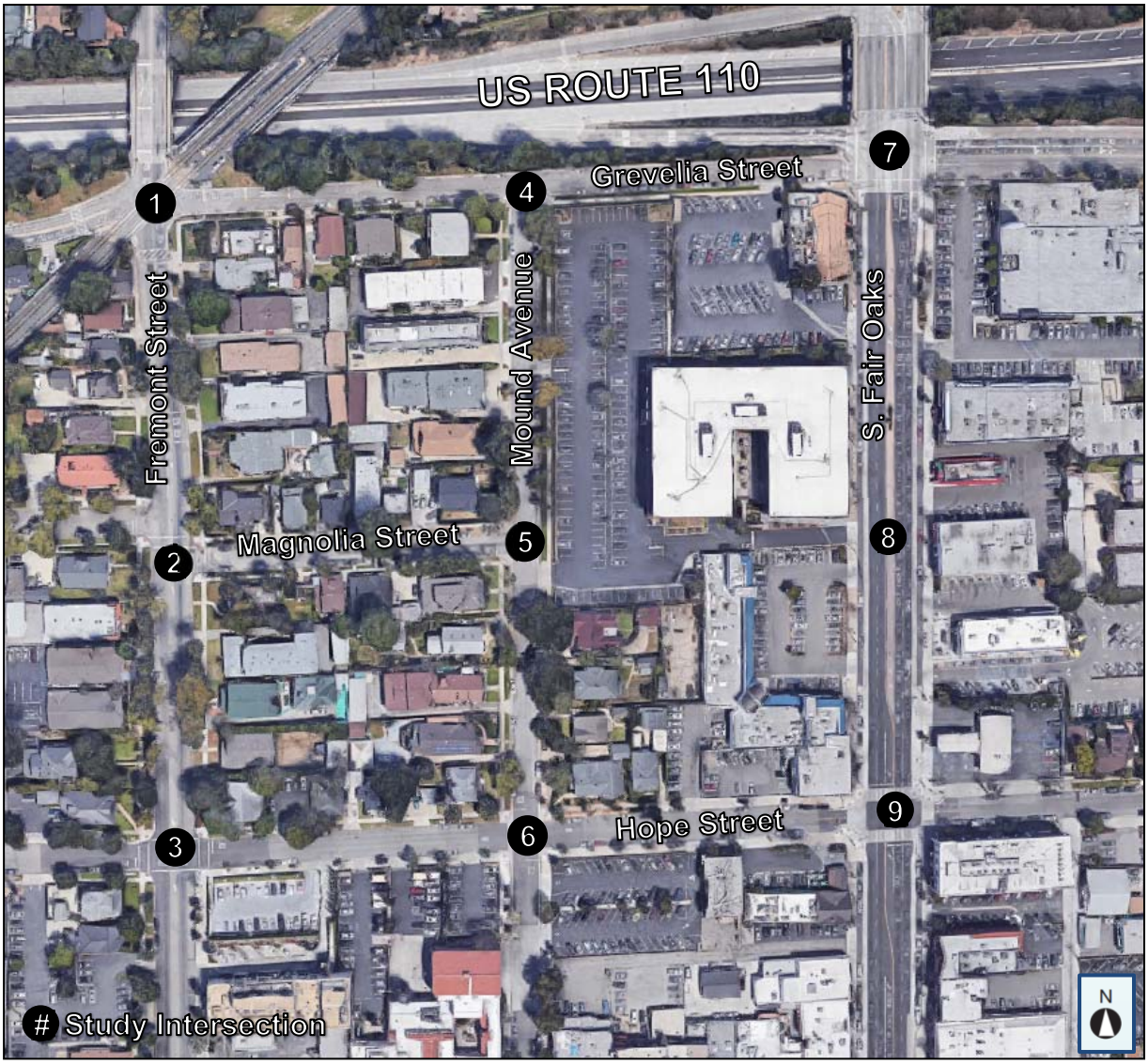

Figure 3: Study Intersections Location Map

ii. Bicycle and Pedestrian Routes

Sidewalks are currently provided on both sides of S. Fair Oaks Avenue, Fremont Avenue, Hope Street, and Mound Street in the project vicinity to facilitate pedestrian movement. There is a sidewalk on the south side of Grevelia Street west of South Fair Oaks Avenue. There are marked crosswalks provided at the S. Fair Oaks Avenue/Grevelia Street and S. Fair Oaks Avenue/Hope Street intersections to cross S. Fair Oaks. Currently, there are no bike lanes provided on S. Fair Oaks Avenue and Fremont Avenue in the project vicinity.

IV. EXISTING TRAFFIC CONDITIONS

Existing peak hour traffic volumes are based upon morning and evening peak period intersection turning movement counts obtained from Counts Unlimited in April 11, 2023 during typical weekday conditions. The morning peak period was collected between 7:00 AM and 9:00 AM and the evening peak period was collected between 4:00 PM and 6:00 PM. The resulting AM and PM peak hour traffic flows were developed into passenger car unit's (pcu's) for the surrounding road network. The actual peak hour within the peak period is the four consecutive 15 minute periods with the highest total volume when all movements are added together. Thus, for example, the weekday evening peak hour at one intersection may be 4:45 PM to 5:45 PM if those four consecutive 15 minute periods have the highest combined volume. Intersection turning movement count worksheets are provided in Appendix A.

Figure 4 and Figure 5 show the existing morning and evening peak hour intersection turning movement volumes, respectively.

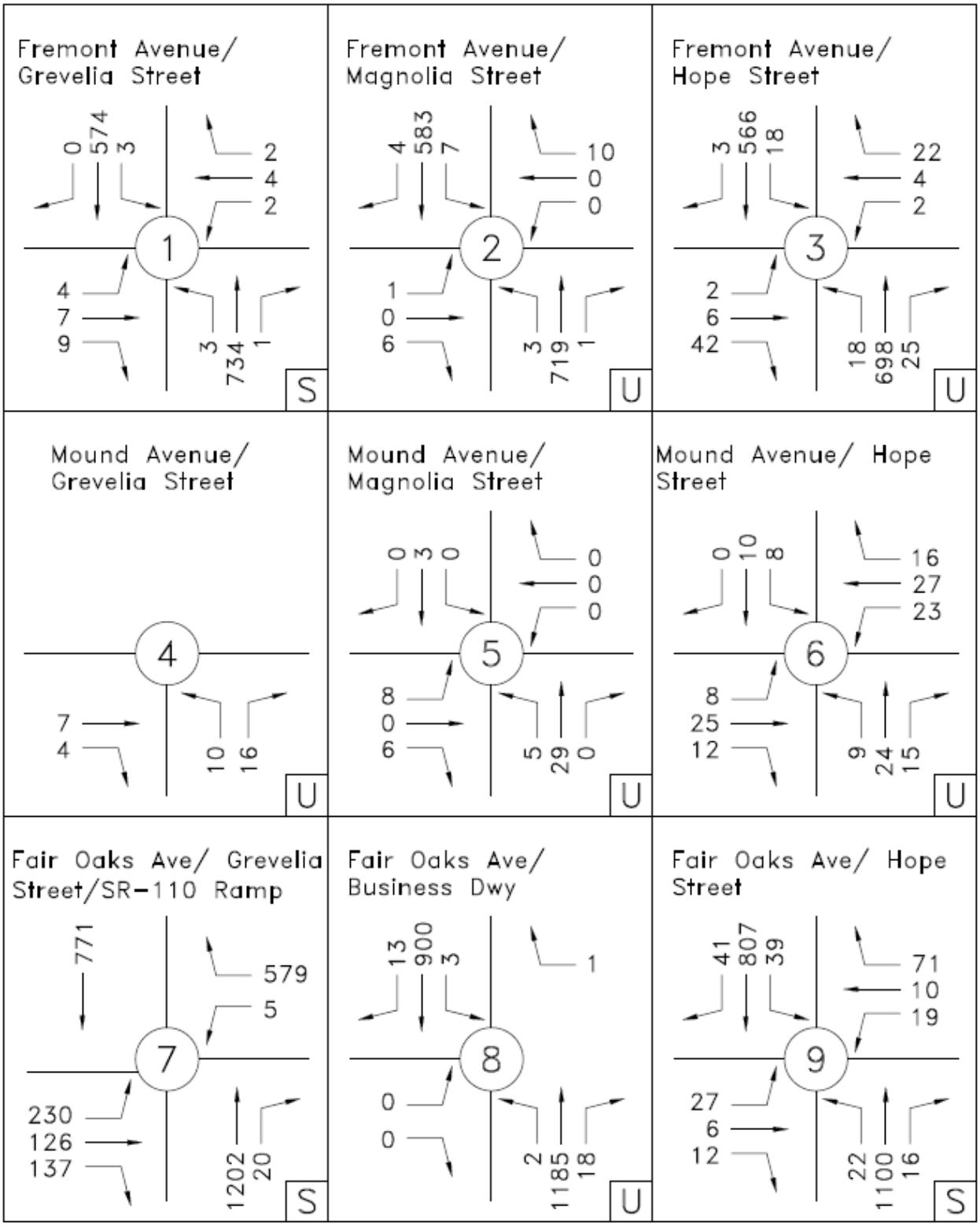

Figure 4: Existing w/o Project AM Peak Hour Intersection Turning Movement Volumes

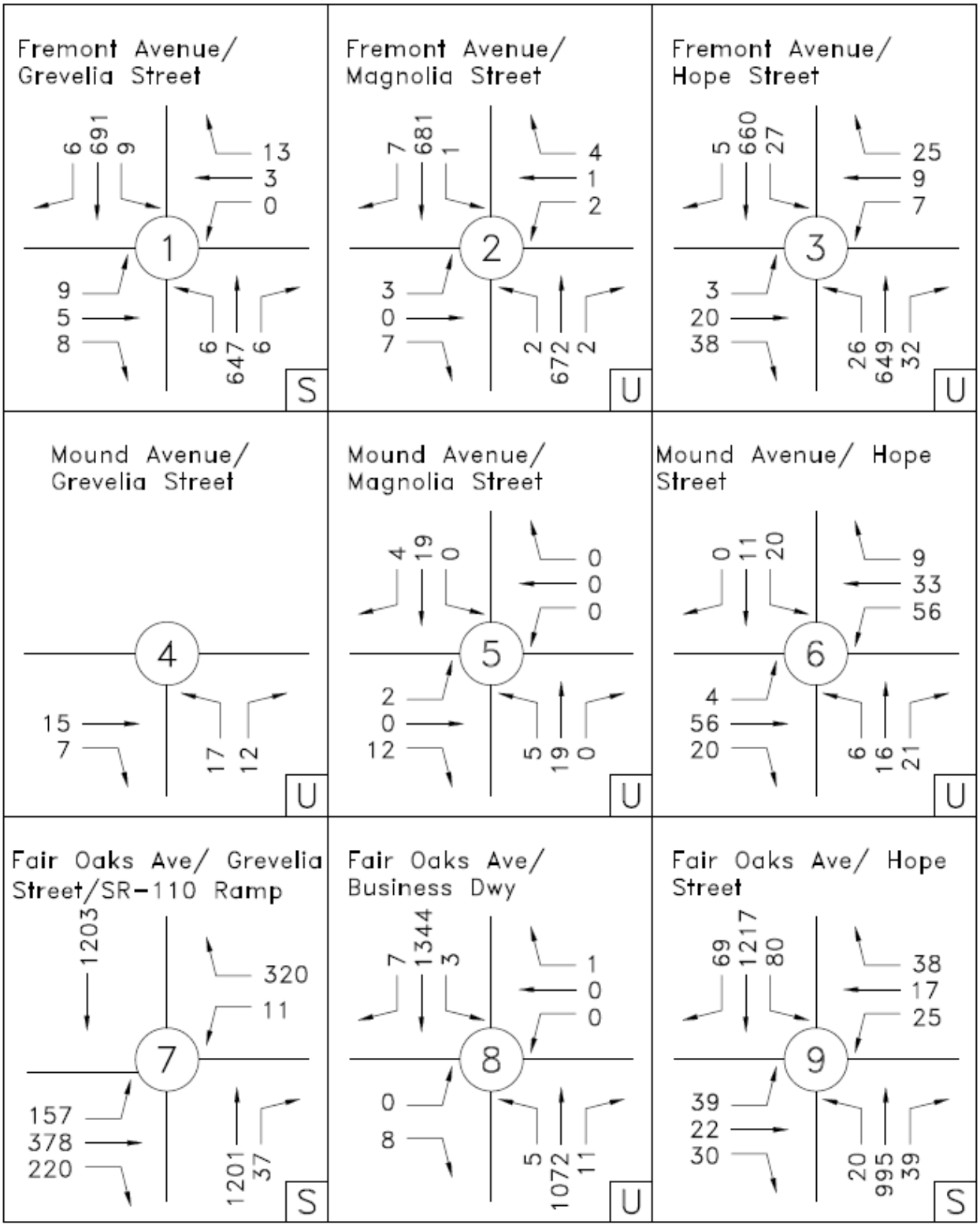

Figure 5: Existing w/o Projects PM Peak Hour Intersection Turning Movement Volumes

i. Roadway Segments

The study roadway segment is evaluated based on Average Daily Traffic (ADT) with Level of Service as defined below:

Table 2: Roadway Segment Maximum ADT

Roadway Type	Maximum ADT by Level of Service				
	A	B	C	D	E
6 Lanes (Divided)	33,900	39,400	45,000	50,600	56,300
4 Lanes (Divided)	22,500	26,300	30,000	33,800	37,500
4 Lanes (Undivided)	15,000	17,500	20,000	22,500	25,000
2 Lanes (Divided)	10,000	11,700	13,000	15,000	16,600
2 Lanes (Undivided)	7,500	8,800	10,000	11,300	12,500
Local Road	3,000	3,500	4,000	4,500	12,500

Source: City of South Pasadena General Plan.

The ADT counts on S. Fair Oaks and Fremont Avenue in the study area were collected on April 11, 2023, by Counts Unlimited. The traffic counts are provided in Appendix A. The ADT counts on S. Fair Oaks between Grevelia Street and Hope Street was 31,415 vehicles and based on the City of South Pasadena's threshold for 4 lanes divided street, the LOS is D. The ADT traffic pattern on S. Fair Oak Avenue is shown in Figure 6. ADT traffic pattern shows that the southbound direction has more vehicle traffic during PM peak hour, and northbound direction has more vehicle traffic during AM peak hour. The maximum traffic is approximately 2,200 vph during AM and 2,500 vph during PM peak hours in both directions. The ADT counts on Fremont Avenue between Grevelia Street and Hope Street was 17,269 vehicles and based on the City of South Pasadena's threshold for 2 lanes divided street, the LOS is F. The ADT traffic pattern on Fremont Street is shown in Figure 7. ADT counts show that traffic on northbound and southbound directions follows the same pattern during the peak hours. The maximum traffic is approximately 1,350 vph during AM and 1,400 vph during PM peak hours in both directions.

Figure 6: Fair Oaks Avenue ADT Counts between Grevelia Street & Hope Street

Figure 7: Fremont Avenue ADT Counts between Grevelia Street & Hope Street

ii. South Fair Oaks Bicycle Volume

Bicycle volume counts were recorded on February 4, 2020, on S. Fair Oaks Avenue between Grevelia Street and Hope Street during peak hours. There were 5 bicycles observed in AM peak hour, as well as 5 bicycles recorded during the PM peak hour. Bicycle lanes were not present when counts were recorded in 2020 and are not present currently, which discourages the use of bicycles through the area.

V. PROJECT TRIP GENERATION

Table 3 shows the trip generation based upon regression/linear equations for each project based on the land use obtained from the Institute of Transportation Engineers (ITE), Trip Generation Manual, 11th Edition, 2021.

In accordance with the Institute of Transportation Engineers recommendations, the numbers of trips forecast to be generated by the proposed land use are determined by solving for trips (T) in the trip generation equation given the land use quantity (X).

As shown in Table 3, the proposed project is estimated to generate approximately 648 daily trips in passenger car equivalents, of which, 49 trips would occur during the morning peak hour and 60 trips would occur during the afternoon peak hour. The Peak hour's trips estimates are used in analyzing the affected intersections and streets in the City of South Pasadena.

Table 3: South Pasadena Senior Housing Development Project Trip Generation

Name/Address	Land Use	Size		Vehicle Estimated Trip Generation						
				Daily	AM Peak Hour Trips			PM Peak Hour Trips		
		Quantity	Unit	Trips	In	Out	Total	In	Out	Total
Senior Housing/625 Fair Oaks	ITE 252	306	Dwelling Unit	909	30	36	66	48	42	90
Internal Capture				-91	0	0	0	-6	-5	-11
Existing Shaker's (Trip Credits)	ITE 932	2.559	GFA	-274	-20	-15	-35	-21	-21	-42
Proposed Cafe	ITE 932	1	GFA	107	8	6	14	8	8	16
Internal Capture				-11	0	0	0	-1	-1	-2
Pass-By				-32	0	0	0	-2	-2	-5
Proposed Hair Salon	ITE 918	1	GFA	8	1	1	2	1	1	2
Proposed Fitness Club	ITE 492	3.1	GFA	32	2	2	4	6	6	12
Total Net Trips				648	21	30	51	33	28	60

[1]Trip Rates from the institute of transportation Engineers (ITE) Trip Generation Manual, 11th Edition (2021).

[2] KSF= 1,000 gross square feet of building area

[3]Pass-By Trips are trips made as intermediate stops on the way from an origin to a primary trip destination. Pass-by trips are attracted from traffic passing the site on adjacent streets, which contain direct access to the generator. For this analysis, the following pass-by reduction factors were used (Source: Trip Generation Handbook, 3rd Edition, ITE 2017):

Land Use Code 932 – High Turn Over Restaurant is assumed to have a 30% pass-by trip rate

[4]Internal Capture based on the NCHRP 684 Internal Trip Capture Estimation Tool, developed by the Texas A&M Transportation Institute (Version 2013.1)
Multifamily Housing (Mid-Rise) Internal Trip Capture with Restaurant: 9% Daily, 13% PM In, 13% PM Out
Restaurant Center Internal Trip Capture with Residential: 9% Daily, 2% PM In, 2% PM Out

VI. PROJECT TRIP DISTRIBUTION

i. Cumulative Projects

In accordance with the CEQA Guidelines, this study considers the effects of this project in addition to related projects in the area. These related projects are detailed in table 4 and their corresponding general locations are shown in Figure 8. Based on our analysis the portion of trips generated that contribute to vehicle volume in the direction of the project are not significant and will dissipate before the study intersections.

Table 4: Cumulative Project Trip Generation

Project Description	Use	Size	Vehicle Estimated Trip Generation						
			Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
				In	Out	Total	In	Out	Total
1. Fairview Court[1]	Multi-Family General Office	38 du 3,585 sf	343	24	3	27	11	22	33
2. Mission Bell[2]	Apartments Specialty Retail High Turnover Restaurant Cafe	36 du 2,325 sf 2,142 sf 797 sf	504	30	35	65	30	22	52
3. Seven Patios[3]	Multi-Family Restaurant Retail	57 du 3,050 sf 3,050 sf	757	20	29	49	28	14	42
4. Arbor Square[4]	Multi-Family Retail	50 du 3,769 sf	81	-7	4	-3	0	2	2
Total Trips			1685	67	71	138	69	60	129

[1]Source: Table 1 of Mission Place Mixed-Use Project TIA (Arch Beach Consulting, December 31, 2015)

[2]Source: Traffic Study for the Mission View Mixed-Use Development Project (Gibson Transportation Consulting Inc, January 2017)

[3]Source: Seven Patios Mixed-Use Residential/Commercial Retail Project Traffic Impact Analysis (Ganddini Group Inc, February 26, 2020)

[4]Source: 815 Fremont Avenue Traffic Impact Study (W.G. Zimmerman Engineering, Inc, March 2022)

Figure 8: Locations of Related Projects

ii. Trip Distribution

Figure 9 shows site circulation intended for the project. The site circulation includes driveways to enter and exit the project, pathways to circulate vehicles, and ramps to access subterranean parking.

Figures 10 and 11 show the forecasted inbound and outbound directional distribution patterns for the project generated trips. The project trip distribution patterns are based on review of existing traffic volume data, surrounding land uses, circulation plan, and the local and regional roadway facilities in the project vicinity.

Based on the identified project trip generation and distributions, morning and evening peak hour intersection turning movement volumes expected from the project are shown on Figure 12 and Figure 13, respectively.

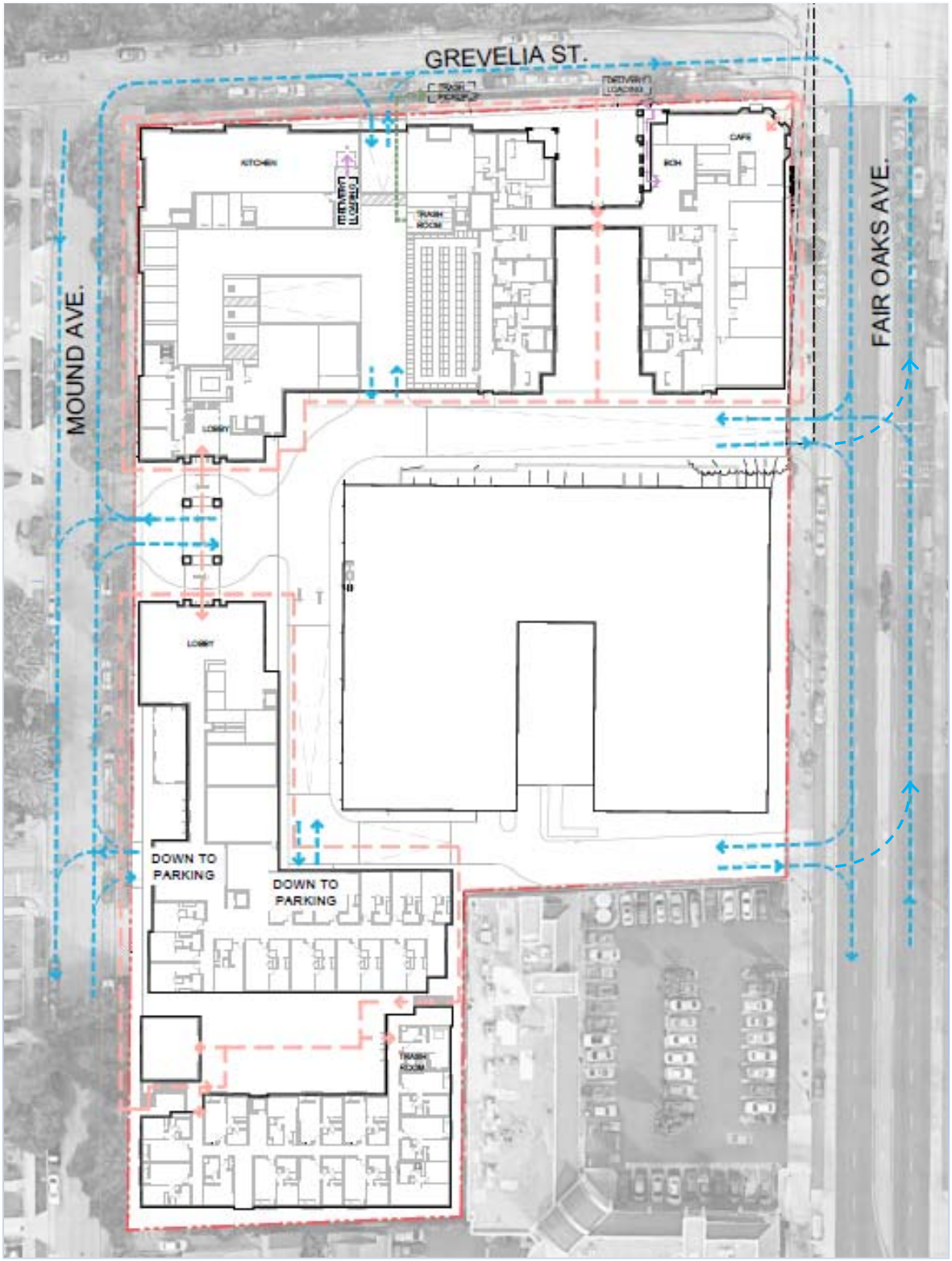

Figure 9: Outbound Trip Distribution and Assignment

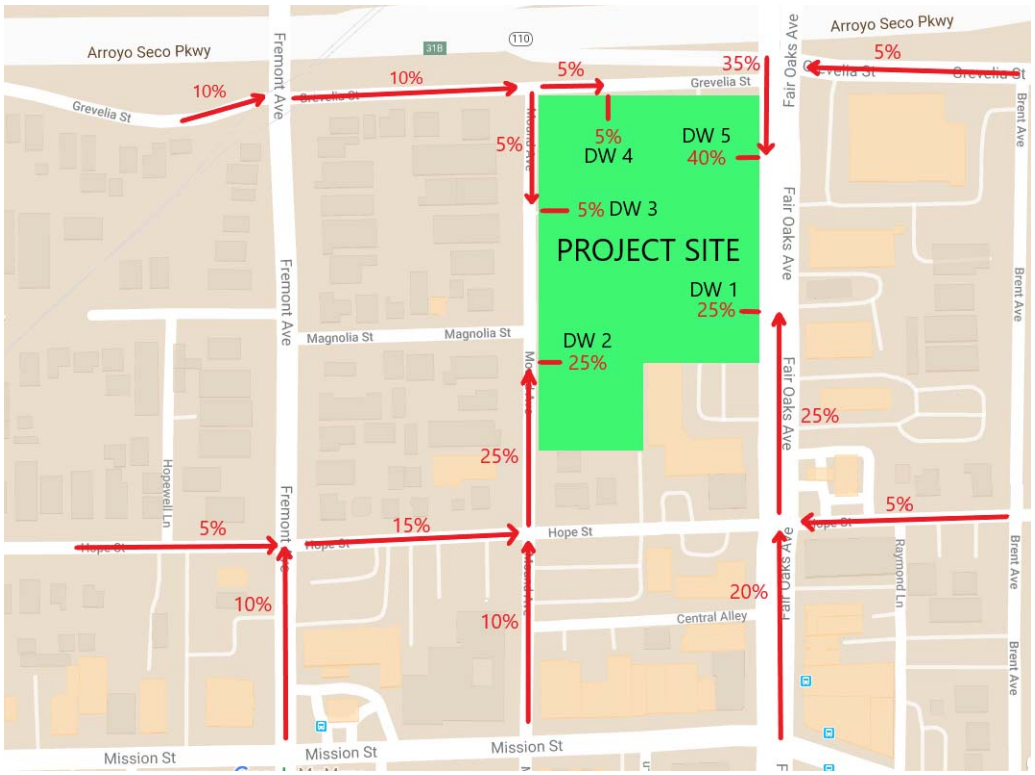

Figure 10: Inbound Trip Distribution and Assignment

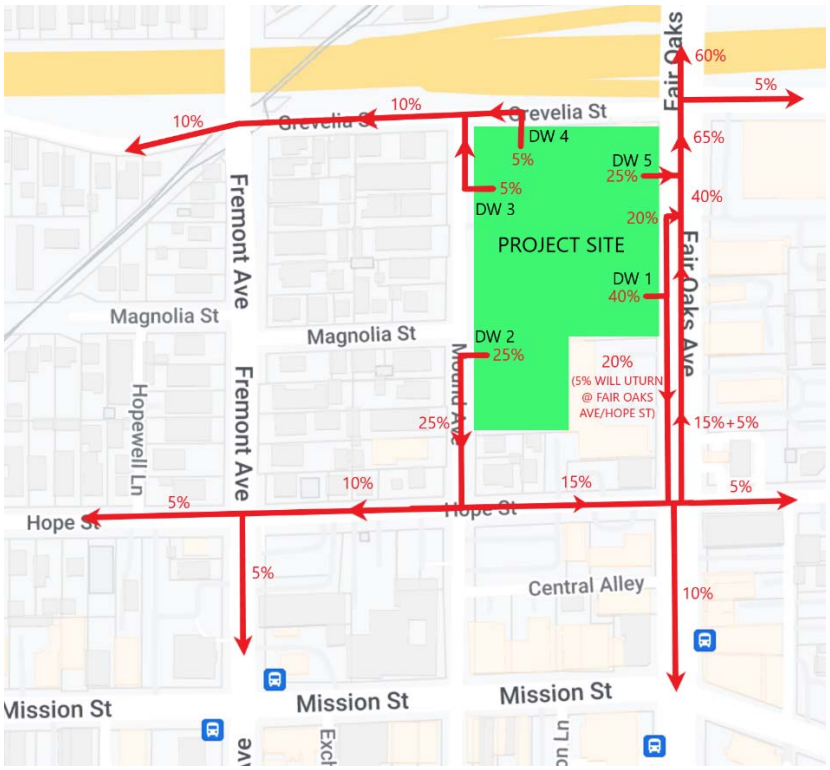

Figure 11: Outbound Trip Distribution and Assignment

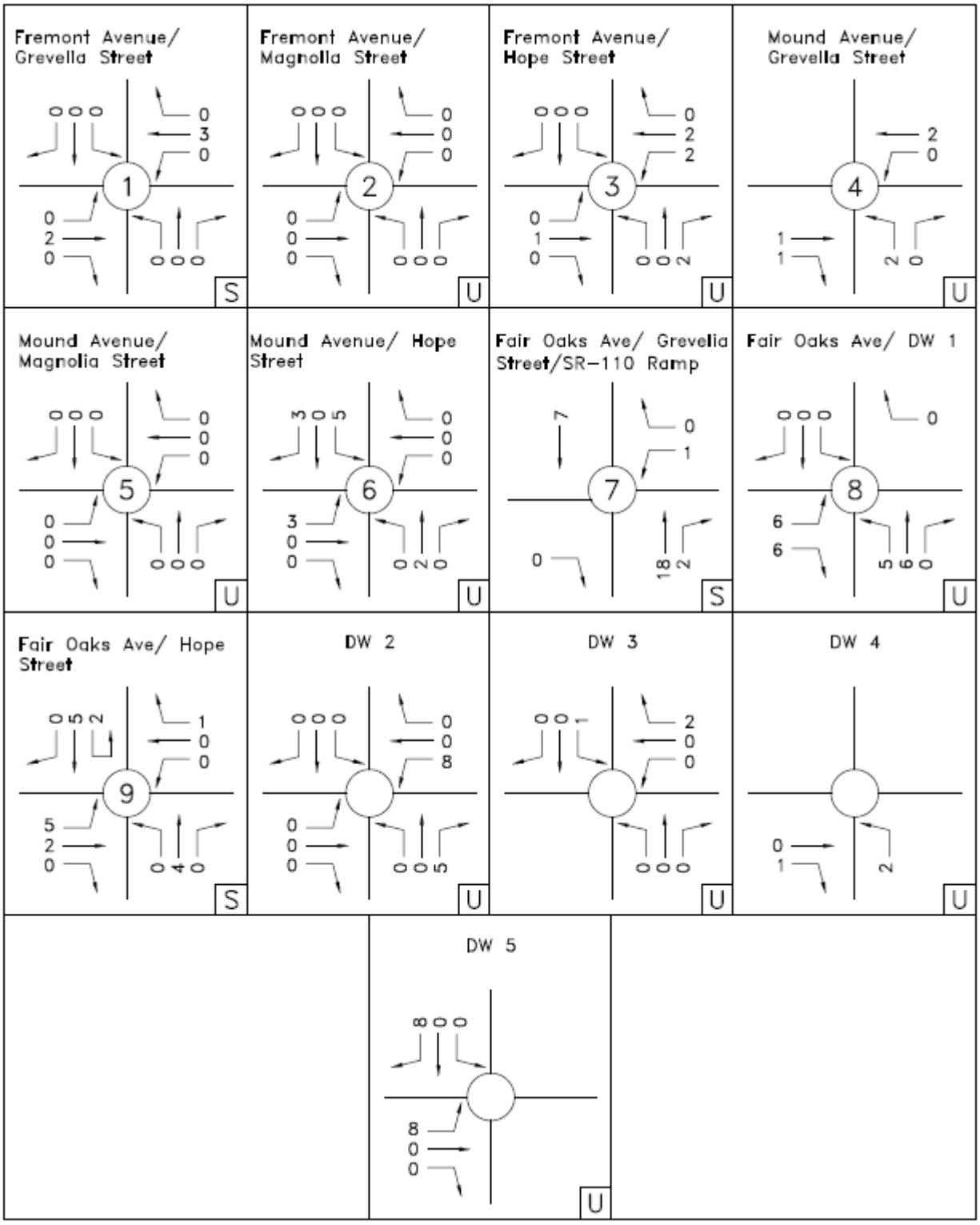

Figure 12: Project Total Vehicles AM Peak Hour Intersection Turning Movement Volumes

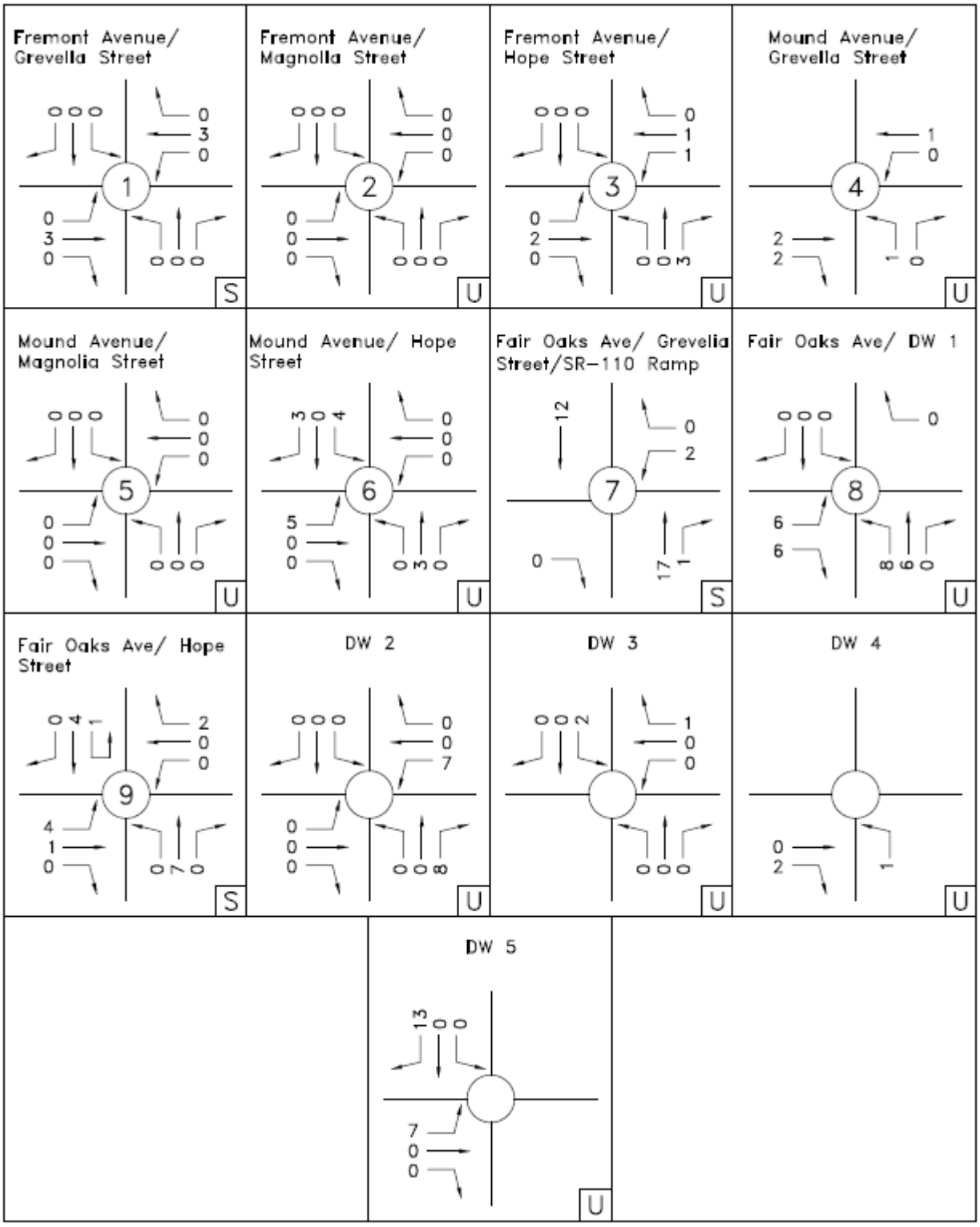

Figure 13: Project Total Vehicles PM Peak Hour Intersection Turning Movement Volumes

VII. TRAFFIC FORECASTS

a) Existing Plus Project

The traffic volumes for existing plus project traffic conditions have been derived by adding the project generated trips to existing traffic volumes. Existing plus project morning and evening peak hour intersection turning movement volumes are shown on Figure 14 and Figure 15, respectively.

b) Future (Opening Year - 2025) Without Project

To assess Future (2025) without project traffic conditions, existing traffic volumes were combined with an ambient growth factor of 1% per year over a 2-year period. Future (2025) Without Project morning and evening peak hour intersection turning movement volumes are shown on Figure 16 and Figure 17, respectively.

c) Future (Opening Year - 2025) Plus Project

To assess Future (2025) plus project traffic conditions, project generated trips were added to Future (2025) With Project traffic volumes. Future (2025) with project morning and evening peak hour intersection turning movement volumes are shown on Figure 18 and Figure 19, respectively.

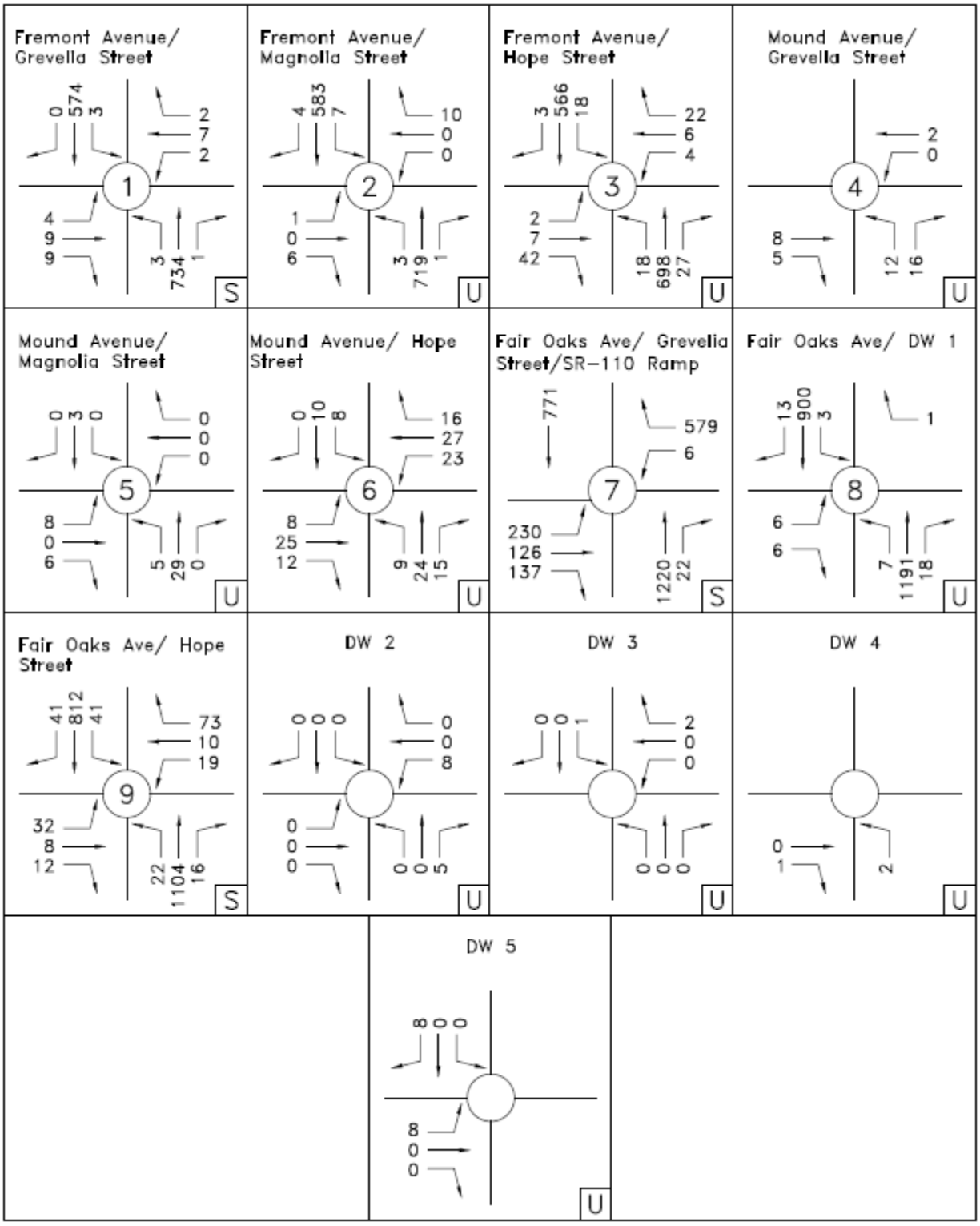

Figure 14: Existing Plus Project AM Peak Hour Intersection Turning Movement Volumes

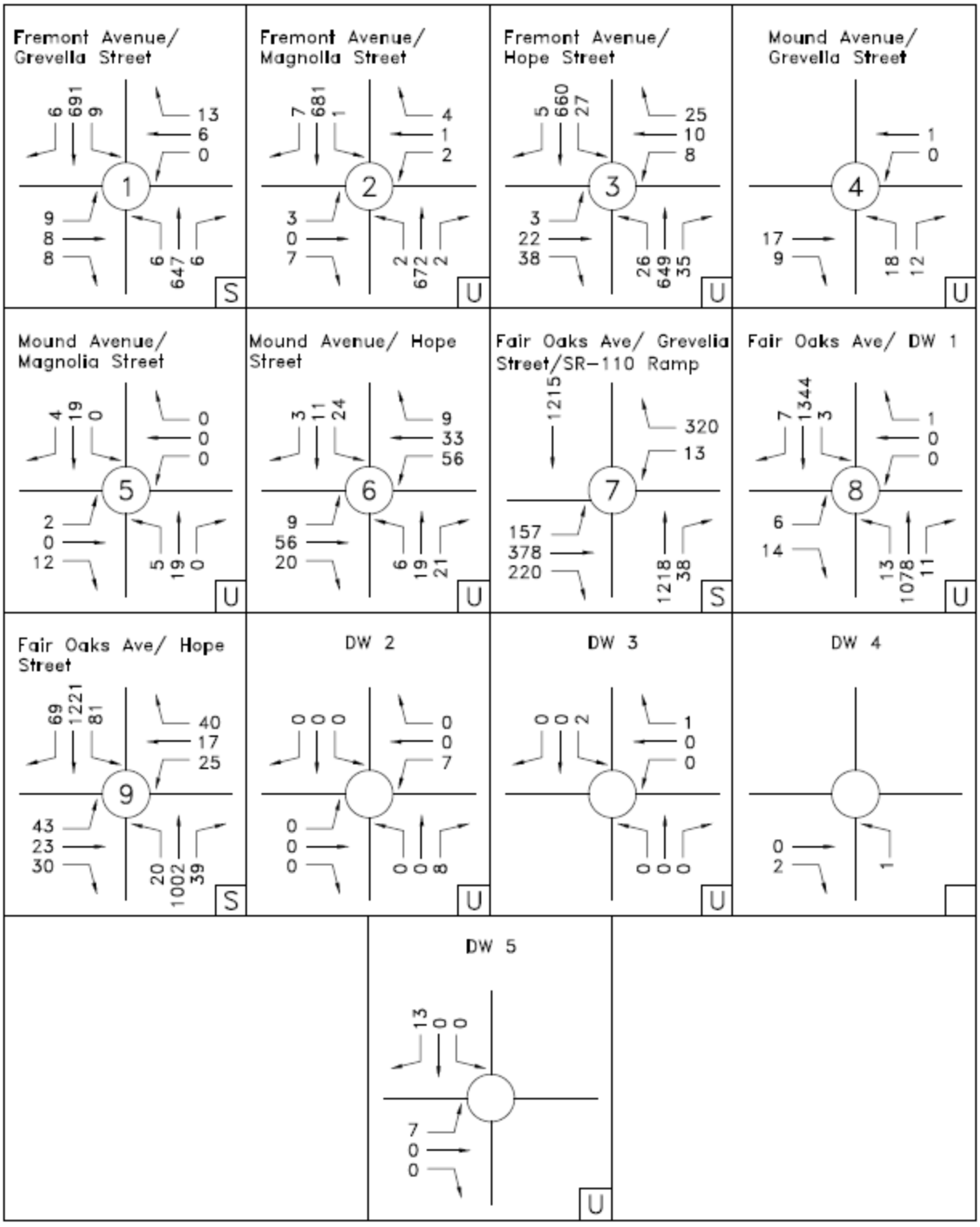

Figure 15: Existing Plus Project PM Peak Hour Intersection Turning Movement Volumes

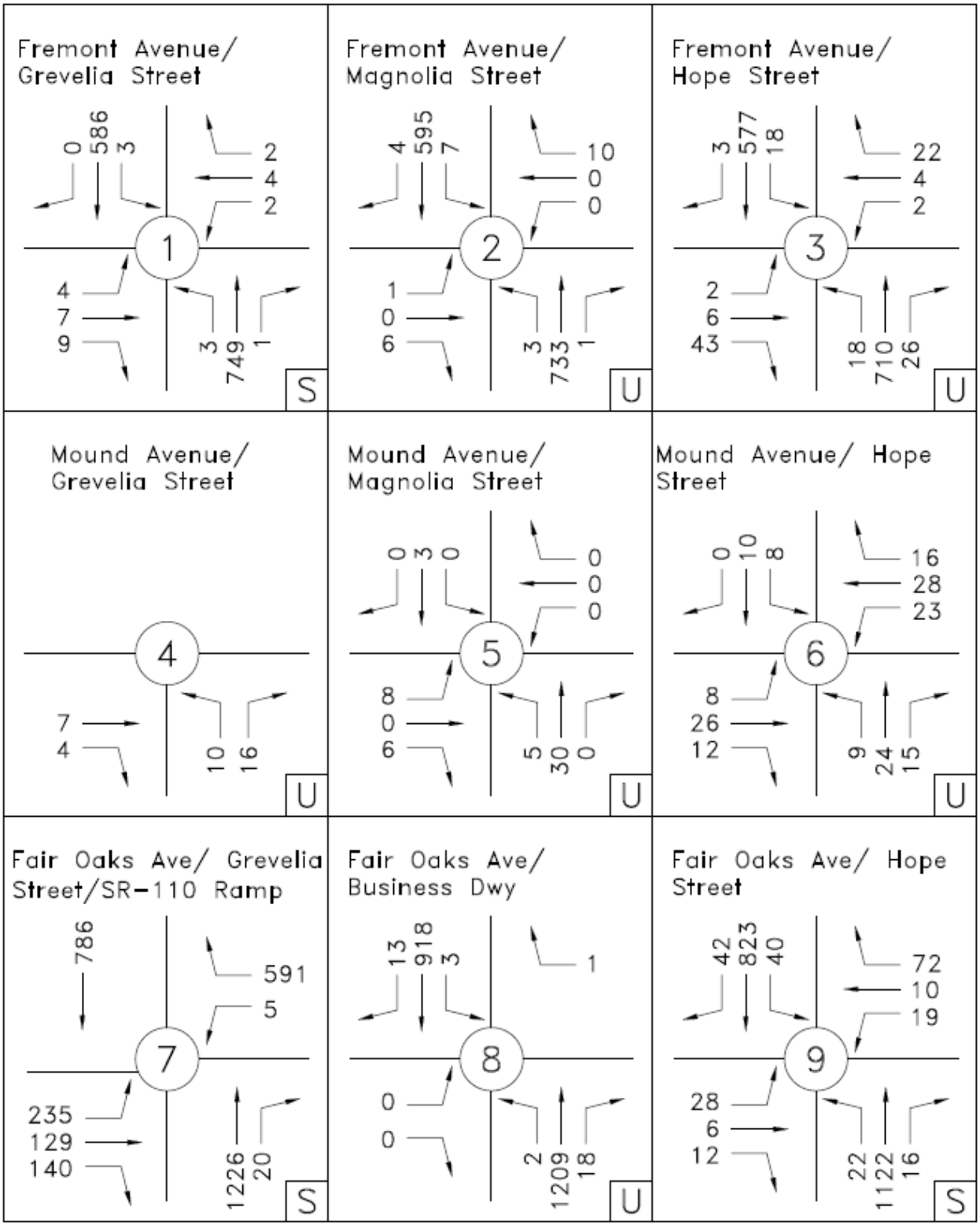

Figure 16: Future w/o Project AM Peak Hour Intersection Turning Movement Volumes

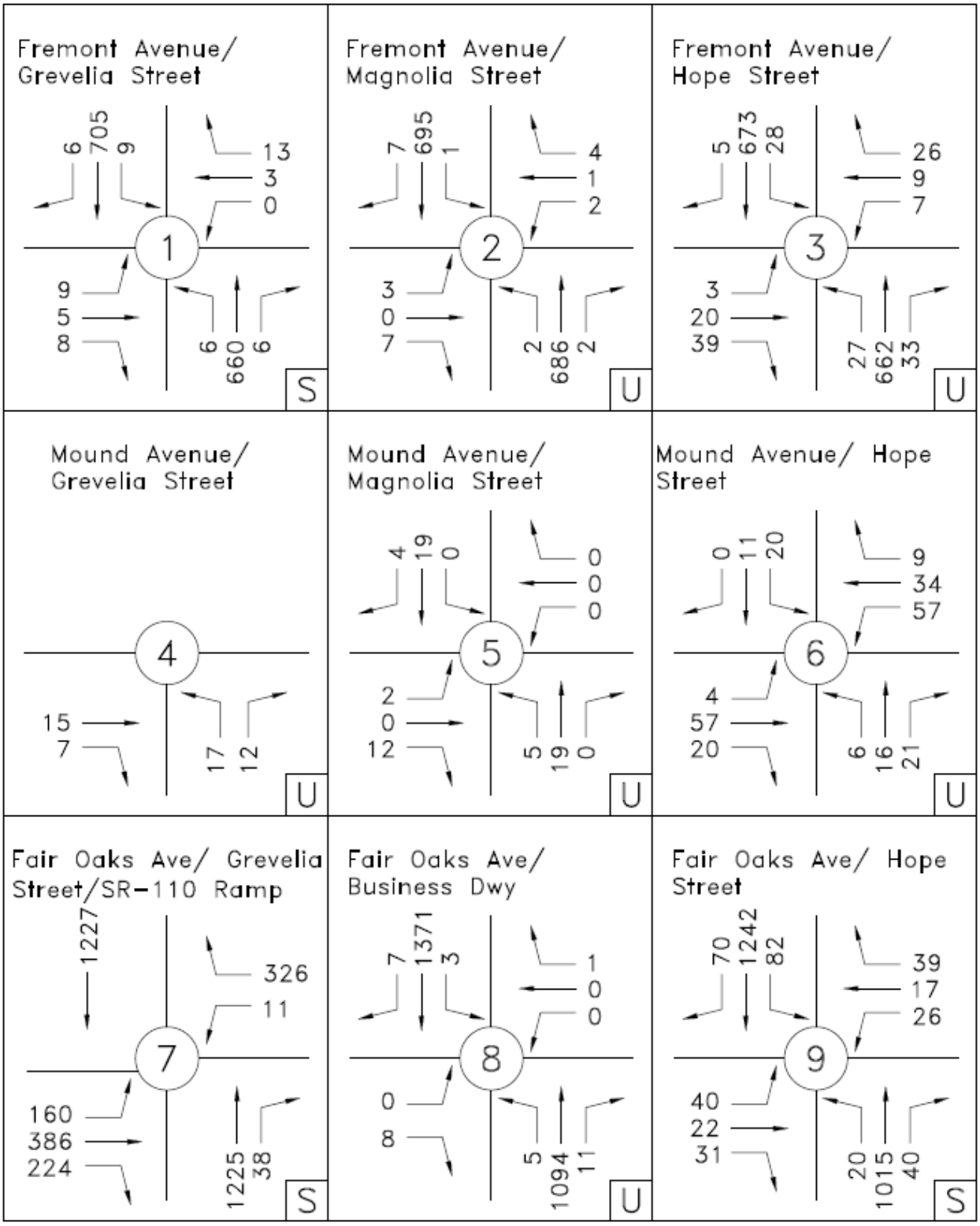

Figure 17: Future w/o Project PM Peak Hour Intersection Turning Movement Volumes

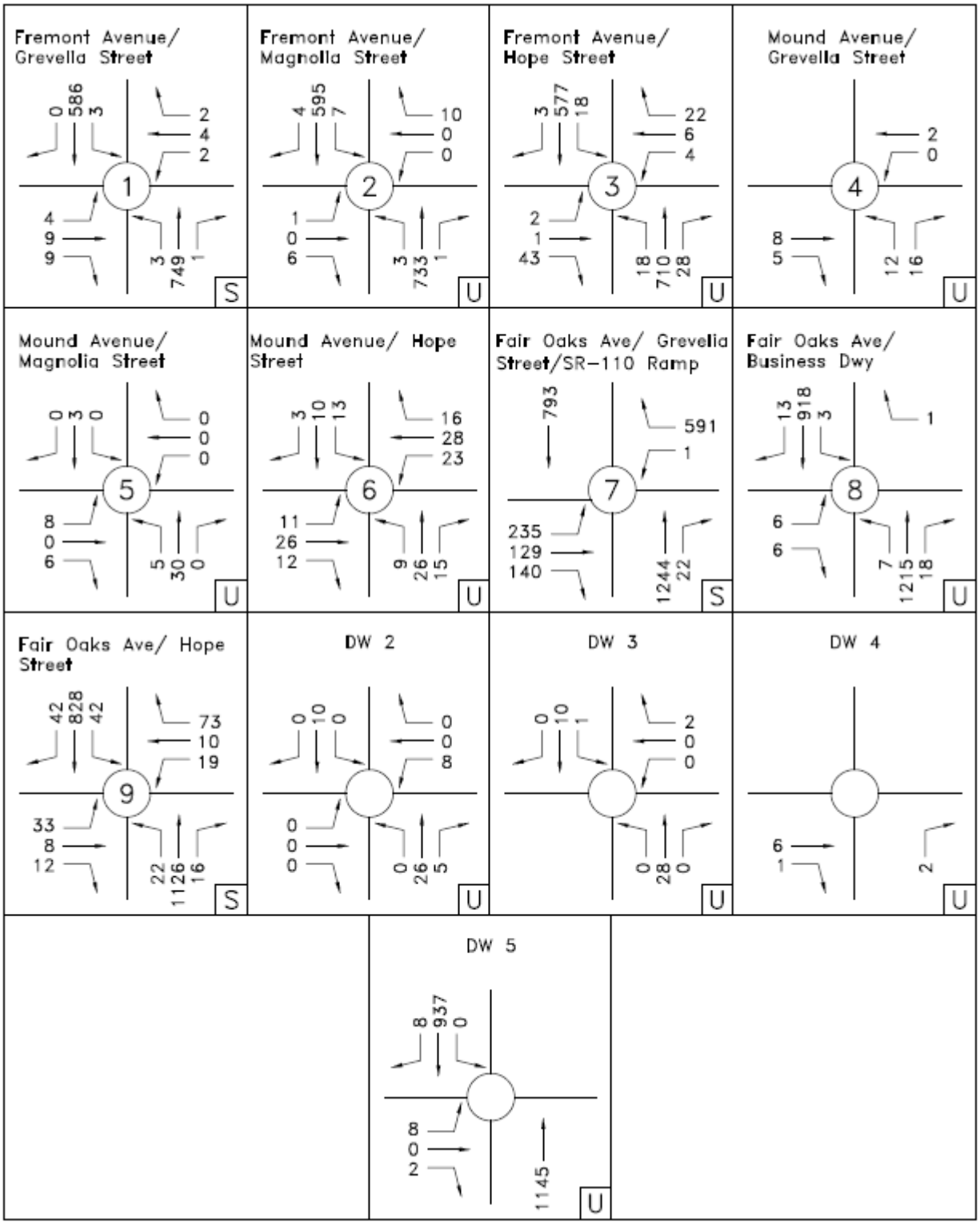

Figure 18: Future plus Project AM Peak Hour Intersection Turning Movement Volumes

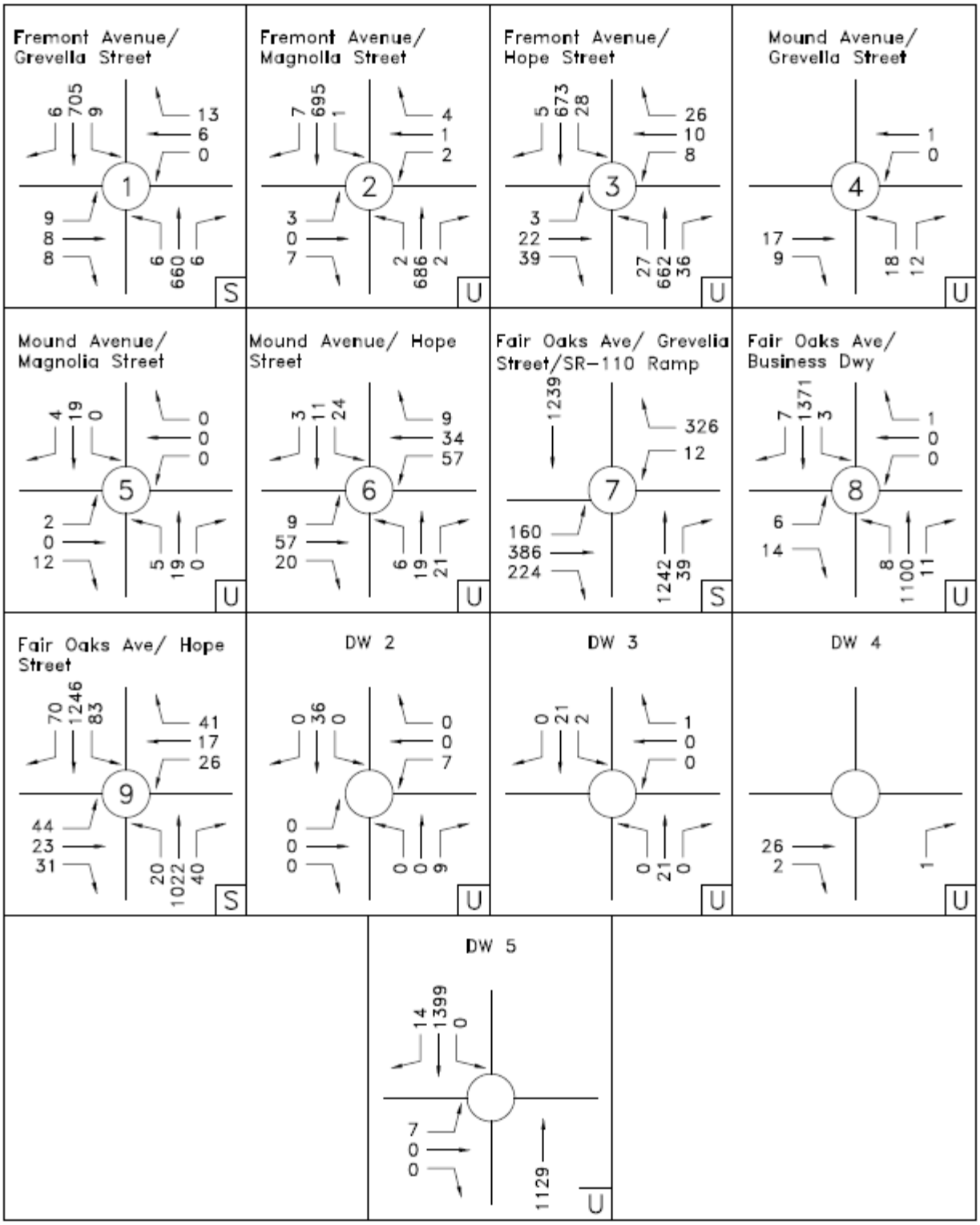

Figure 19: Future plus Project PM Peak Hour Intersection Turning Movement Volumes

VIII. TRAFFIC ASSESSMENT

i. Project Methodology

The traffic assessment for the South Pasadena Seniors project will be analyzed in the context of the City of South Pasadena and CA MUTCD policies and guidelines. Field counts for turning movements at each intersection within the study area were collected and used for the existing 2023 network conditions.

The reference material used to evaluate the study area intersections included the following:

- California Manual on Uniform Traffic Control Devices (CA-MUTCD), 2014 Edition, Rev 7
- The Highway Capacity Manual (HCM), 2010
- South Pasadena Transportation Impact Analysis Methodology

For this study, level of service (LOS) will be used to determine the operating conditions of each signalized intersection during the weekday AM and PM peak hours. The criteria for LOS in this study are based on the control delay methodology for signalized intersections. The control delay methodology quantifies the increase in travel time that a vehicle experiences due to the traffic signal control and provides a surrogate measure for driver discomfort and fuel consumption. The resulting control delay is expressed in terms of LOS, where the LOS is stated in terms of average control delay per vehicle during a specified time period (i.e. weekday PM peak hour). According to the City of South Pasadena's Transportation Impact Analysis Methodology, LOS at an intersection or roadway is considered to be unsatisfactory when the addition of project-generated trips reduces the peak hour LOS of the study intersection from an acceptable operation (LOS A, B, C, or D) to a deficient operation (LOS E or F). If the study intersection is already operating deficiently (LOS E or F) prior to the addition of the project-generated traffic and the addition of the project-generated traffic increased the critical movement delay by four (4) or more seconds. The relationship of Control Delay to LOS is shown in Table 5.

Table 5: Signalized Intersection LOS Criteria

Level of Service (LOS)	Signalized Intersection Delay (Sec/veh)
A	≤ 10
B	> 10 and ≤ 20
C	> 20 and ≤ 35
D	> 35 and ≤ 55
E	> 55 and ≤ 80
F	> 80
Source: Highway Capacity Manual, 2010	

The HCM's (2010) methodology is used to determine the LOS at Unsignalized intersections. The relationship of delay to LOS is demonstrated in Table 6. For all-way stop control, the delay and LOS is determined as the average of all approaches. For side-street stop control, the determination is based on the worse-case side-street movement (or lane if there is a shared lane use).

Table 6: Unsignalized Intersection LOS Criteria

Level of Service (LOS)	Unsignalized Intersection Delay (Sec/veh)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50
Source: Highway Capacity Manual, 2010	

Traffic engineering software such as Synchro and SimTraffic were also used to conduct the study network analysis.

Level of Service

Level of Service (LOS) is a qualitative measure of the effect of traffic flow factors, such as speed, travel time, interruptions, freedom to maneuver, driver comfort, and convenience. Roadway and traffic conditions, ranging from ideal to forced flow, have been divided into six LOS categories for qualitative evaluation.

- Level A – The control delay of less than or equal to 10 sec/veh. At this LOS, traffic volumes are low and speed is not restricted by other vehicles. All signal cycles clear with no vehicles waiting through more than one original cycle.
- Level B – The control delay ranges from 10 to 15 sec/veh. At this LOS, traffic volumes begin to be affected by other traffic. Between 1 and 10 percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods.
- Level C – The control delay ranges from 15 to 25 sec/veh. At this LOS, operating speeds and maneuverability are closely controlled by other traffic. Between 11 and 30 percent of the signal cycle have one or more vehicles which wait through more than one signal cycle during peak traffic periods.

- Level D – The control delay ranges from 25 to 35 sec/veh. At this LOS, traffic will operate at tolerable operating speeds, although with restricted maneuverability.
- Level E – The control delay ranges from 35 to 50 sec/veh. Traffic will experience restricted speeds, vehicles will frequently have to wait through two or more cycles at signalized intersections, and any additional traffic will result in breakdown of the traffic carrying ability of the system.
- Level F – A control delay of more than 50 sec/veh. Long queues of traffic, unstable flow, stoppages of long duration with traffic volumes and traffic, speed can drop to zero. LOS F is considered unacceptable for most drivers, often occurs with oversaturation.

ii. Level of Service

The existing intersections' LOS for the study area is based on collected traffic counts. The primary measures of evaluation include level of service and delay. The study intersections' LOS was calculated using Synchro software which is based on the Highway Capacity Manual method for signalized and unsignalized intersections. The AM and PM peak hour LOS were calculated based on following conditions:

- Existing conditions (2023)
- Existing conditions (2023) plus project
- Future conditions (2025)
- Future conditions (2025) plus project

Table 7 summarizes the results of the existing weekday morning and evening peak hour control delay and corresponding LOS at each intersection. As shown in Table 7, the proposed project is forecasted to result in no significant traffic impact at the study intersections as no intersection changes to an LOS of E & F or changes in delay by more than 4 seconds.

Table 7: Existing Conditions Intersection Level of Service

ID	Intersection	Peak Hour	Existing		Existing + Project		Change in Delay	Significant Impact?
			Delay	LOS	Delay	LOS		
1	Fremont Avenue and Grevelia Street	AM PM	37.3 41.1	D D	37.5 41.2	D D	0.2 0.1	NO NO
2	Fremont Avenue and Magnolia Street[1]	AM PM	[13.9] [15.3]	B C	[13.9] [15.3]	B C	0.00 0.00	NO NO
3	Fremont Avenue and Hope Street[1]	AM PM	[15.5] [18.6]	C C	[16.1] [19.0]	C C	0.60 0.40	NO NO
4	Mound Avenue and Grevelia Street[1]	AM PM	[6.8] [7.1]	A A	[6.9] [7.1]	A A	0.10 0.00	NO NO
5	Mound Avenue and Magnolia Street[1]	AM PM	[8.6] [8.5]	A A	[8.6] [8.5]	A A	0.00 0.00	NO NO
6	Mound Avenue and Hope Street[1]	AM PM	[10.6] [12.4]	B B	[10.6] [12.1]	B B	0.00 -0.30	NO NO
7	Fair Oaks Avenue and Grevelia Street	AM PM	323.6 152.2	F F	324.8 154.7	F F	1.2 2.5	NO NO
8	Fair Oaks Avenue and Driveway[1]	AM PM	[10.0] [10.7]	A B	[10.0] [14.6]	A B	0.00 3.9	NO NO
9	Fair Oaks Avenue and Hope Street	AM PM	17.7 32.5	B C	18.4 35.2	B D	0.70 2.7	NO NO
[1] Unsignalized								

Table 8 summarizes the results of the future (Year 2025) weekday morning and evening peak hour control delay and corresponding LOS at each intersection. As shown in Table 8, the proposed project is forecast to result in no significant traffic impact at the study intersections for Future plus Project traffic conditions as no intersection changes to an LOS of E & F. The detailed Synchro reports for existing and future conditions are attached as Appendix B.

Table 8: Future (Year 2025) Conditions Intersection Level of Service

ID	Intersection	Peak Hour	Future		Future + Project		Change in Delay	Significant Impact?
			Delay	LOS	Delay	LOS		
1	Fremont Avenue and Grevelia Street	AM PM	42.5 41.8	D D	42.5 41.9	D D	0.00 0.10	NO NO
2	Fremont Avenue and Magnolia Street[1]	AM PM	[14.1] [15.6]	B C	[14.1] [15.6]	B C	0.00 0.00	NO NO
3	Fremont Avenue and Hope Street[1]	AM PM	[15.7] [19.1]	C C	[16.3] [19.5]	C C	0.60 0.40	NO NO
4	Mound Avenue and Grevelia Street[1]	AM PM	[6.8] [7.1]	A A	[6.9] [7.1]	A A	0.10 0.00	NO NO
5	Mound Avenue and Magnolia Street[1]	AM PM	[8.6] [8.5]	A A	[8.6] [8.5]	A A	0.00 0.00	NO NO
6	Mound Avenue and Hope Street[1]	AM PM	[10.7] [12.5]	A B	[10.6] [12.3]	A B	-0.10 -0.20	NO NO
7	Fair Oaks Avenue and Grevelia Street	AM PM	335.2 184.9	F F	336.6 186.2	F F	1.40 1.30	NO NO
8	Fair Oaks Avenue and Driveway[1]	AM PM	[10.1] [10.6]	B B	[10.1] [15.1]	B C	0.00 4.50	NO NO
9	Fair Oaks Avenue and Hope Street	AM PM	19.1 37.3	B D	19.9 39.9	B D	0.80 2.60	NO NO
[1] Unsignalized								

iii. Project Queuing Analysis

The City of South Pasadena City Council Resolution 7656 considers a queue impacted when the proposed project traffic causes the 95th percentile queue in a left or right turn lane/ pocket to extend beyond the turn pocket by 25 feet or more into adjacent traffic lanes that operate separately from a left or right turn length. When the vehicle queue length already exceeds that turn lane/pocket length, a queuing deficiency would occur if project traffic increased the queue by 25 feet or more.

Table 9 summarizes queue lengths of the study intersections in every turning movement before and after the proposed project is complete and determined no significant impacts will occur. Synchro Traffic Modeling Software was used to determine queue lengths.

Table 9: Study Intersections Queue Lengths and Significant Impacts

ID	Movement	Storage	Existing				Existing + Project				SI
			AM		PM		AM		PM		
			Q	ES	Q	ES	Q	ES	Q	ES	
1	ET	585’	40’	No	43’	No	44’	No	47’	No	No
	WT	400’	23’	No	11’	No	27’	No	13’	No	No
	NT	330’	1,140’	Yes	882’	Yes	1,142’	Yes	882’	Yes	No
	ST	265’	470’	Yes	969’	Yes	470’	Yes	969’	Yes	No
2*	ET	250’	5’	No	9’	No	5’	No	9’	No	No
	WT	350’	3’	No	2’	No	3’	No	2’	No	No
	NL	100’	0’	No	0’	No	0’	No	0’	No	No
	SL	60’	1’	No	0’	No	1’	No	0’	No	No
3*	ET	560’	14’	No	25’	No	15’	No	26’	No	No
	WT	340’	9’	No	15’	No	11’	No	17’	No	No
	NL	120’	2’	No	3’	No	2’	No	3’	No	No
	SL	150’	2’	No	3’	No	2’	No	3’	No	No
4*	ET	385’	0’	No	0’	No	0’	No	0’	No	No
	WT	250’	0’	No	0’	No	0’	No	0’	No	No
	NT	385’	0’	No	0’	No	0’	No	0’	No	No
5*	ET	360’	1’	No	1’	No	1’	No	1’	No	No
	WT	100’	5’	No	5’	No	5’	No	5’	No	No
	NT	300’	0’	No	0’	No	0’	No	0’	No	No
	ST	385’	0’	No	0’	No	0’	No	0’	No	No
6*	ET	350’	1’	No	0’	No	1’	No	1’	No	No
	WT	350’	2’	No	4’	No	2’	No	4’	No	No
	NT	275’	9’	No	8’	No	9’	No	6’	No	No
	ST	300’	3’	No	7’	No	5’	No	6’	No	No
7	ET	425’	195’	No	718’	Yes	195’	No	721’	Yes	No
	WL	350’	7’	No	31’	No	8’	No	33’	No	No
	WR	350’	410’	Yes	446’	Yes	411’	Yes	451’	Yes	No
	NT	680	250’	No	445’	No	255’	No	458’	No	No
	ST	355’	216’	No	965’	Yes	218’	No	980’	Yes	No
9	ET	350’	48’	No	158’	No	58’	No	173’	No	No
	WT	325’	37’	No	67’	No	47’	No	67’	No	No
	NL	75’	11’	No	13’	No	11’	No	13’	No	No
	NT	280’	420’	Yes	300’	No	422’	Yes	308’	Yes	No
	SL	80’	28’	No	80’	No	29’	No	85’	No	No
	ST	680’	180’	No	606’	No	181’	No	608’	No	No

Intersections ID:
1 = Fremont Avenue & Grevelia Street
2 = Fremont Avenue & Magnolia Street
3 = Fremont Avenue & Hope Street
4 = Mound Avenue & Grevelia Street
5 = Mound Avenue & Magnolia Street
6 = Mound Avenue & Hope Street
7 = Fair Oaks Avenue & Grevelia Street
9 = Fair Oaks Avenue & Hope Street

Legend:
* = Unsignalized
Q = Queue
ES = Exceeds Storage
SI = Significant Impact
E = East
W = West
N = North
S = South
T = Through
L = Left Turn
R = Right Turn

Table 10 summarizes the queue length in number of vehicles exiting the proposed project's driveways by analyzing the Synchro simulation of the model created using existing trip distribution and generation.

Table 10: Project Driveway Queueing Analysis

Driveway	Distribution Exiting	Queue Length (# of cars)
1	40%	1-2
2	25%	1-2
3	5%	1-2
4	5%	1-2
5	25%	1-2

iv. Time Gap Analysis

For this development, a gap analysis was performed using Synchro and SimTraffic modeling software to simulate Driveway 1 and Driveway 5 for left turns onto S. Fair Oaks Avenue. Based on the HDM guidelines for left turns, there must be a minimum gap of 7.5 seconds on the major street for a vehicle to turn safely without additional safety measures. Our analysis of the traffic model estimated an available gap of 10.8 seconds for vehicles making a turn from Driveway 1 and an available gap of 15 seconds for vehicles making a turn from Driveway 5. Based on these two gaps, both driveways meet HDM criteria and do not require any additional safety measure.

IX. SIGNAL WARRANT ANALYSIS

A signal warrant analysis was performed for the intersection of Mound Avenue and Magnolia Street. The purpose of the warrant analysis is to determine whether installation of a traffic control signal is justified in the location. There are nine (9) warrants that can justify a traffic control signal. Satisfying a warrant does not in itself require the installation of a traffic control signal. Using the counts provided by Counts Unlimited, it is determined that the intersection of Mound Avenue and Magnolia Street does not require a traffic control signal. Table 11 is provided below to show the results of the analysis. The worksheet used to complete the warrant analysis can be found in Appendix C.

Table 11: Signal Warrant Analysis

Warrant	Yes	No	N/A
Warrant 1 – 8 Hour Volume		X	
Warrant 2 – 4 Hour Volume		X	
Warrant 3 – Peak Hour		X	
Warrant 4 – Pedestrian Volume			X
Warrant 5 – School Crossing			X
Warrant 6 – Coordinated Signal System			X
Warrant 7- Crash Experience Warrant			X
Warrant 8 – Roadway Network			X
Warrant 9 – Intersection Near a Grade Crossing			X

X. VEHICLE MILES TRAVELED ANALYSIS

This section provides an assessment of the project VMT impacts and mitigation, if necessary, for compliance with CEQA Section 15064.3(b).5.

i. Background

California Senate Bill 743 (SB 743) directs the State Office of Planning and Research (OPR) to amend the California Environmental Quality Act (CEQA) Guidelines for evaluating transportation impacts to provide alternatives to Level of Service that "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." In December 2018, the California Natural Resources Agency certified and adopted the updated CEQA Guidelines package. The amended CEQA Guidelines, specifically Section 15064.3, recommends the use of Vehicle Miles Travelled (VMT) as the primary metric for the evaluation of transportation impacts associated with land use and transportation projects. In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. All agencies and projects State-wide are required to utilize the updated CEQA guidelines recommending use of VMT for evaluating transportation impacts as of July 1, 2020.

The updated CEQA Guidelines allow for lead agency discretion in establishing methodologies and thresholds provided there is substantial evidence to demonstrate that the established

procedures promote the intended goals of the legislation. Where quantitative models or methods are unavailable, Section 15064.3 allows agencies to assess VMT qualitatively using factors such as availability of transit and proximity to other destinations. The Office of Planning and Research (OPR) Technical Advisory on Evaluating Transportation Impacts in CEQA (State of California, December 2018) ["OPR Technical Advisory"] provides technical considerations regarding methodologies and thresholds with a focus on office, residential, and retail developments as these projects tend to have the greatest influence on VMT.

ii. Vehicle Miles Traveled Screening Assessment

On May 20, 2020, the City of South Pasadena established Vehicle Miles Traveled (VMT) methodology in accordance with CEQA transportation impact analysis requirements and included it in the City's Transportation Impact Analysis Methodology (TIAM). Per the City's guidelines, a screening assessment for the Mixed-use development was performed. As specified in City guidelines, a screening analysis was performed to quickly identify when a project should be expected to cause a less than significant VMT impact. The following sections meet the criteria and discuss the Housing Site's development relative to the screening thresholds recommended by the City.

iii. Small Project Size

Per the City's TIAM, projects that would generate fewer than 100 trips per day may be presumed to cause a less-than-significant transportation impact. The proposed Mixed-use development would generate 648 net daily trips. Therefore, the development may be presumed to have significant VMT impact.

iv. Low VMT Area

The City's Transportation Impact Analysis Methodology states that project consistent with the General Plan and any relevant Specific Plan and located in areas of the City calculated to have low VMT per capita or per service population may be presumed to cause a less-than-significant transportation impact. Per Figure 20 below from the City's TIAM, the proposed Mixed-use development falls within a VMT per Service Population area that is below 85% of the County Average which is considered a Low VMT area. Therefore, the Mixed-use development may be presumed to result in a less-than-significant VMT impact.

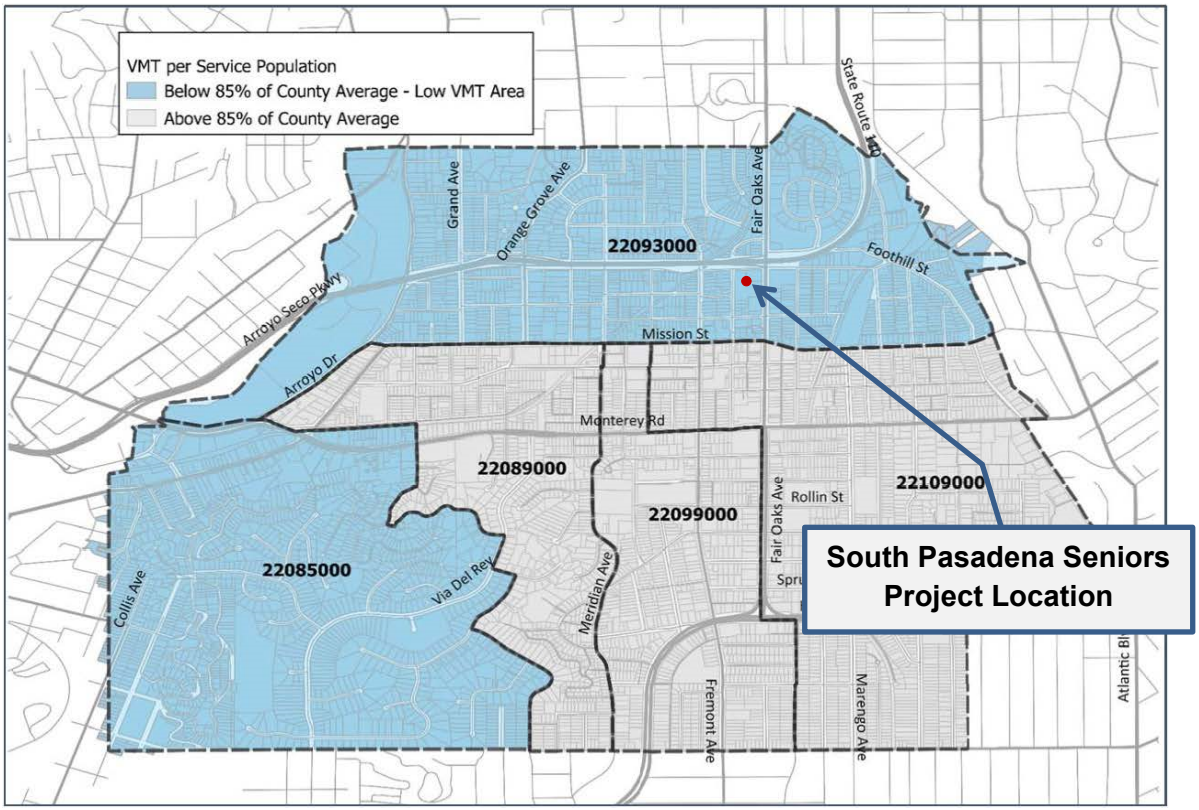

Figure 20: City of South Pasadena Low VMT TAZs

v. Within a Transit Priority Area

Projects within a half mile of the five major transit stops in the City would be screened from analysis unless they have a floor area ratio of less than 0.75, include more parking than required by the City, are inconsistent with the SCAG RTP/SCS, or replace affordable housing units with a smaller number of moderate- or high-income residential units. Per Figure 21 from the City's TIAM, the proposed development is within the transit priority area.

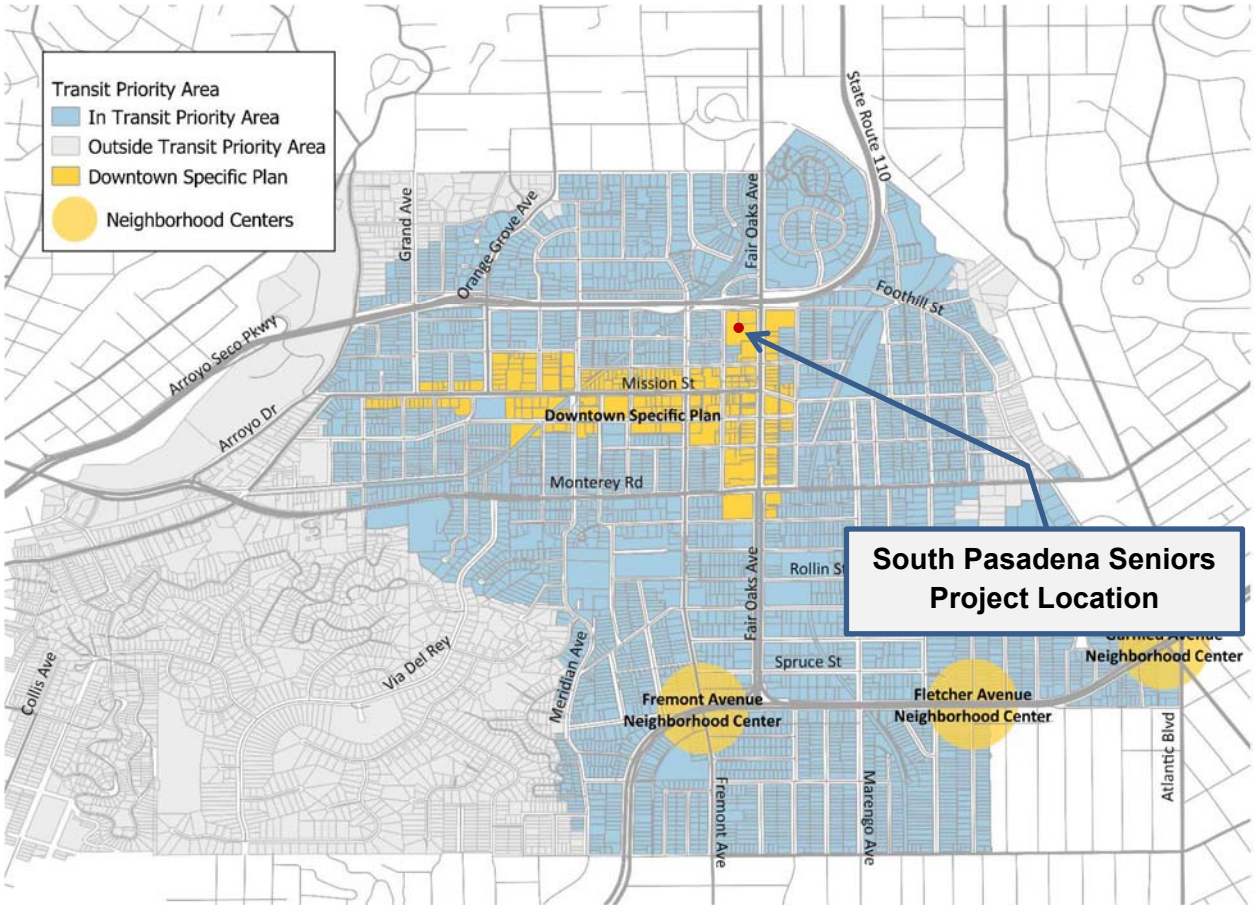

Figure 21: City of South Pasadena Transit Priority Areas

XI. IDENTIFICATION OF DEFICIENCIES

The existing on-site parking area for the businesses in the proposed project area will be impacted during the construction of the South Pasadena Seniors Development. The current parking lot located on the east side of Mound Avenue from Magnolia Street to Grevelia Street is a 61,000 square foot facility providing 171 parking spaces to the banks and other establishments occupying the existing building directly adjacent to the parking lot. During the construction of the Senior Housing these parking spaces will not be available and the vehicles currently parking on-site will need to utilize the existing on street parking. Street parking around the project area has been previously observed to be sparse. Due to the presumed lack of available on street parking and the estimated increase in demand for parking in this area, mitigation to provide parking during construction will most likely be needed. One solution is to establish a satellite parking lot off-site and provide a shuttle system to and from the development area. One area of concern to include in this section is the existing bus stops located at the northeast and southwest corners of South Fair Oaks Avenue and Mission Street.

Regarding the project area, the southbound bus route which stops at the southwest corner has no bus bay for the bus to pull over and does not allow cars to pass. Due to this temporary obstruction, southbound traffic in this intersection may experience back up in the number 2 lane during times in which the bus is dropping off or picking up passengers.

XII. CONCLUSION AND RECOMMENDATION

The 2010 Highway Capacity Manual (HCM 2010) methodology is used to analyze the LOS at surrounding signalized and unsignalized intersections along Fremont Avenue and South Fair Oaks Avenue. Peak hour delay analysis of all study intersections was carried out using SYNCHRO. As shown in Tables 7 and 8, the delays of surrounding intersections along Fremont Avenue and South Fair Oaks Avenue do not see significant impact in AM/PM times with the addition of this project. However, the future development of the Senior Housing will show an increase in pedestrian traffic in the area as a result of the residents going on daily walks or visiting the shops and stores in the area which are located to the south of the project site within walking distance. The raised level of senior citizen pedestrian activity will create the demand to enhance safety measures in the area. It is recommended to upgrade all pedestrian facilities such as sidewalks and curb ramps in the project and adjoining area to be compliant with ADA standards. Furthermore, additional signage, for example CA MUTCD sign SW50(CA) “SENIOR CITIZEN FACILITY”, which urges caution and provides awareness when driving by the proposed Senior Housing Facility should be installed on the neighboring streets and around the proposed development. Due to the possible increase in pedestrian traffic from the proposed senior facility to the shops located south of Hope Street, recommended mitigation measures for South Fair Oaks Avenue at Hope Street include updating the intersection to current State guidelines, including upgrading ADA ramps, countdown pedestrian heads, and new traffic signal poles. The cost estimate for these traffic signal modifications, including design, is approximately $350,000. The project change in control delay is 2.60 seconds. Dividing this number by the change in control delay of 39.9 seconds provides a percent change of 6.52%. Applying this percentage to the traffic signal modification cost estimate of $350,000 provides a ***fair share*** amount of $22,820 towards the project.

As described in the City's Transportation Impact Analysis Methodology (May 2020), the project was analyzed using the screening thresholds to determine if the project required a detailed VMT analysis. The following screening criteria was used for the project:

- Small Project Size
- Low VMT Area
- Within a Transit Priority Area (TPA)
- Retail Projects
- Redevelopment Projects

It was determined that further VMT analysis is not required because the project meets criteria for being in a low VMT area as well as being in a Transit Priority Area. Per City guidelines the project only needs to meet 1 criterion to screen out a detailed VMT analysis.

APPENDIX

Appendix A: Traffic Counts Data

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of South Pasadena
N/S: Fremont Avenue
E/W: Grevelia Street
Weather: Clear

File Name : 01_SPA_Fre_Gre AM
Site Code : 2372336
Start Date : 4/11/2023
Page No : 1

Groups Printed- Total Volume

	Fremont Avenue Southbound				Grevelia Street Westbound				Fremont Avenue Northbound				Grevelia Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	110	0	110	0	0	0	0	0	110	1	111	0	0	0	0	221
07:15 AM	0	131	1	132	0	0	0	0	0	172	0	172	0	0	0	0	304
07:30 AM	0	156	0	156	0	1	0	1	0	188	0	188	1	2	4	7	352
07:45 AM	0	139	0	139	0	0	0	0	1	188	0	189	0	2	1	3	331
Total	0	536	1	537	0	1	0	1	1	658	1	660	1	4	5	10	1208
08:00 AM	2	133	0	135	1	2	0	3	1	183	0	184	1	2	2	5	327
08:15 AM	1	146	0	147	1	1	2	4	1	171	1	173	2	1	2	5	329
08:30 AM	0	99	1	100	0	0	1	1	3	191	2	196	1	2	0	3	300
08:45 AM	2	143	2	147	0	1	0	1	1	182	1	184	3	0	4	7	339
Total	5	521	3	529	2	4	3	9	6	727	4	737	7	5	8	20	1295
Grand Total	5	1057	4	1066	2	5	3	10	7	1385	5	1397	8	9	13	30	2503
Apprch %	0.5	99.2	0.4		20	50	30		0.5	99.1	0.4		26.7	30	43.3		
Total %	0.2	42.2	0.2	42.6	0.1	0.2	0.1	0.4	0.3	55.3	0.2	55.8	0.3	0.4	0.5	1.2	

	Fremont Avenue Southbound				Grevelia Street Westbound				Fremont Avenue Northbound				Grevelia Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**156**	0	**156**	0	1	0	1	0	**188**	0	188	1	**2**	**4**	**7**	**352**
07:45 AM	0	139	0	139	0	0	0	0	**1**	188	0	**189**	0	2	1	3	331
08:00 AM	**2**	133	0	135	**1**	**2**	0	3	1	183	0	184	1	2	2	5	327
08:15 AM	1	146	0	147	1	1	**2**	**4**	1	171	**1**	173	**2**	1	2	5	329
Total Volume	3	574	0	577	2	4	2	8	3	730	1	734	4	7	9	20	1339
% App. Total	0.5	99.5	0		25	50	25		0.4	99.5	0.1		20	35	45		
PHF	.375	.920	.000	.925	.500	.500	.250	.500	.750	.971	.250	.971	.500	.875	.563	.714	.951

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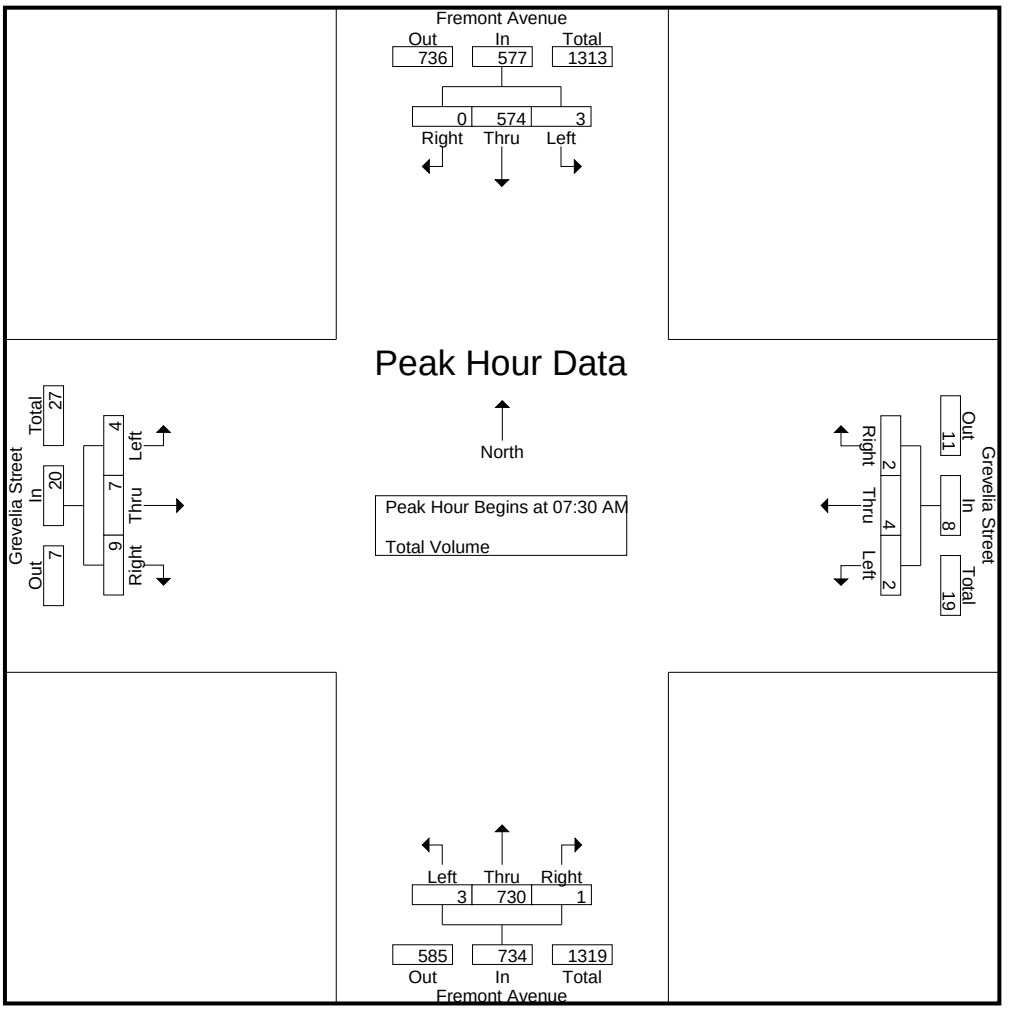
File Name : 01_SPA_Fre_Gre AM
Site Code : 2372336
Start Date : 4/11/2023



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				08:00 AM				07:45 AM				07:30 AM			
+0 mins.	0	**156**	0	**156**	**1**	**2**	0	3	1	188	0	189	1	**2**	**4**	**7**
+15 mins.	0	139	0	139	1	1	**2**	**4**	1	183	0	184	0	2	1	3
+30 mins.	**2**	133	0	135	0	0	1	1	1	171	1	173	1	2	2	5
+45 mins.	1	146	0	147	0	1	0	1	**3**	**191**	**2**	**196**	**2**	1	2	5
Total Volume	3	574	0	577	2	4	3	9	6	733	3	742	4	7	9	20
% App. Total	0.5	99.5	0		22.2	44.4	33.3		0.8	98.8	0.4		20	35	45	
PHF	.375	.920	.000	.925	.500	.500	.375	.563	.500	.959	.375	.946	.500	.875	.563	.714

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City of South Pasadena
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File Name : 01_SPA_Fre_Gre PM
Site Code : 2372336
Start Date : 4/11/2023
Page No : 1

Groups Printed- Total Volume

	Fremont Avenue Southbound				Grevelia Street Westbound				Fremont Avenue Northbound				Grevelia Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	115	3	119	0	3	1	4	2	137	0	139	2	1	3	6	268
04:15 PM	0	91	2	93	1	1	2	4	3	162	1	166	0	2	4	6	269
04:30 PM	1	151	0	152	1	0	1	2	1	169	3	173	1	1	4	6	333
04:45 PM	5	174	2	181	0	0	0	0	1	151	2	154	3	3	1	7	342
Total	7	531	7	545	2	4	4	10	7	619	6	632	6	7	12	25	1212
05:00 PM	2	177	1	180	0	1	4	5	1	153	0	154	3	0	4	7	346
05:15 PM	1	175	1	177	0	1	7	8	1	189	1	191	1	2	0	3	379
05:30 PM	1	165	2	168	0	1	2	3	3	154	3	160	2	0	3	5	336
05:45 PM	2	148	0	150	0	1	2	3	1	171	0	172	0	3	0	3	328
Total	6	665	4	675	0	4	15	19	6	667	4	677	6	5	7	18	1389
Grand Total	13	1196	11	1220	2	8	19	29	13	1286	10	1309	12	12	19	43	2601
Apprch %	1.1	98	0.9		6.9	27.6	65.5		1	98.2	0.8		27.9	27.9	44.2		
Total %	0.5	46	0.4	46.9	0.1	0.3	0.7	1.1	0.5	49.4	0.4	50.3	0.5	0.5	0.7	1.7	

	Fremont Avenue Southbound				Grevelia Street Westbound				Fremont Avenue Northbound				Grevelia Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**5**	174	**2**	**181**	0	0	0	0	1	151	2	154	**3**	**3**	1	**7**	342
05:00 PM	2	**177**	1	180	0	**1**	4	5	1	153	0	154	3	0	**4**	7	346
05:15 PM	1	175	1	177	0	1	**7**	**8**	1	**189**	1	**191**	1	2	0	3	**379**
05:30 PM	1	165	2	168	0	1	2	3	**3**	154	**3**	160	2	0	3	5	336
Total Volume	9	691	6	706	0	3	13	16	6	647	6	659	9	5	8	22	1403
% App. Total	1.3	97.9	0.8		0	18.8	81.2		0.9	98.2	0.9		40.9	22.7	36.4		
PHF	.450	.976	.750	.975	.000	.750	.464	.500	.500	.856	.500	.863	.750	.417	.500	.786	.925

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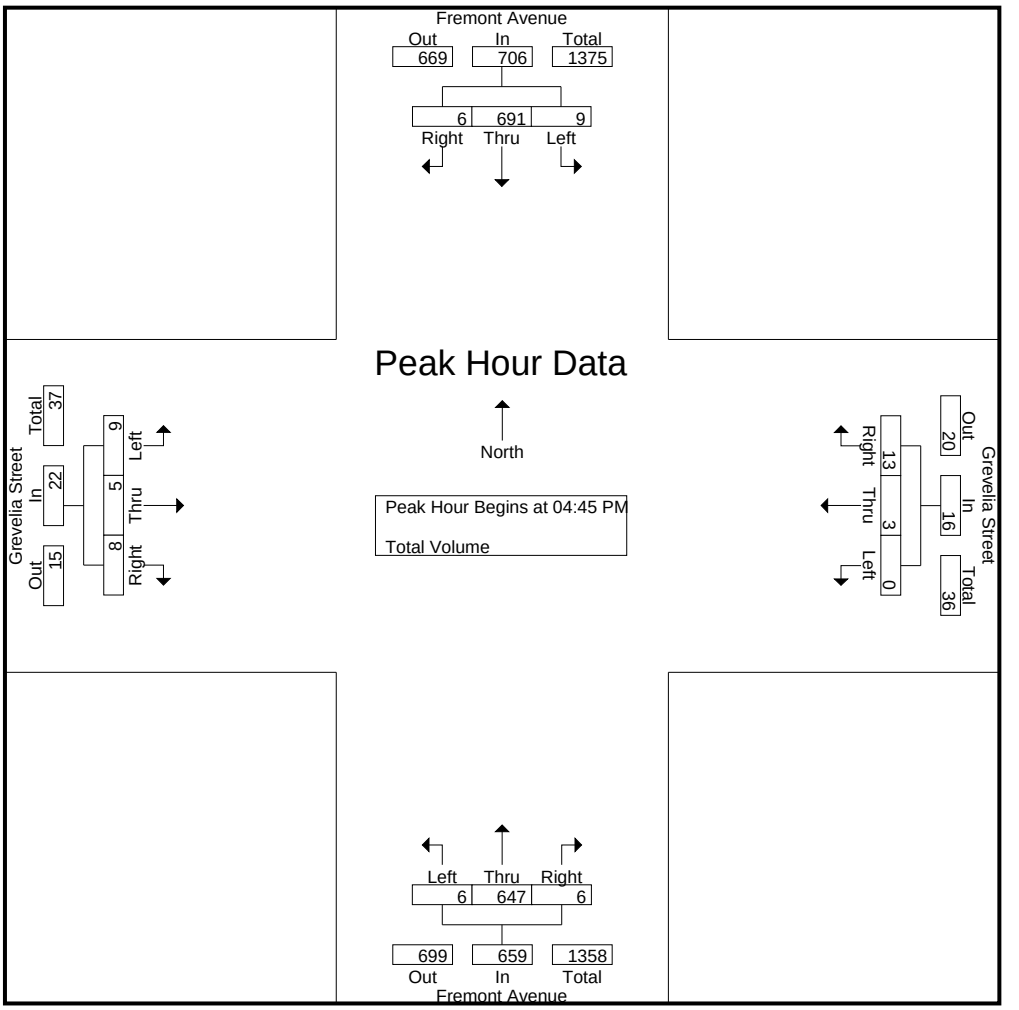
File Name : 01_SPA_Fre_Gre PM
Site Code : 2372336
Start Date : 4/11/2023



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				05:00 PM				05:00 PM				04:15 PM			
+0 mins.	**5**	174	**2**	**181**	0	**1**	4	5	1	153	0	154	0	2	**4**	6
+15 mins.	2	**177**	1	180	0	1	**7**	**8**	1	**189**	1	**191**	1	1	4	6
+30 mins.	1	175	1	177	0	1	2	3	**3**	154	**3**	160	**3**	**3**	1	**7**
+45 mins.	1	165	2	168	0	1	2	3	1	171	0	172	3	0	4	7
Total Volume	9	691	6	706	0	4	15	19	6	667	4	677	7	6	13	26
% App. Total	1.3	97.9	0.8		0	21.1	78.9		0.9	98.5	0.6		26.9	23.1	50	
PHF	.450	.976	.750	.975	.000	1.000	.536	.594	.500	.882	.333	.886	.583	.500	.813	.929

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City of South Pasadena
N/S: Fremont Avenue
E/W: Magnolia Street
Weather: Clear

File Name : 02_SPA_Fre_Mag AM
Site Code : 2372336
Start Date : 4/11/2023
Page No : 1

Groups Printed- Total Volume

	Fremont Avenue Southbound				Magnolia Street Westbound				Fremont Avenue Northbound				Magnolia Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	106	0	107	1	0	1	2	0	114	0	114	2	0	1	3	226
07:15 AM	1	135	1	137	0	0	0	0	0	175	0	175	0	0	0	0	312
07:30 AM	1	161	1	163	0	0	2	2	1	181	0	182	0	0	2	2	349
07:45 AM	3	137	2	142	0	0	3	3	0	181	0	181	1	0	0	1	327
Total	6	539	4	549	1	0	6	7	1	651	0	652	3	0	3	6	1214
08:00 AM	1	138	1	140	0	0	1	1	1	185	1	187	0	0	3	3	331
08:15 AM	2	147	0	149	0	0	4	4	1	172	0	173	0	0	1	1	327
08:30 AM	1	98	0	99	0	0	0	0	2	198	0	200	0	0	1	1	300
08:45 AM	1	145	1	147	0	0	0	0	0	185	0	185	1	0	1	2	334
Total	5	528	2	535	0	0	5	5	4	740	1	745	1	0	6	7	1292
Grand Total	11	1067	6	1084	1	0	11	12	5	1391	1	1397	4	0	9	13	2506
Apprch %	1	98.4	0.6		8.3	0	91.7		0.4	99.6	0.1		30.8	0	69.2		
Total %	0.4	42.6	0.2	43.3	0	0	0.4	0.5	0.2	55.5	0	55.7	0.2	0	0.4	0.5	

	Fremont Avenue Southbound				Magnolia Street Westbound				Fremont Avenue Northbound				Magnolia Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	1	**161**	1	**163**	0	0	2	2	**1**	181	0	182	0	0	2	2	**349**
07:45 AM	**3**	137	**2**	142	0	0	3	3	0	181	0	181	**1**	0	0	1	327
08:00 AM	1	138	1	140	0	0	1	1	1	**185**	**1**	**187**	0	0	**3**	**3**	331
08:15 AM	2	147	0	149	0	0	**4**	**4**	1	172	0	173	0	0	1	1	327
Total Volume	7	583	4	594	0	0	10	10	3	719	1	723	1	0	6	7	1334
% App. Total	1.2	98.1	0.7		0	0	100		0.4	99.4	0.1		14.3	0	85.7		
PHF	.583	.905	.500	.911	.000	.000	.625	.625	.750	.972	.250	.967	.250	.000	.500	.583	.956

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N/S: Fremont Avenue
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File Name : 02_SPA_Fre_Mag AM
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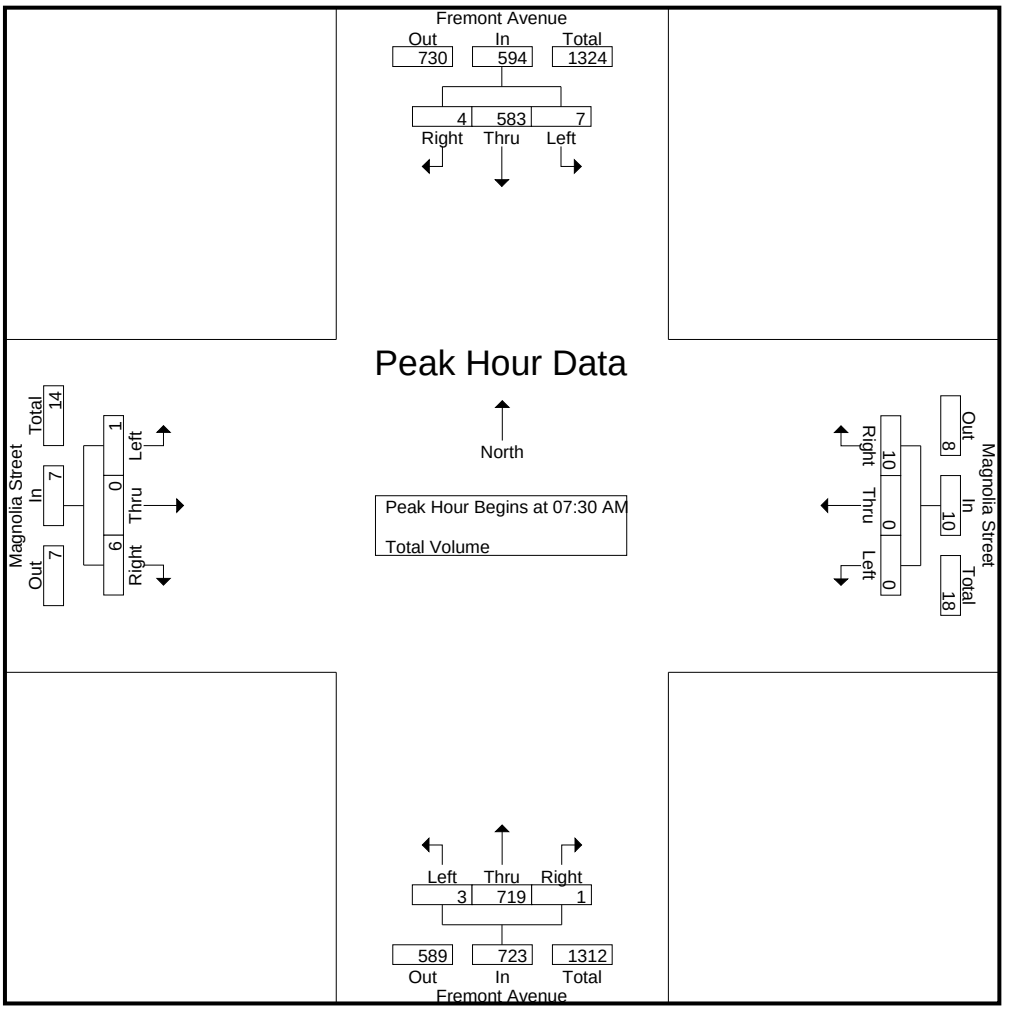
Start Date : 4/11/2023



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				08:00 AM				07:30 AM			
+0 mins.	1	**161**	1	**163**	0	0	2	2	1	185	**1**	187	0	0	2	2
+15 mins.	**3**	137	**2**	142	0	0	3	3	1	172	0	173	**1**	0	0	1
+30 mins.	1	138	1	140	0	0	1	1	**2**	**198**	0	**200**	0	0	**3**	**3**
+45 mins.	2	147	0	149	0	0	**4**	**4**	0	185	0	185	0	0	1	1
Total Volume	7	583	4	594	0	0	10	10	4	740	1	745	1	0	6	7
% App. Total	1.2	98.1	0.7		0	0	100		0.5	99.3	0.1		14.3	0	85.7	
PHF	.583	.905	.500	.911	.000	.000	.625	.625	.500	.934	.250	.931	.250	.000	.500	.583

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City of South Pasadena
N/S: Fremont Avenue
E/W: Magnolia Street
Weather: Clear

File Name : 02_SPA_Fre_Mag PM
Site Code : 2372336
Start Date : 4/11/2023
Page No : 1

Groups Printed- Total Volume

	Fremont Avenue Southbound				Magnolia Street Westbound				Fremont Avenue Northbound				Magnolia Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	118	1	120	0	0	2	2	0	144	2	146	0	0	1	1	269
04:15 PM	0	97	0	97	0	0	1	1	2	155	1	158	0	0	1	1	257
04:30 PM	0	154	1	155	0	0	0	0	2	175	0	177	2	0	1	3	335
04:45 PM	0	174	3	177	2	0	0	2	0	157	1	158	0	0	3	3	340
Total	1	543	5	549	2	0	3	5	4	631	4	639	2	0	6	8	1201
05:00 PM	1	179	1	181	0	0	3	3	0	152	0	152	0	0	1	1	337
05:15 PM	0	174	2	176	0	1	1	2	0	188	1	189	1	0	2	3	370
05:30 PM	0	164	3	167	0	0	1	1	0	161	2	163	0	0	3	3	334
05:45 PM	0	145	1	146	0	0	2	2	2	166	1	169	1	0	1	2	319
Total	1	662	7	670	0	1	7	8	2	667	4	673	2	0	7	9	1360
Grand Total	2	1205	12	1219	2	1	10	13	6	1298	8	1312	4	0	13	17	2561
Apprch %	0.2	98.9	1		15.4	7.7	76.9		0.5	98.9	0.6		23.5	0	76.5		
Total %	0.1	47.1	0.5	47.6	0.1	0	0.4	0.5	0.2	50.7	0.3	51.2	0.2	0	0.5	0.7	

	Fremont Avenue Southbound				Magnolia Street Westbound				Fremont Avenue Northbound				Magnolia Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	154	1	155	0	0	0	0	**2**	175	0	177	**2**	0	1	**3**	335
04:45 PM	0	174	**3**	177	**2**	0	0	2	0	157	**1**	158	0	0	**3**	3	340
05:00 PM	**1**	**179**	1	**181**	0	0	**3**	**3**	0	152	0	152	0	0	1	1	337
05:15 PM	0	174	2	176	0	**1**	1	2	0	**188**	1	**189**	1	0	2	3	**370**
Total Volume	1	681	7	689	2	1	4	7	2	672	2	676	3	0	7	10	1382
% App. Total	0.1	98.8	1		28.6	14.3	57.1		0.3	99.4	0.3		30	0	70		
PHF	.250	.951	.583	.952	.250	.250	.333	.583	.250	.894	.500	.894	.375	.000	.583	.833	.934

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City of South Pasadena
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File Name : 02_SPA_Fre_Mag PM
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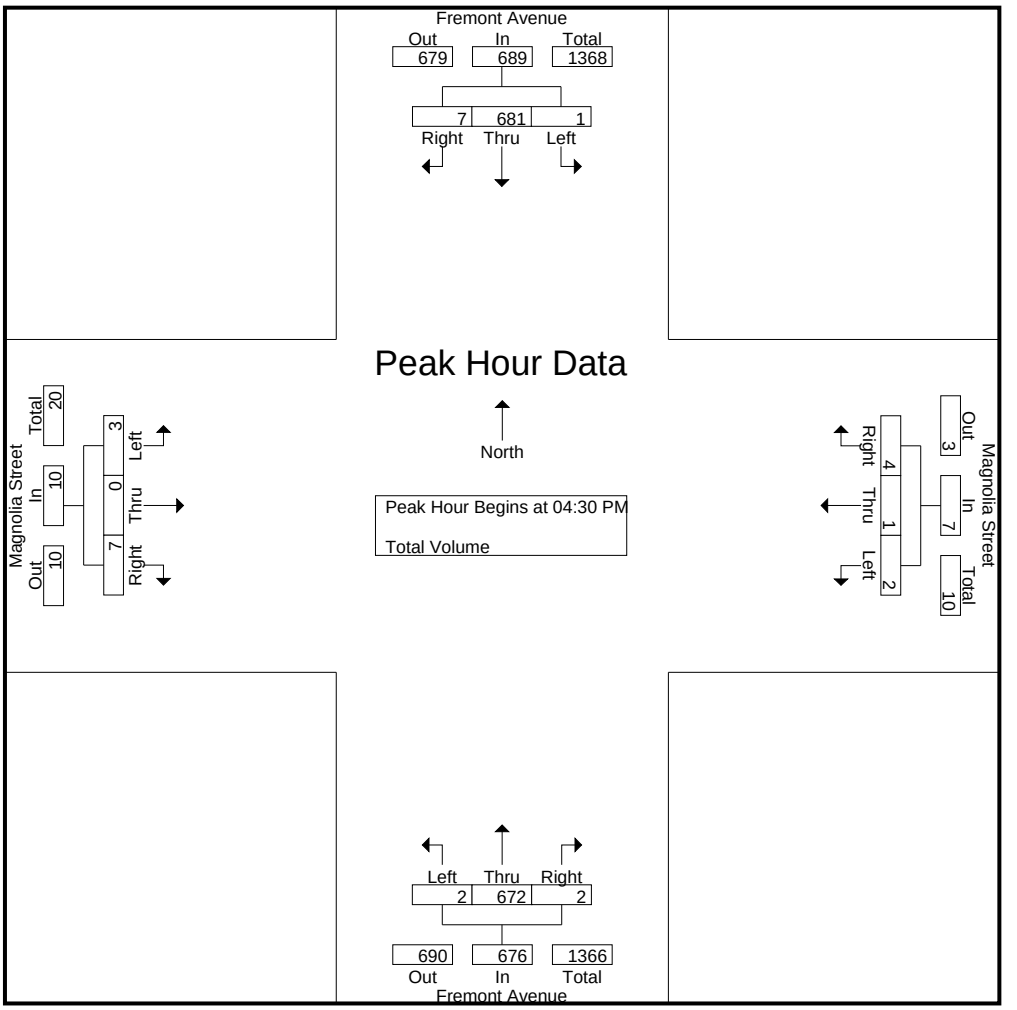

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:30 PM				04:30 PM			
+0 mins.	0	174	**3**	177	**2**	0	0	2	**2**	175	0	177	**2**	0	1	**3**
+15 mins.	**1**	**179**	1	**181**	0	0	**3**	**3**	0	157	**1**	158	0	0	**3**	3
+30 mins.	0	174	2	176	0	**1**	1	2	0	152	0	152	0	0	1	1
+45 mins.	0	164	3	167	0	0	1	1	0	**188**	1	**189**	1	0	2	3
Total Volume	1	691	9	701	2	1	5	8	2	672	2	676	3	0	7	10
% App. Total	0.1	98.6	1.3		25	12.5	62.5		0.3	99.4	0.3		30	0	70	
PHF	.250	.965	.750	.968	.250	.250	.417	.667	.250	.894	.500	.894	.375	.000	.583	.833

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City of South Pasadena
N/S: Fremont Avenue
E/W: Hope Street
Weather: Clear

File Name : 03_SPA_Fre_Hope AM
Site Code : 2372336
Start Date : 4/11/2023
Page No : 1

Groups Printed- Total Volume

	Fremont Avenue Southbound				Hope Street Westbound				Fremont Avenue Northbound				Hope Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	5	97	1	103	0	2	0	2	2	118	2	122	2	0	4	6	233
07:15 AM	4	132	4	140	0	1	2	3	1	173	3	177	0	3	7	10	330
07:30 AM	5	155	0	160	0	0	6	6	2	180	4	186	0	2	12	14	366
07:45 AM	4	135	2	141	0	1	7	8	3	166	7	176	0	2	13	15	340
Total	18	519	7	544	0	4	15	19	8	637	16	661	2	7	36	45	1269
08:00 AM	4	133	1	138	1	1	5	7	4	184	6	194	0	1	6	7	346
08:15 AM	5	143	0	148	1	2	4	7	9	168	8	185	2	1	11	14	354
08:30 AM	3	91	2	96	0	2	5	7	9	195	6	210	0	3	10	13	326
08:45 AM	8	137	1	146	1	2	5	8	7	179	5	191	3	2	7	12	357
Total	20	504	4	528	3	7	19	29	29	726	25	780	5	7	34	46	1383
Grand Total	38	1023	11	1072	3	11	34	48	37	1363	41	1441	7	14	70	91	2652
Apprch %	3.5	95.4	1		6.2	22.9	70.8		2.6	94.6	2.8		7.7	15.4	76.9		
Total %	1.4	38.6	0.4	40.4	0.1	0.4	1.3	1.8	1.4	51.4	1.5	54.3	0.3	0.5	2.6	3.4	

	Fremont Avenue Southbound				Hope Street Westbound				Fremont Avenue Northbound				Hope Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**5**	**155**	0	**160**	0	0	6	6	2	180	4	186	0	**2**	12	14	**366**
07:45 AM	4	135	**2**	141	0	1	**7**	**8**	3	166	7	176	0	2	**13**	**15**	340
08:00 AM	4	133	1	138	**1**	1	5	7	4	**184**	6	**194**	0	1	6	7	346
08:15 AM	5	143	0	148	1	**2**	4	7	**9**	168	**8**	185	**2**	1	11	14	354
Total Volume	18	566	3	587	2	4	22	28	18	698	25	741	2	6	42	50	1406
% App. Total	3.1	96.4	0.5		7.1	14.3	78.6		2.4	94.2	3.4		4	12	84		
PHF	.900	.913	.375	.917	.500	.500	.786	.875	.500	.948	.781	.955	.250	.750	.808	.833	.960

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City of South Pasadena
N/S: Fremont Avenue
E/W: Hope Street
Weather: Clear

File Name : 03_SPA_Fre_Hope AM
Site Code : 2372336
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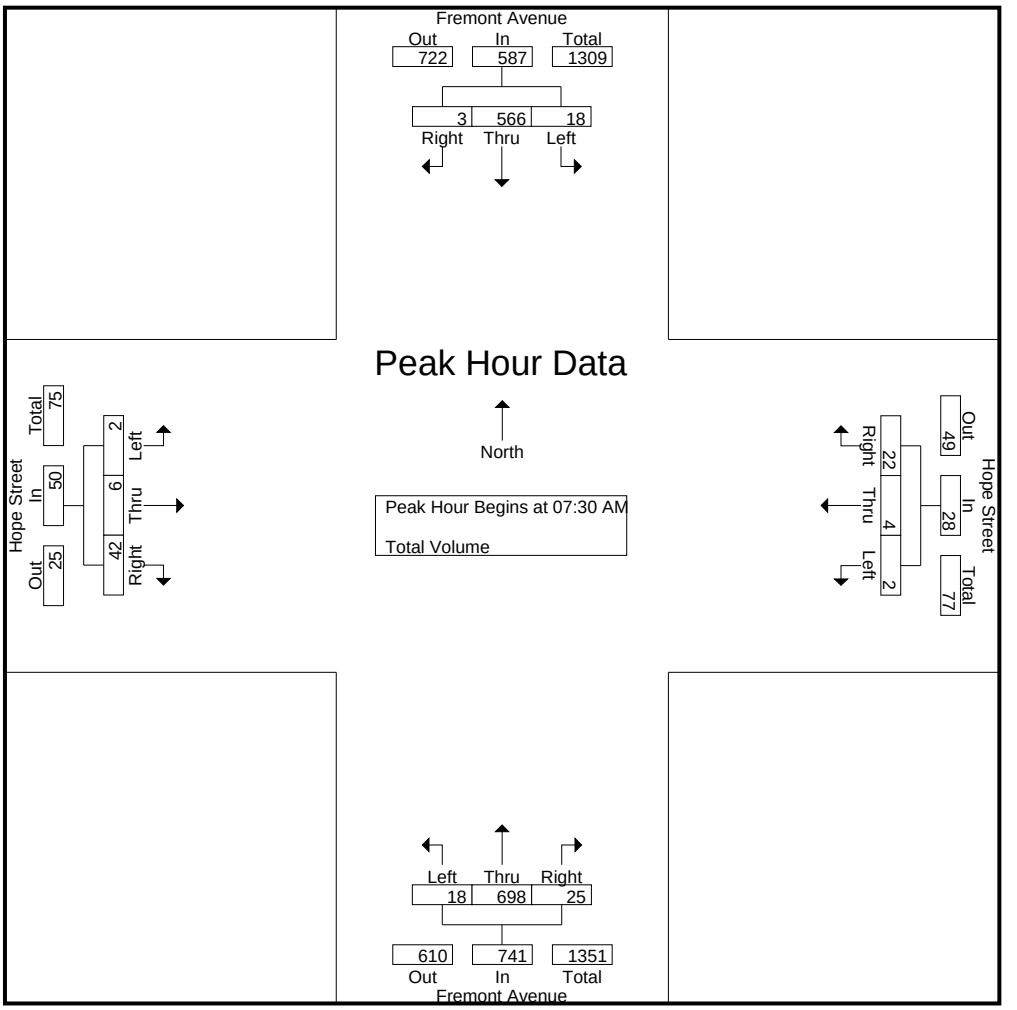

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:45 AM				08:00 AM				07:30 AM			
+0 mins.	**5**	**155**	0	**160**	0	1	**7**	**8**	4	184	6	194	0	**2**	12	14
+15 mins.	4	135	**2**	141	**1**	1	5	7	**9**	168	**8**	185	0	2	**13**	**15**
+30 mins.	4	133	1	138	1	**2**	4	7	9	**195**	6	**210**	0	1	6	7
+45 mins.	5	143	0	148	0	2	5	7	7	179	5	191	**2**	1	11	14
Total Volume	18	566	3	587	2	6	21	29	29	726	25	780	2	6	42	50
% App. Total	3.1	96.4	0.5		6.9	20.7	72.4		3.7	93.1	3.2		4	12	84	
PHF	.900	.913	.375	.917	.500	.750	.750	.906	.806	.931	.781	.929	.250	.750	.808	.833

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City of South Pasadena
N/S: Fremont Avenue
E/W: Hope Street
Weather: Clear

File Name : 03_SPA_Fre_Hope PM
Site Code : 2372336
Start Date : 4/11/2023
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Groups Printed- Total Volume

	Fremont Avenue Southbound				Hope Street Westbound				Fremont Avenue Northbound				Hope Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	6	111	3	120	2	4	9	15	5	142	6	153	0	4	8	12	300
04:15 PM	4	93	2	99	1	1	9	11	9	141	7	157	2	5	16	23	290
04:30 PM	1	150	1	152	2	3	6	11	3	169	9	181	2	8	9	19	363
04:45 PM	11	165	2	178	0	2	9	11	14	153	5	172	0	2	7	9	370
Total	22	519	8	549	5	10	33	48	31	605	27	663	4	19	40	63	1323
05:00 PM	10	171	2	183	3	2	6	11	6	145	11	162	1	5	12	18	374
05:15 PM	5	174	0	179	2	2	4	8	3	182	7	192	0	5	10	15	394
05:30 PM	8	158	0	166	0	1	8	9	11	152	1	164	2	1	14	17	356
05:45 PM	9	139	1	149	0	2	13	15	10	154	10	174	4	0	10	14	352
Total	32	642	3	677	5	7	31	43	30	633	29	692	7	11	46	64	1476
Grand Total	54	1161	11	1226	10	17	64	91	61	1238	56	1355	11	30	86	127	2799
Apprch %	4.4	94.7	0.9		11	18.7	70.3		4.5	91.4	4.1		8.7	23.6	67.7		
Total %	1.9	41.5	0.4	43.8	0.4	0.6	2.3	3.3	2.2	44.2	2	48.4	0.4	1.1	3.1	4.5	

	Fremont Avenue Southbound				Hope Street Westbound				Fremont Avenue Northbound				Hope Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	1	150	1	152	2	**3**	6	**11**	3	169	9	181	**2**	**8**	9	**19**	363
04:45 PM	**11**	165	**2**	178	0	2	**9**	11	**14**	153	5	172	0	2	7	9	370
05:00 PM	10	171	2	**183**	**3**	2	6	11	6	145	**11**	162	1	5	**12**	18	374
05:15 PM	5	**174**	0	179	2	2	4	8	3	**182**	7	**192**	0	5	10	15	**394**
Total Volume	27	660	5	692	7	9	25	41	26	649	32	707	3	20	38	61	1501
% App. Total	3.9	95.4	0.7		17.1	22	61		3.7	91.8	4.5		4.9	32.8	62.3		
PHF	.614	.948	.625	.945	.583	.750	.694	.932	.464	.891	.727	.921	.375	.625	.792	.803	.952

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City of South Pasadena
N/S: Fremont Avenue
E/W: Hope Street
Weather: Clear

File Name : 03_SPA_Fre_Hope PM
Site Code : 2372336
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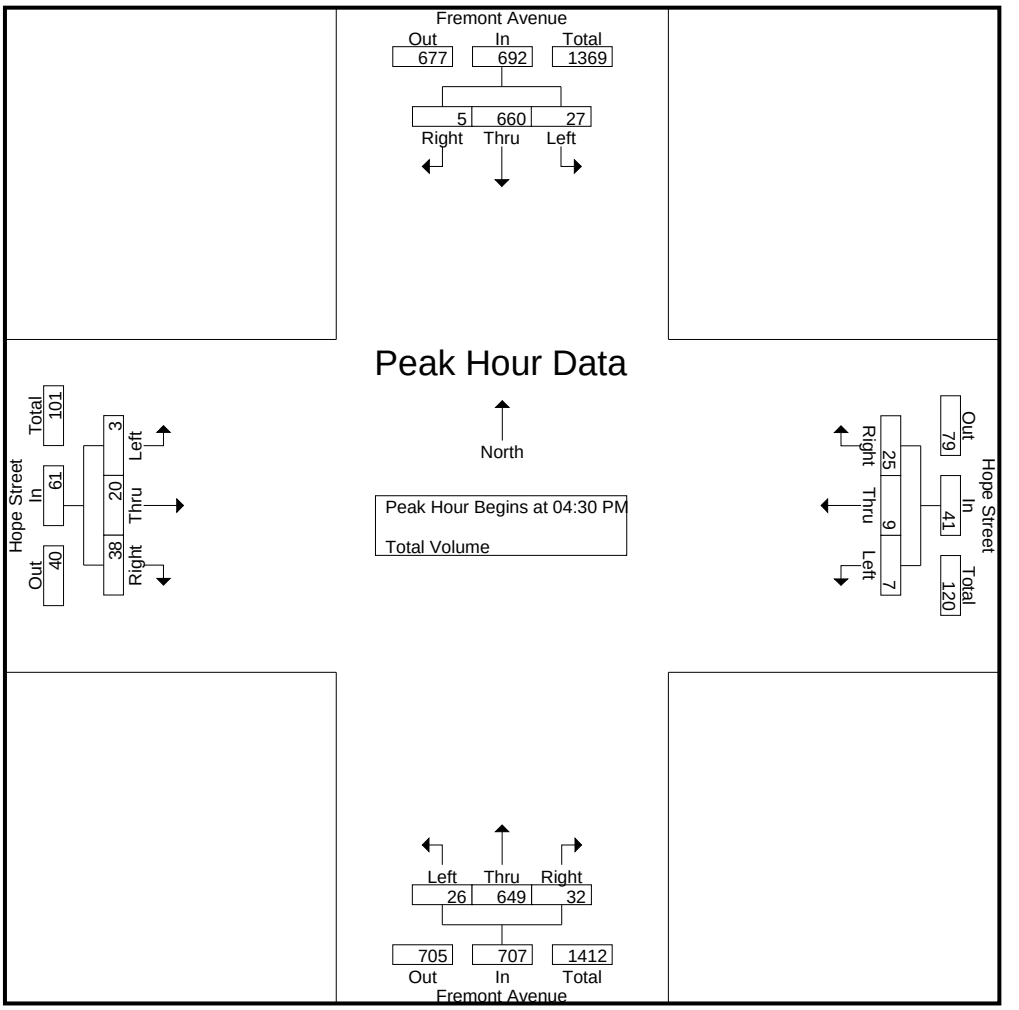

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:00 PM				04:30 PM				04:15 PM			
+0 mins.	**11**	165	**2**	178	**2**	**4**	**9**	**15**	3	169	9	181	**2**	5	**16**	**23**
+15 mins.	10	171	2	**183**	1	1	9	11	**14**	153	5	172	2	**8**	9	19
+30 mins.	5	**174**	0	179	2	3	6	11	6	145	**11**	162	0	2	7	9
+45 mins.	8	158	0	166	0	2	9	11	3	**182**	7	**192**	1	5	12	18
Total Volume	34	668	4	706	5	10	33	48	26	649	32	707	5	20	44	69
% App. Total	4.8	94.6	0.6		10.4	20.8	68.8		3.7	91.8	4.5		7.2	29	63.8	
PHF	.773	.960	.500	.964	.625	.625	.917	.800	.464	.891	.727	.921	.625	.625	.688	.750

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City of South Pasadena
N/S: Mound Avenue
E/W: Grevelia Street
Weather: Clear

File Name : 04_SPA_Mound_Gre AM
Site Code : 2372336
Start Date : 4/11/2023
Page No : 1

Groups Printed- Total Volume

	Grevelia Street Westbound			Mound Avenue Northbound			Grevelia Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	2	0	2	2
07:15 AM	0	0	0	0	2	2	0	1	1	3
07:30 AM	0	0	0	1	0	1	2	0	2	3
07:45 AM	0	0	0	1	3	4	1	2	3	7
Total	0	0	0	2	5	7	5	3	8	15
08:00 AM	0	0	0	2	5	7	1	2	3	10
08:15 AM	0	0	0	4	4	8	2	1	3	11
08:30 AM	0	0	0	1	3	4	2	0	2	6
08:45 AM	0	0	0	3	4	7	2	1	3	10
Total	0	0	0	10	16	26	7	4	11	37
Grand Total	0	0	0	12	21	33	12	7	19	52
Apprch %	0	0		36.4	63.6		63.2	36.8		
Total %	0	0	0	23.1	40.4	63.5	23.1	13.5	36.5	

	Grevelia Street Westbound			Mound Avenue Northbound			Grevelia Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	0	0	0	2	**5**	7	1	**2**	**3**	10
08:15 AM	0	0	0	**4**	4	**8**	**2**	1	3	**11**
08:30 AM	0	0	0	1	3	4	2	0	2	6
08:45 AM	0	0	0	3	4	7	2	1	3	10
Total Volume	0	0	0	10	16	26	7	4	11	37
% App. Total	0	0		38.5	61.5		63.6	36.4		
PHF	.000	.000	.000	.625	.800	.813	.875	.500	.917	.841

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City of South Pasadena
N/S: Mound Avenue
E/W: Grevelia Street
Weather: Clear

File Name : 04_SPA_Mound_Gre AM
Site Code : 2372336
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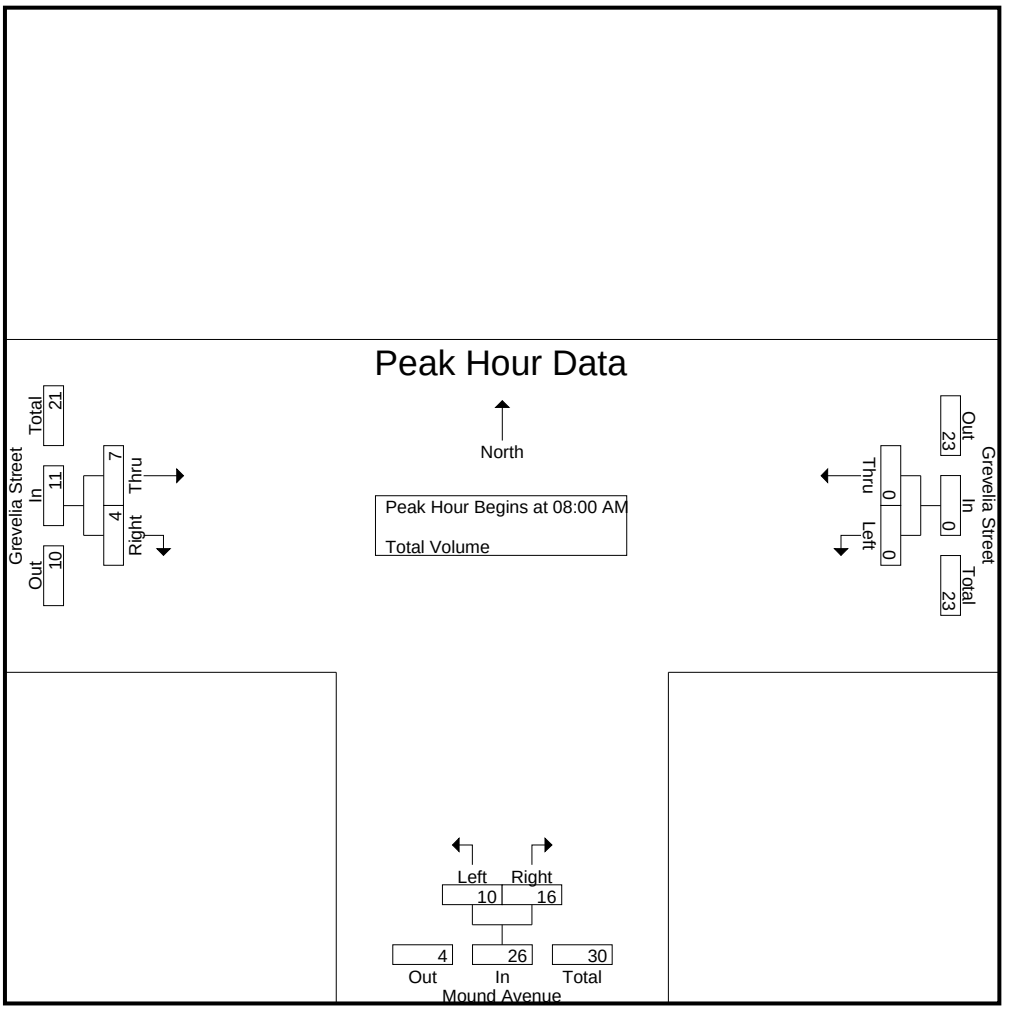

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			08:00 AM			07:30 AM		
+0 mins.	0	0	0	2	**5**	7	**2**	0	2
+15 mins.	0	0	0	**4**	4	**8**	1	**2**	**3**
+30 mins.	0	0	0	1	3	4	1	2	3
+45 mins.	0	0	0	3	4	7	2	1	3
Total Volume	0	0	0	10	16	26	6	5	11
% App. Total	0	0		38.5	61.5		54.5	45.5	
PHF	.000	.000	.000	.625	.800	.813	.750	.625	.917

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City of South Pasadena
N/S: Mound Avenue
E/W: Grevelia Street
Weather: Clear

File Name : 04_SPA_Mound_Gre PM
Site Code : 2372336
Start Date : 4/11/2023
Page No : 1

Groups Printed- Total Volume

	Grevelia Street Westbound			Mound Avenue Northbound			Grevelia Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	3	0	3	2	0	2	5
04:15 PM	0	0	0	2	2	4	3	0	3	7
04:30 PM	0	0	0	2	3	5	4	1	5	10
04:45 PM	0	0	0	1	2	3	8	2	10	13
Total	0	0	0	8	7	15	17	3	20	35
05:00 PM	0	0	0	6	1	7	1	2	3	10
05:15 PM	0	0	0	8	6	14	2	2	4	18
05:30 PM	0	0	0	5	0	5	4	1	5	10
05:45 PM	1	0	1	3	4	7	5	0	5	13
Total	1	0	1	22	11	33	12	5	17	51
Grand Total	1	0	1	30	18	48	29	8	37	86
Apprch %	100	0		62.5	37.5		78.4	21.6		
Total %	1.2	0	1.2	34.9	20.9	55.8	33.7	9.3	43	

	Grevelia Street Westbound			Mound Avenue Northbound			Grevelia Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	0	0	2	3	5	4	1	5	10
04:45 PM	0	0	0	1	2	3	**8**	**2**	**10**	13
05:00 PM	0	0	0	6	1	7	1	2	3	10
05:15 PM	0	0	0	**8**	**6**	**14**	2	2	4	**18**
Total Volume	0	0	0	17	12	29	15	7	22	51
% App. Total	0	0		58.6	41.4		68.2	31.8		
PHF	.000	.000	.000	.531	.500	.518	.469	.875	.550	.708

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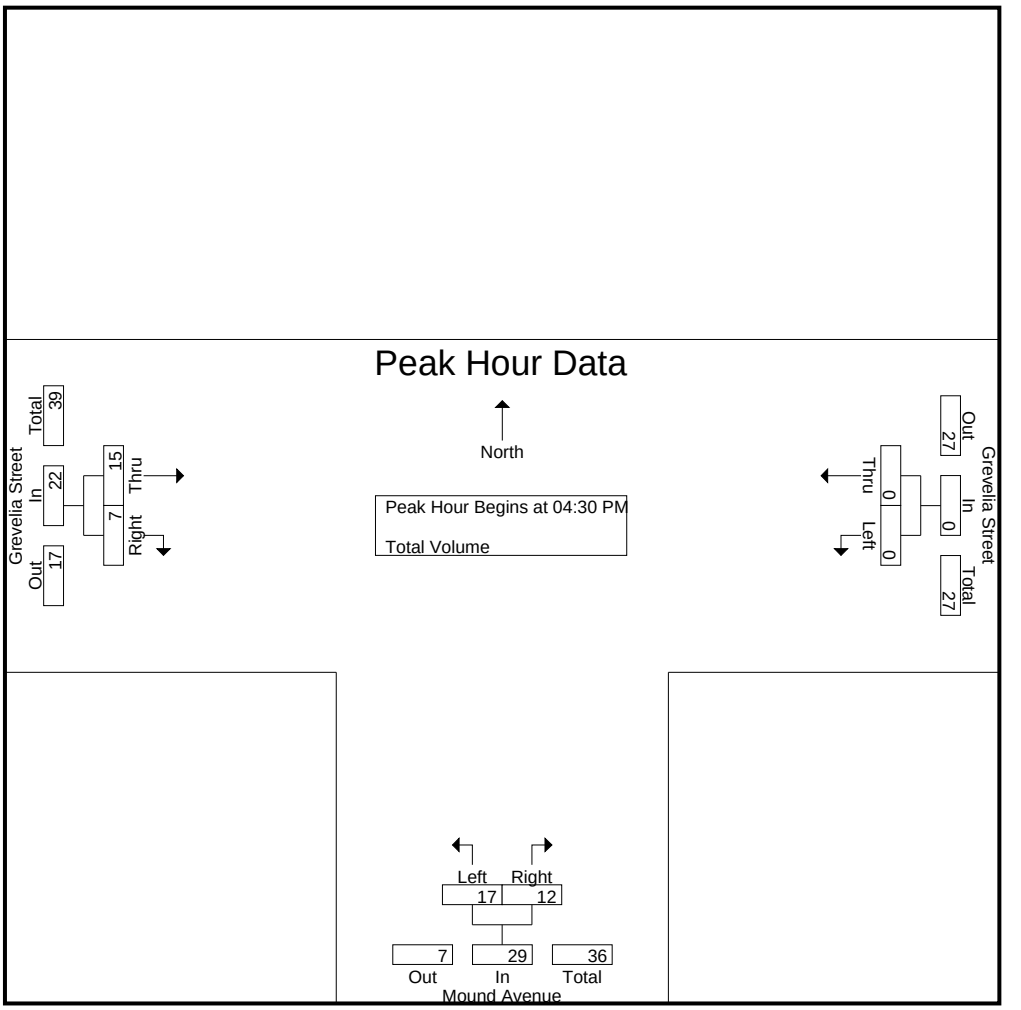
City of South Pasadena
N/S: Mound Avenue
E/W: Grevelia Street
Weather: Clear

File Name : 04_SPA_Mound_Gre PM
Site Code : 2372336
Start Date : 4/11/2023



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			05:00 PM			04:30 PM		
+0 mins.	0	0	0	6	1	7	4	1	5
+15 mins.	0	0	0	**8**	**6**	**14**	**8**	**2**	**10**
+30 mins.	0	0	0	5	0	5	1	2	3
+45 mins.	**1**	0	**1**	3	4	7	2	2	4
Total Volume	1	0	1	22	11	33	15	7	22
% App. Total	100	0		66.7	33.3		68.2	31.8	
PHF	.250	.000	.250	.688	.458	.589	.469	.875	.550

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City of South Pasadena
N/S: Mound Avenue
E/W: Hope Street
Weather: Clear

File Name : 05_SPA_Mound_Hope AM
Site Code : 2372336
Start Date : 4/11/2023
Page No : 1

Groups Printed- Total Volume

	Mound Avenue Southbound				Hope Street Westbound				Mound Avenue Northbound				Hope Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	1	3	0	4	3	2	1	6	1	2	5	8	19
07:15 AM	1	2	0	3	1	3	1	5	1	2	0	3	1	4	3	8	19
07:30 AM	1	2	0	3	3	7	2	12	4	4	1	9	0	8	3	11	35
07:45 AM	3	5	0	8	8	8	1	17	2	10	2	14	5	4	4	13	52
Total	5	10	0	15	13	21	4	38	10	18	4	32	7	18	15	40	125
08:00 AM	2	2	0	4	4	6	5	15	3	6	4	13	1	5	2	8	40
08:15 AM	1	2	0	3	10	7	6	23	1	5	5	11	1	7	1	9	46
08:30 AM	2	1	0	3	1	6	4	11	3	3	4	10	1	9	5	15	39
08:45 AM	0	2	0	2	6	11	3	20	1	3	1	5	3	7	8	18	45
Total	5	7	0	12	21	30	18	69	8	17	14	39	6	28	16	50	170
Grand Total	10	17	0	27	34	51	22	107	18	35	18	71	13	46	31	90	295
Apprch %	37	63	0		31.8	47.7	20.6		25.4	49.3	25.4		14.4	51.1	34.4		
Total %	3.4	5.8	0	9.2	11.5	17.3	7.5	36.3	6.1	11.9	6.1	24.1	4.4	15.6	10.5	30.5	

	Mound Avenue Southbound				Hope Street Westbound				Mound Avenue Northbound				Hope Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**3**	**5**	0	**8**	8	**8**	1	17	2	**10**	2	**14**	**5**	4	4	13	**52**
08:00 AM	2	2	0	4	4	6	5	15	**3**	6	4	13	1	5	2	8	40
08:15 AM	1	2	0	3	**10**	7	**6**	**23**	1	5	**5**	11	1	7	1	9	46
08:30 AM	2	1	0	3	1	6	4	11	3	3	4	10	1	**9**	**5**	**15**	39
Total Volume	8	10	0	18	23	27	16	66	9	24	15	48	8	25	12	45	177
% App. Total	44.4	55.6	0		34.8	40.9	24.2		18.8	50	31.2		17.8	55.6	26.7		
PHF	.667	.500	.000	.563	.575	.844	.667	.717	.750	.600	.750	.857	.400	.694	.600	.750	.851

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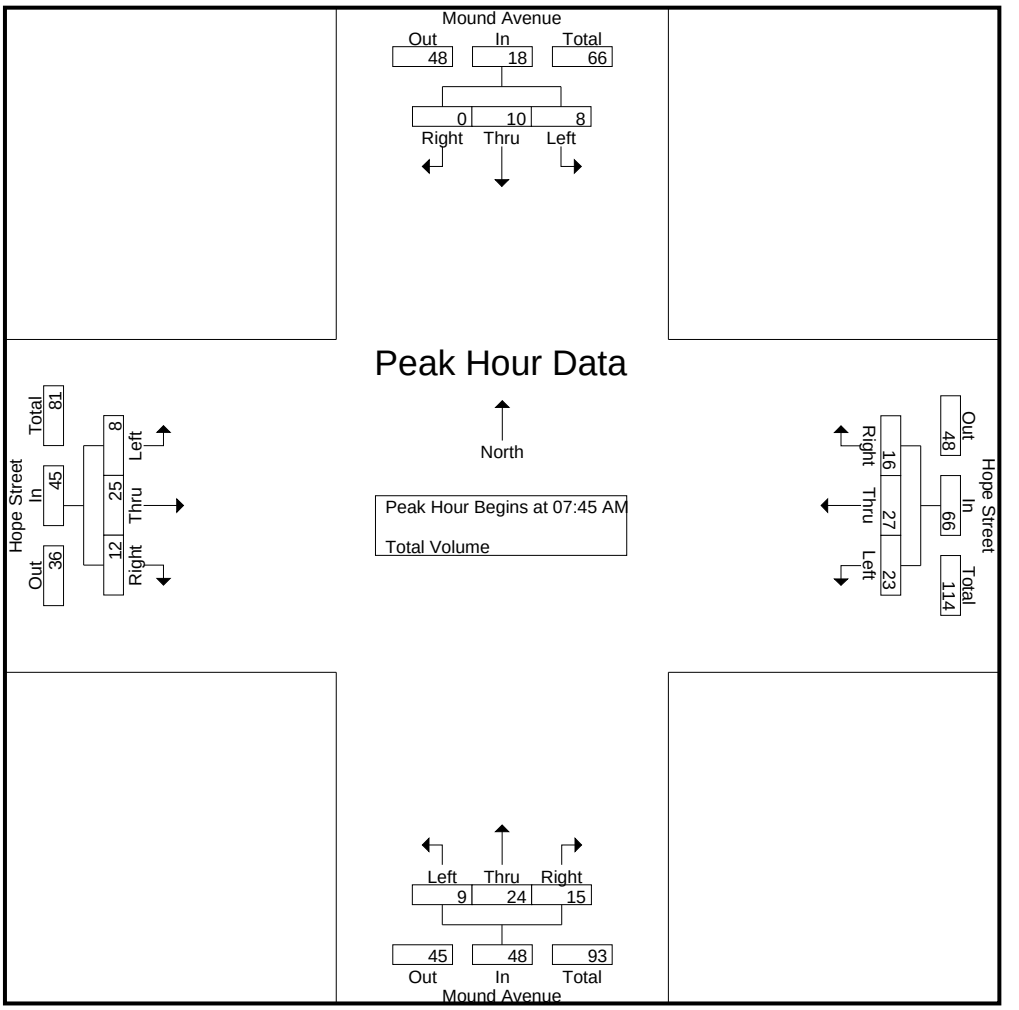
City of South Pasadena
N/S: Mound Avenue
E/W: Hope Street
Weather: Clear

File Name : 05_SPA_Mound_Hope AM
Site Code : 2372336
Start Date : 4/11/2023



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				08:00 AM				07:45 AM				08:00 AM			
+0 mins.	1	2	0	3	4	6	5	15	2	**10**	2	**14**	1	5	2	8
+15 mins.	1	2	0	3	**10**	7	**6**	**23**	**3**	6	4	13	1	7	1	9
+30 mins.	**3**	**5**	0	**8**	1	6	4	11	1	5	**5**	11	1	**9**	5	15
+45 mins.	2	2	0	4	6	**11**	3	20	3	3	4	10	**3**	7	**8**	**18**
Total Volume	7	11	0	18	21	30	18	69	9	24	15	48	6	28	16	50
% App. Total	38.9	61.1	0		30.4	43.5	26.1		18.8	50	31.2		12	56	32	
PHF	.583	.550	.000	.563	.525	.682	.750	.750	.750	.600	.750	.857	.500	.778	.500	.694

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City of South Pasadena
N/S: Mound Avenue
E/W: Hope Street
Weather: Clear

File Name : 05_SPA_Mound_Hope PM
Site Code : 2372336
Start Date : 4/11/2023
Page No : 1

Groups Printed- Total Volume

	Mound Avenue Southbound				Hope Street Westbound				Mound Avenue Northbound				Hope Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	4	0	0	4	12	9	2	23	4	2	3	9	0	12	7	19	55
04:15 PM	2	1	0	3	7	10	4	21	1	2	5	8	1	10	2	13	45
04:30 PM	7	2	0	9	15	10	2	27	1	5	6	12	1	15	2	18	66
04:45 PM	6	0	0	6	14	8	0	22	1	4	7	12	0	12	6	18	58
Total	19	3	0	22	48	37	8	93	7	13	21	41	2	49	17	68	224
05:00 PM	0	8	0	8	15	7	1	23	4	2	7	13	3	16	7	26	70
05:15 PM	7	1	0	8	12	8	6	26	0	5	1	6	0	13	5	18	58
05:30 PM	5	4	0	9	13	8	4	25	6	2	4	12	0	7	1	8	54
05:45 PM	0	2	0	2	10	14	3	27	6	3	5	14	3	14	4	21	64
Total	12	15	0	27	50	37	14	101	16	12	17	45	6	50	17	73	246
Grand Total	31	18	0	49	98	74	22	194	23	25	38	86	8	99	34	141	470
Apprch %	63.3	36.7	0		50.5	38.1	11.3		26.7	29.1	44.2		5.7	70.2	24.1		
Total %	6.6	3.8	0	10.4	20.9	15.7	4.7	41.3	4.9	5.3	8.1	18.3	1.7	21.1	7.2	30	

	Mound Avenue Southbound				Hope Street Westbound				Mound Avenue Northbound				Hope Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**7**	2	0	**9**	**15**	**10**	2	**27**	1	**5**	6	12	1	15	2	18	66
04:45 PM	6	0	0	6	14	8	0	22	1	4	**7**	12	0	12	6	18	58
05:00 PM	0	**8**	0	8	15	7	1	23	**4**	2	7	**13**	**3**	**16**	**7**	**26**	**70**
05:15 PM	7	1	0	8	12	8	**6**	26	0	5	1	6	0	13	5	18	58
Total Volume	20	11	0	31	56	33	9	98	6	16	21	43	4	56	20	80	252
% App. Total	64.5	35.5	0		57.1	33.7	9.2		14	37.2	48.8		5	70	25		
PHF	.714	.344	.000	.861	.933	.825	.375	.907	.375	.800	.750	.827	.333	.875	.714	.769	.900

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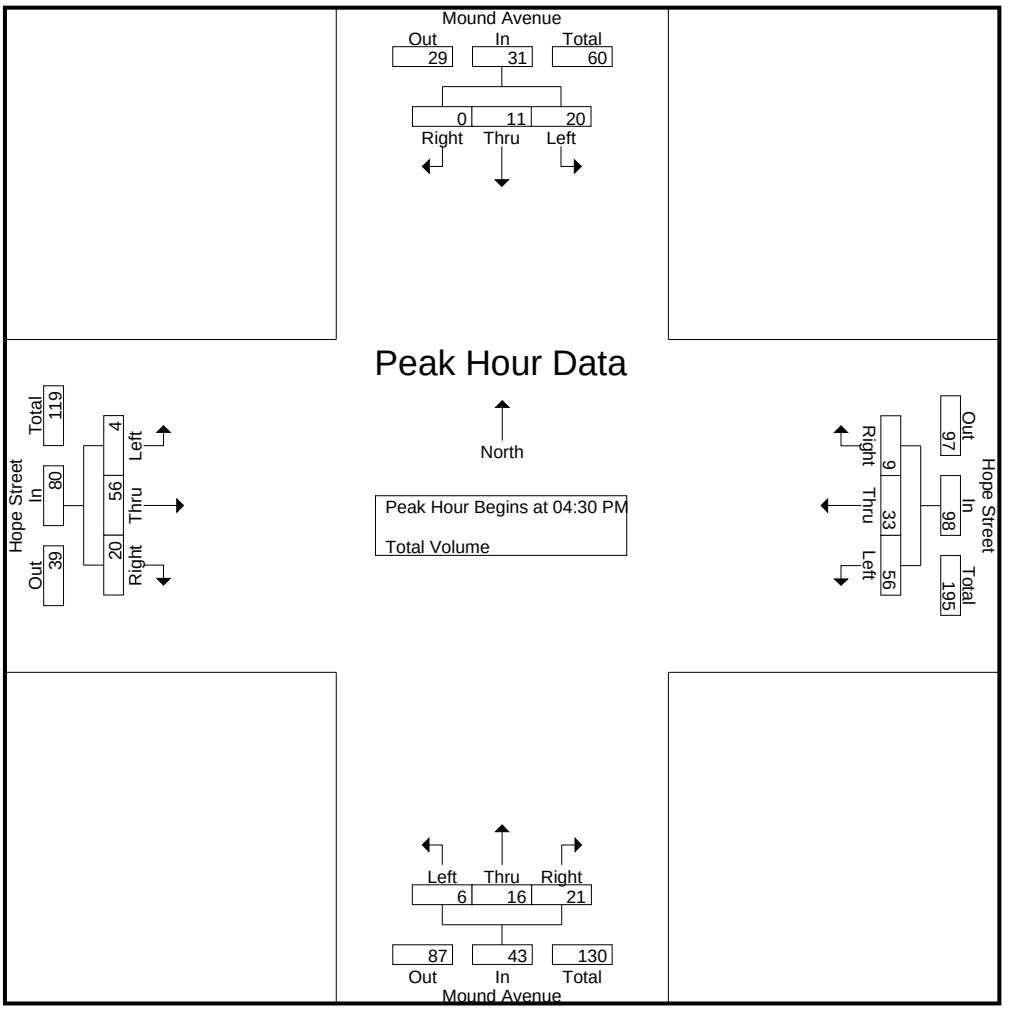
City of South Pasadena
N/S: Mound Avenue
E/W: Hope Street
Weather: Clear

File Name : 05_SPA_Mound_Hope PM
Site Code : 2372336
Start Date : 4/11/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				05:00 PM				04:15 PM				04:30 PM			
+0 mins.	**7**	2	0	**9**	**15**	7	1	23	1	2	5	8	1	15	2	18
+15 mins.	6	0	0	6	12	8	**6**	26	1	**5**	6	12	0	12	6	18
+30 mins.	0	**8**	0	8	13	8	4	25	1	4	**7**	12	**3**	**16**	**7**	**26**
+45 mins.	7	1	0	8	10	**14**	3	**27**	**4**	2	7	**13**	0	13	5	18
Total Volume	20	11	0	31	50	37	14	101	7	13	25	45	4	56	20	80
% App. Total	64.5	35.5	0		49.5	36.6	13.9		15.6	28.9	55.6		5	70	25	
PHF	.714	.344	.000	.861	.833	.661	.583	.935	.438	.650	.893	.865	.333	.875	.714	.769

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City of South Pasadena
N/S: Fair Oaks Avenue
E/W: Grevelia Street/CA-110 NB Off Ramp
Weather: Clear

File Name : 06_SPA_FO_Gre AM
Site Code : 2372336
Start Date : 4/11/2023

Groups Printed- Total Volume

	Fair Oaks Avenue Southbound				Grevelia Street Westbound				Fair Oaks Avenue Northbound				Grevelia Street/CA-110 NB Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	83	0	83	0	0	121	121	0	224	5	229	32	11	20	63	496
07:15 AM	0	119	0	119	1	0	131	132	0	279	2	281	45	20	24	89	621
07:30 AM	0	189	0	189	1	0	147	148	0	273	5	278	52	26	40	118	733
07:45 AM	0	186	0	186	2	0	152	154	0	312	1	313	64	39	33	136	789
Total	0	577	0	577	4	0	551	555	0	1088	13	1101	193	96	117	406	2639
08:00 AM	0	235	0	235	0	0	127	127	0	310	6	316	50	30	37	117	795
08:15 AM	0	166	0	166	2	0	152	154	0	270	8	278	67	35	34	136	734
08:30 AM	0	184	0	184	1	0	148	149	0	310	5	315	49	22	33	104	752
08:45 AM	0	212	0	212	2	0	115	117	0	298	8	306	42	30	46	118	753
Total	0	797	0	797	5	0	542	547	0	1188	27	1215	208	117	150	475	3034
Grand Total	0	1374	0	1374	9	0	1093	1102	0	2276	40	2316	401	213	267	881	5673
Apprch %	0	100	0		0.8	0	99.2		0	98.3	1.7		45.5	24.2	30.3		
Total %	0	24.2	0	24.2	0.2	0	19.3	19.4	0	40.1	0.7	40.8	7.1	3.8	4.7	15.5	

	Fair Oaks Avenue Southbound				Grevelia Street Westbound				Fair Oaks Avenue Northbound				Grevelia Street/CA-110 NB Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	186	0	186	**2**	0	**152**	**154**	0	**312**	1	313	64	**39**	33	**136**	789
08:00 AM	0	**235**	0	**235**	0	0	127	127	0	310	6	**316**	50	30	**37**	117	**795**
08:15 AM	0	166	0	166	2	0	152	154	0	270	**8**	278	**67**	35	34	136	734
08:30 AM	0	184	0	184	1	0	148	149	0	310	5	315	49	22	33	104	752
Total Volume	0	771	0	771	5	0	579	584	0	1202	20	1222	230	126	137	493	3070
% App. Total	0	100	0		0.9	0	99.1		0	98.4	1.6		46.7	25.6	27.8		
PHF	.000	.820	.000	.820	.625	.000	.952	.948	.000	.963	.625	.967	.858	.808	.926	.906	.965

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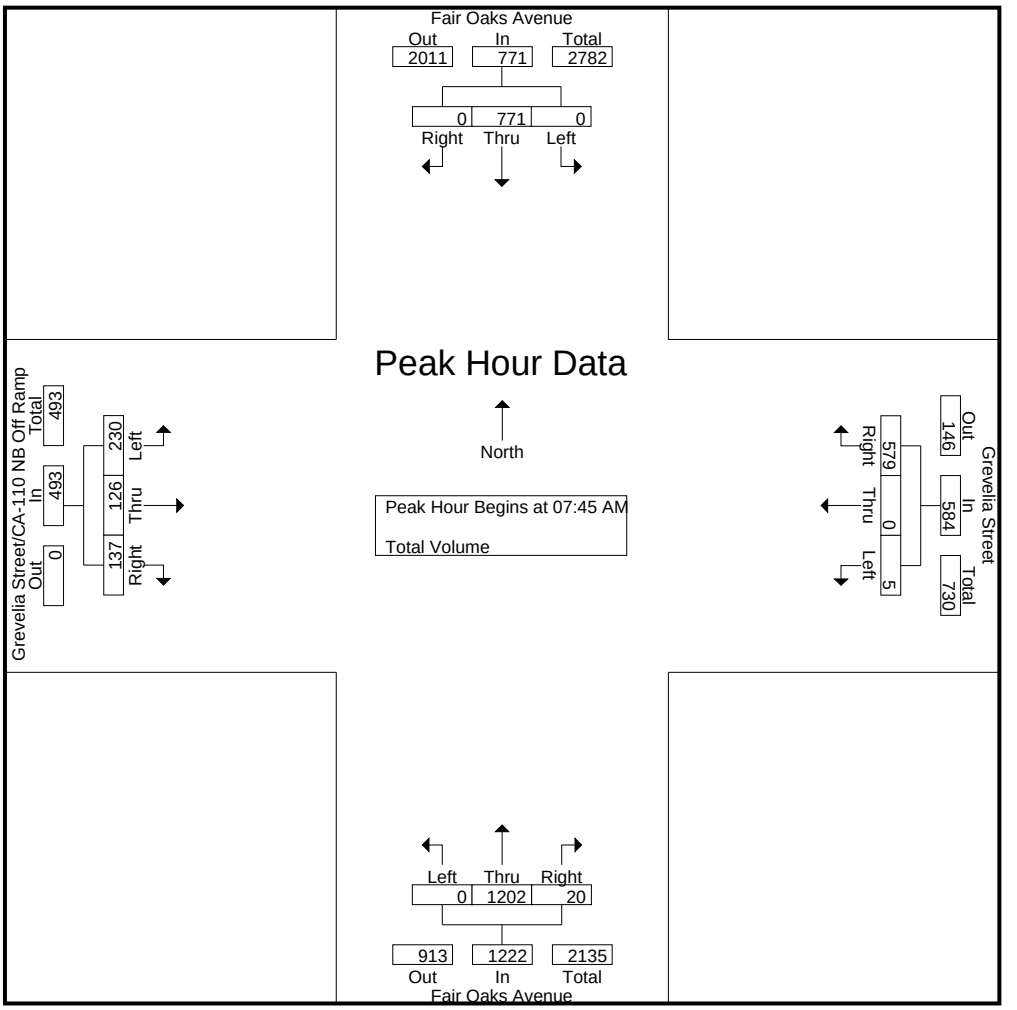
City of South Pasadena
N/S: Fair Oaks Avenue
E/W: Grevelia Street/CA-110 NB Off Ramp
Weather: Clear

File Name : 06_SPA_FO_Gre AM
Site Code : 2372336
Start Date : 4/11/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				07:45 AM				07:45 AM				07:30 AM			
+0 mins.	0	**235**	0	**235**	**2**	0	**152**	**154**	0	**312**	1	313	52	26	**40**	118
+15 mins.	0	166	0	166	0	0	127	127	0	310	6	**316**	64	**39**	33	**136**
+30 mins.	0	184	0	184	2	0	152	154	0	270	**8**	278	50	30	37	117
+45 mins.	0	212	0	212	1	0	148	149	0	310	5	315	**67**	35	34	136
Total Volume	0	797	0	797	5	0	579	584	0	1202	20	1222	233	130	144	507
% App. Total	0	100	0		0.9	0	99.1		0	98.4	1.6		46	25.6	28.4	
PHF	.000	.848	.000	.848	.625	.000	.952	.948	.000	.963	.625	.967	.869	.833	.900	.932

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City of South Pasadena
N/S: Fair Oaks Avenue
E/W: Grevelia Street/CA-110 NB Off Ramp
Weather: Clear

File Name : 06_SPA_FO_Gre PM
Site Code : 2372336
Start Date : 4/11/2023

Groups Printed- Total Volume

	Fair Oaks Avenue Southbound				Grevelia Street Westbound				Fair Oaks Avenue Northbound				Grevelia Street/CA-110 NB Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	292	0	292	2	0	66	68	0	260	7	267	40	101	49	190	817
04:15 PM	0	288	0	288	1	0	86	87	0	259	12	271	32	104	61	197	843
04:30 PM	0	318	0	318	2	0	74	76	0	291	9	300	38	92	49	179	873
04:45 PM	0	304	0	304	5	0	83	88	0	217	6	223	48	91	46	185	800
Total	0	1202	0	1202	10	0	309	319	0	1027	34	1061	158	388	205	751	3333
05:00 PM	0	293	0	293	3	0	77	80	0	254	10	264	39	91	64	194	831
05:15 PM	0	297	0	297	1	0	67	68	0	261	5	266	32	112	68	212	843
05:30 PM	0	288	0	288	3	0	92	95	0	229	3	232	42	85	52	179	794
05:45 PM	0	273	0	273	4	0	88	92	1	285	7	293	40	98	60	198	856
Total	0	1151	0	1151	11	0	324	335	1	1029	25	1055	153	386	244	783	3324
Grand Total	0	2353	0	2353	21	0	633	654	1	2056	59	2116	311	774	449	1534	6657
Apprch %	0	100	0		3.2	0	96.8		0	97.2	2.8		20.3	50.5	29.3		
Total %	0	35.3	0	35.3	0.3	0	9.5	9.8	0	30.9	0.9	31.8	4.7	11.6	6.7	23	

	Fair Oaks Avenue Southbound				Grevelia Street Westbound				Fair Oaks Avenue Northbound				Grevelia Street/CA-110 NB Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	288	0	288	1	0	**86**	87	0	259	**12**	271	32	**104**	61	**197**	843
04:30 PM	0	**318**	0	**318**	2	0	74	76	0	**291**	9	**300**	38	92	49	179	**873**
04:45 PM	0	304	0	304	**5**	0	83	**88**	0	217	6	223	**48**	91	46	185	800
05:00 PM	0	293	0	293	3	0	77	80	0	254	10	264	39	91	**64**	194	831
Total Volume	0	1203	0	1203	11	0	320	331	0	1021	37	1058	157	378	220	755	3347
% App. Total	0	100	0		3.3	0	96.7		0	96.5	3.5		20.8	50.1	29.1		
PHF	.000	.946	.000	.946	.550	.000	.930	.940	.000	.877	.771	.882	.818	.909	.859	.958	.958

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City of South Pasadena
N/S: Fair Oaks Avenue
E/W: Grevelia Street/CA-110 NB Off Ramp
Weather: Clear

File Name : 06_SPA_FO_Gre PM
Site Code : 2372336
Start Date : 4/11/2023
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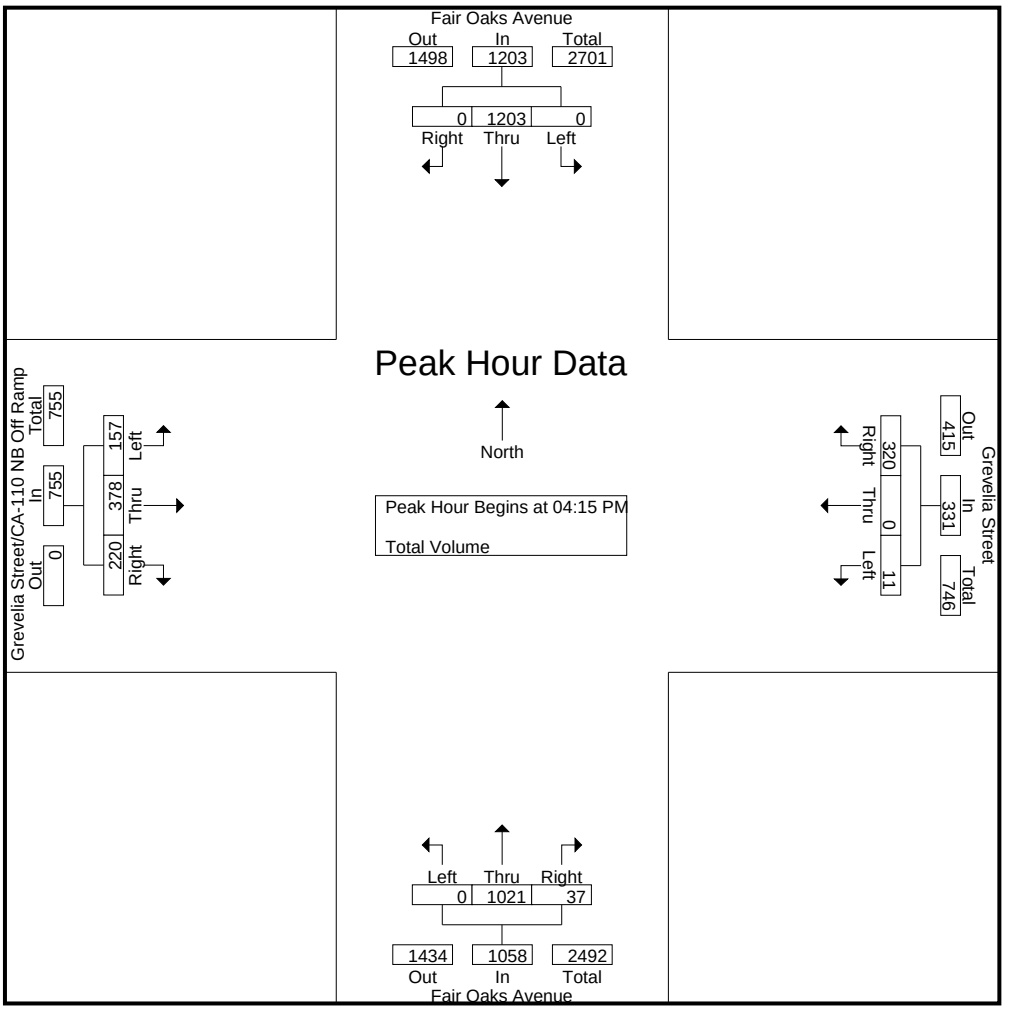

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				05:00 PM				04:00 PM				05:00 PM			
+0 mins.	0	**318**	0	**318**	3	0	77	80	0	260	7	267	39	91	64	194
+15 mins.	0	304	0	304	1	0	67	68	0	259	**12**	271	32	**112**	**68**	**212**
+30 mins.	0	293	0	293	3	0	**92**	**95**	0	**291**	9	**300**	**42**	85	52	179
+45 mins.	0	297	0	297	**4**	0	88	92	0	217	6	223	40	98	60	198
Total Volume	0	1212	0	1212	11	0	324	335	0	1027	34	1061	153	386	244	783
% App. Total	0	100	0		3.3	0	96.7		0	96.8	3.2		19.5	49.3	31.2	
PHF	.000	.953	.000	.953	.688	.000	.880	.882	.000	.882	.708	.884	.911	.862	.897	.923

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City of South Pasadena
N/S: Fair Oaks Avenue
E/W: Magnolia Street
Weather: Clear

File Name : 07_SPA_FO_Mag AM
Site Code : 2372336
Start Date : 4/11/2023
Page No : 1

Groups Printed- Total Volume

	Fair Oaks Avenue Southbound				Magnolia Street Westbound				Fair Oaks Avenue Northbound				Magnolia Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	104	0	105	0	0	0	0	0	239	3	242	0	0	0	0	347
07:15 AM	2	142	1	145	0	0	0	0	5	267	1	273	0	0	0	0	418
07:30 AM	1	210	0	211	0	0	1	1	1	278	2	281	0	0	0	0	493
07:45 AM	0	211	4	215	0	0	0	0	1	326	2	329	0	0	0	0	544
Total	4	667	5	676	0	0	1	1	7	1110	8	1125	0	0	0	0	1802
08:00 AM	0	260	4	264	0	0	0	0	0	294	6	300	0	0	0	0	564
08:15 AM	0	186	0	186	0	0	1	1	0	296	3	299	0	0	0	0	486
08:30 AM	3	208	3	214	0	0	0	0	0	303	4	307	0	0	0	0	521
08:45 AM	0	246	6	252	0	0	0	0	2	292	5	299	0	0	0	0	551
Total	3	900	13	916	0	0	1	1	2	1185	18	1205	0	0	0	0	2122
Grand Total	7	1567	18	1592	0	0	2	2	9	2295	26	2330	0	0	0	0	3924
Apprch %	0.4	98.4	1.1		0	0	100		0.4	98.5	1.1		0	0	0		
Total %	0.2	39.9	0.5	40.6	0	0	0.1	0.1	0.2	58.5	0.7	59.4	0	0	0	0	

	Fair Oaks Avenue Southbound				Magnolia Street Westbound				Fair Oaks Avenue Northbound				Magnolia Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	**260**	4	**264**	0	0	0	0	0	294	**6**	300	0	0	0	0	**564**
08:15 AM	0	186	0	186	0	0	**1**	**1**	0	296	3	299	0	0	0	0	486
08:30 AM	**3**	208	3	214	0	0	0	0	0	**303**	4	**307**	0	0	0	0	521
08:45 AM	0	246	**6**	252	0	0	0	0	**2**	292	5	299	0	0	0	0	551
Total Volume	3	900	13	916	0	0	1	1	2	1185	18	1205	0	0	0	0	2122
% App. Total	0.3	98.3	1.4		0	0	100		0.2	98.3	1.5		0	0	0		
PHF	.250	.865	.542	.867	.000	.000	.250	.250	.250	.978	.750	.981	.000	.000	.000	.000	.941

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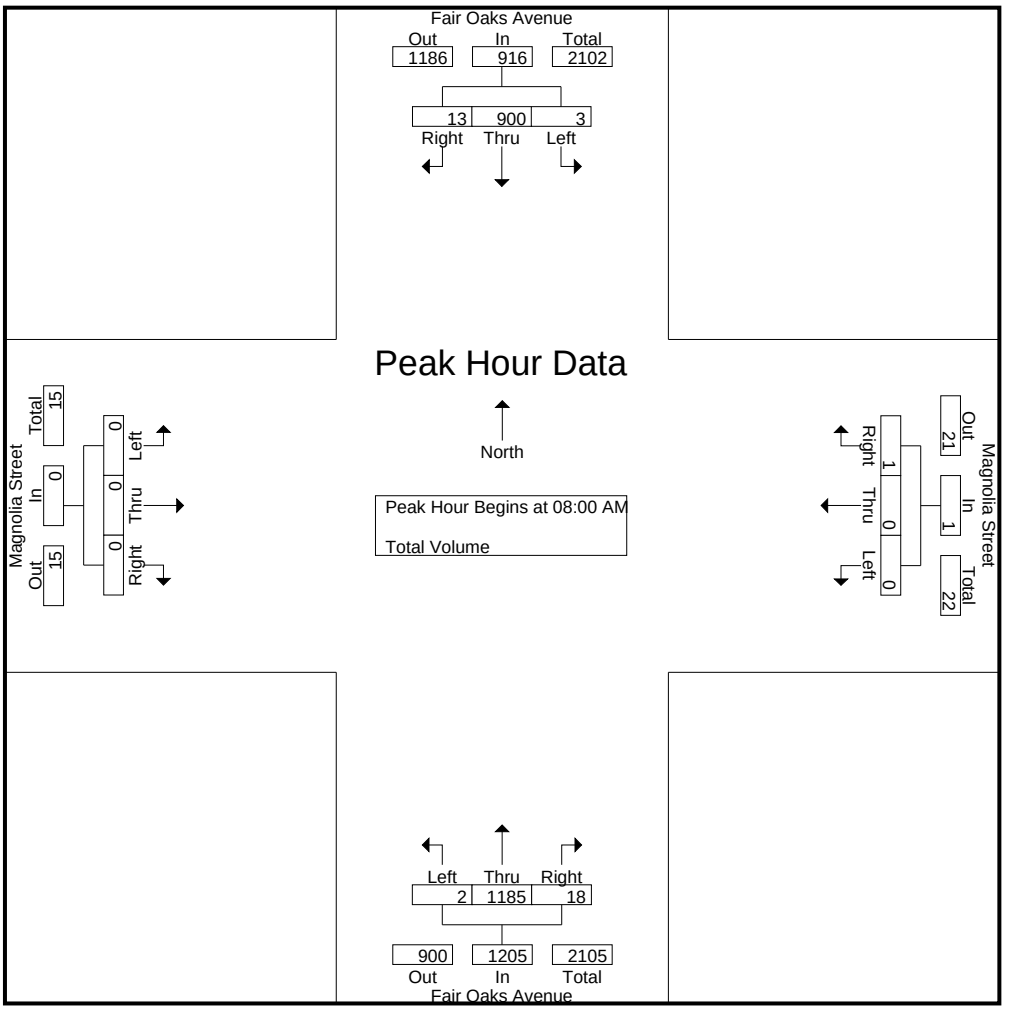
City of South Pasadena
N/S: Fair Oaks Avenue
E/W: Magnolia Street
Weather: Clear

File Name : 07_SPA_FO_Mag AM
Site Code : 2372336
Start Date : 4/11/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				07:30 AM				07:45 AM				07:00 AM			
+0 mins.	0	**260**	4	**264**	0	0	**1**	**1**	**1**	**326**	2	**329**	0	0	0	0
+15 mins.	0	186	0	186	0	0	0	0	0	294	**6**	300	0	0	0	0
+30 mins.	**3**	208	3	214	0	0	0	0	0	296	3	299	0	0	0	0
+45 mins.	0	246	**6**	252	0	0	1	1	0	303	4	307	0	0	0	0
Total Volume	3	900	13	916	0	0	2	2	1	1219	15	1235	0	0	0	0
% App. Total	0.3	98.3	1.4		0	0	100		0.1	98.7	1.2		0	0	0	
PHF	.250	.865	.542	.867	.000	.000	.500	.500	.250	.935	.625	.938	.000	.000	.000	.000

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City of South Pasadena
N/S: Fair Oaks Avenue
E/W: Magnolia Street
Weather: Clear

File Name : 07_SPA_FO_Mag PM
Site Code : 2372336
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Groups Printed- Total Volume

	Fair Oaks Avenue Southbound				Magnolia Street Westbound				Fair Oaks Avenue Northbound				Magnolia Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	342	1	344	0	0	0	0	0	249	3	252	0	0	2	2	598
04:15 PM	0	329	1	330	0	0	0	0	0	288	3	291	0	0	1	1	622
04:30 PM	0	331	3	334	0	0	0	0	3	282	3	288	0	0	1	1	623
04:45 PM	3	338	2	343	0	0	0	0	1	218	3	222	0	0	1	1	566
Total	4	1340	7	1351	0	0	0	0	4	1037	12	1053	0	0	5	5	2409
05:00 PM	0	346	1	347	0	0	1	1	1	284	2	287	0	0	5	5	640
05:15 PM	2	337	0	339	0	0	0	0	0	244	1	245	1	0	6	7	591
05:30 PM	0	338	0	338	0	0	0	0	0	262	2	264	0	0	0	0	602
05:45 PM	0	330	1	331	0	0	0	0	2	272	3	277	1	0	0	1	609
Total	2	1351	2	1355	0	0	1	1	3	1062	8	1073	2	0	11	13	2442
Grand Total	6	2691	9	2706	0	0	1	1	7	2099	20	2126	2	0	16	18	4851
Apprch %	0.2	99.4	0.3		0	0	100		0.3	98.7	0.9		11.1	0	88.9		
Total %	0.1	55.5	0.2	55.8	0	0	0	0	0.1	43.3	0.4	43.8	0	0	0.3	0.4	

	Fair Oaks Avenue Southbound				Magnolia Street Westbound				Fair Oaks Avenue Northbound				Magnolia Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	329	1	330	0	0	0	0	0	**288**	**3**	**291**	0	0	1	1	622
04:30 PM	0	331	**3**	334	0	0	0	0	**3**	282	3	288	0	0	1	1	623
04:45 PM	**3**	338	2	343	0	0	0	0	1	218	3	222	0	0	1	1	566
05:00 PM	0	**346**	1	**347**	0	0	**1**	**1**	1	284	2	287	0	0	**5**	**5**	**640**
Total Volume	3	1344	7	1354	0	0	1	1	5	1072	11	1088	0	0	8	8	2451
% App. Total	0.2	99.3	0.5		0	0	100		0.5	98.5	1		0	0	100		
PHF	.250	.971	.583	.976	.000	.000	.250	.250	.417	.931	.917	.935	.000	.000	.400	.400	.957

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City of South Pasadena
N/S: Fair Oaks Avenue
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File Name : 07_SPA_FO_Mag PM
Site Code : 2372336
Start Date : 4/11/2023
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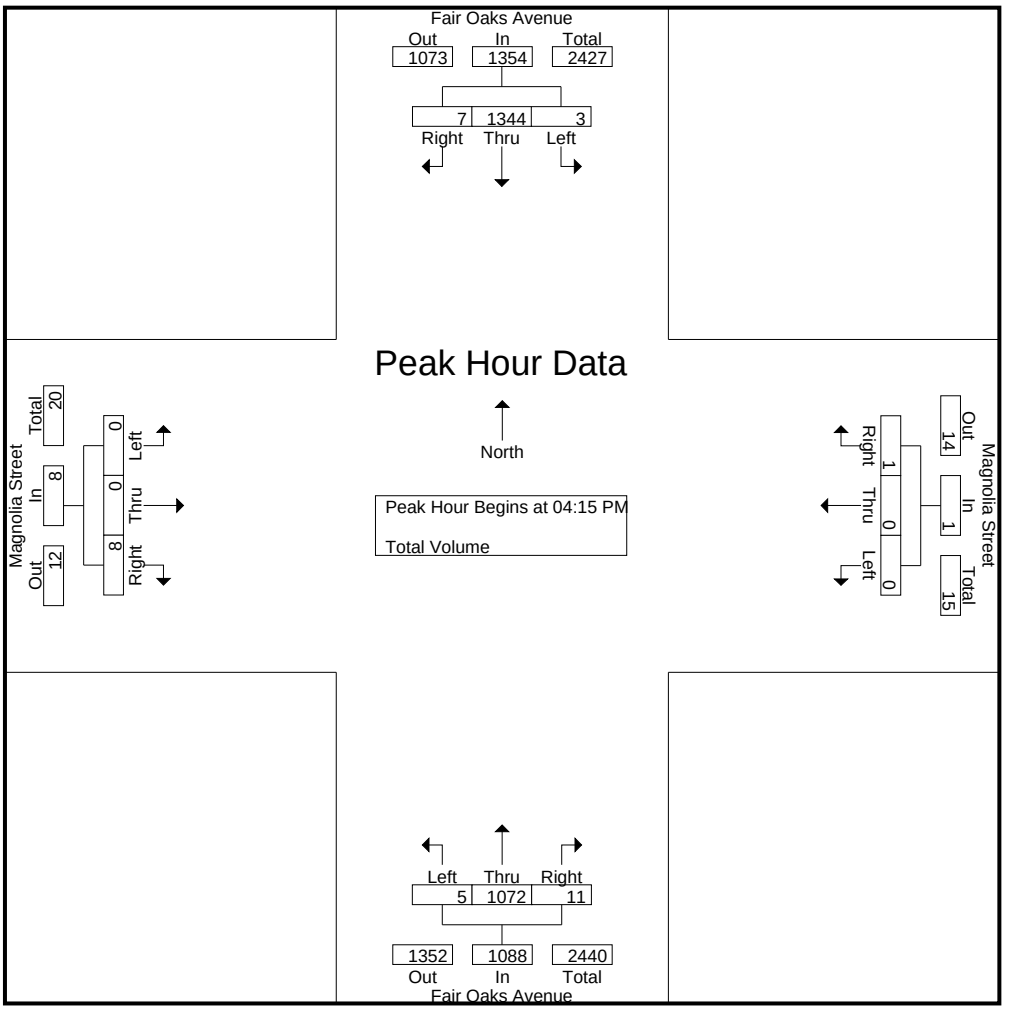

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:15 PM				04:15 PM				04:30 PM			
+0 mins.	**3**	338	**2**	343	0	0	0	0	0	**288**	**3**	**291**	0	0	1	1
+15 mins.	0	**346**	1	**347**	0	0	0	0	**3**	282	3	288	0	0	1	1
+30 mins.	2	337	0	339	0	0	0	0	1	218	3	222	0	0	5	5
+45 mins.	0	338	0	338	0	0	**1**	**1**	1	284	2	287	**1**	0	**6**	**7**
Total Volume	5	1359	3	1367	0	0	1	1	5	1072	11	1088	1	0	13	14
% App. Total	0.4	99.4	0.2		0	0	100		0.5	98.5	1		7.1	0	92.9	
PHF	.417	.982	.375	.985	.000	.000	.250	.250	.417	.931	.917	.935	.250	.000	.542	.500

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City of South Pasadena
N/S: Fair Oaks Avenue
E/W: Hope Street
Weather: Clear

File Name : 08_SPA_FO_Hope AM
Site Code : 2372336
Start Date : 4/11/2023
Page No : 1

Groups Printed- Total Volume

	Fair Oaks Avenue Southbound				Hope Street Westbound				Fair Oaks Avenue Northbound				Hope Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	4	97	3	104	3	0	4	7	3	246	1	250	1	1	4	6	367
07:15 AM	3	131	2	136	2	0	5	7	4	253	2	259	2	0	2	4	406
07:30 AM	3	191	7	201	4	2	11	17	6	280	3	289	4	3	3	10	517
07:45 AM	8	199	9	216	5	5	10	20	6	295	2	303	7	2	3	12	551
Total	18	618	21	657	14	7	30	51	19	1074	8	1101	14	6	12	32	1841
08:00 AM	7	237	7	251	6	3	22	31	5	276	4	285	5	1	5	11	578
08:15 AM	5	166	14	185	4	3	19	26	5	278	3	286	6	1	4	11	508
08:30 AM	14	190	4	208	3	3	17	23	6	275	3	284	10	2	1	13	528
08:45 AM	13	214	16	243	6	1	13	20	6	271	6	283	6	2	2	10	556
Total	39	807	41	887	19	10	71	100	22	1100	16	1138	27	6	12	45	2170
Grand Total	57	1425	62	1544	33	17	101	151	41	2174	24	2239	41	12	24	77	4011
Apprch %	3.7	92.3	4		21.9	11.3	66.9		1.8	97.1	1.1		53.2	15.6	31.2		
Total %	1.4	35.5	1.5	38.5	0.8	0.4	2.5	3.8	1	54.2	0.6	55.8	1	0.3	0.6	1.9	

	Fair Oaks Avenue Southbound				Hope Street Westbound				Fair Oaks Avenue Northbound				Hope Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	7	**237**	7	**251**	**6**	**3**	**22**	**31**	5	276	4	285	5	1	**5**	11	**578**
08:15 AM	5	166	14	185	4	3	19	26	5	**278**	3	**286**	6	1	4	11	508
08:30 AM	**14**	190	4	208	3	3	17	23	**6**	275	3	284	**10**	**2**	1	**13**	528
08:45 AM	13	214	**16**	243	6	1	13	20	6	271	**6**	283	6	2	2	10	556
Total Volume	39	807	41	887	19	10	71	100	22	1100	16	1138	27	6	12	45	2170
% App. Total	4.4	91	4.6		19	10	71		1.9	96.7	1.4		60	13.3	26.7		
PHF	.696	.851	.641	.883	.792	.833	.807	.806	.917	.989	.667	.995	.675	.750	.600	.865	.939

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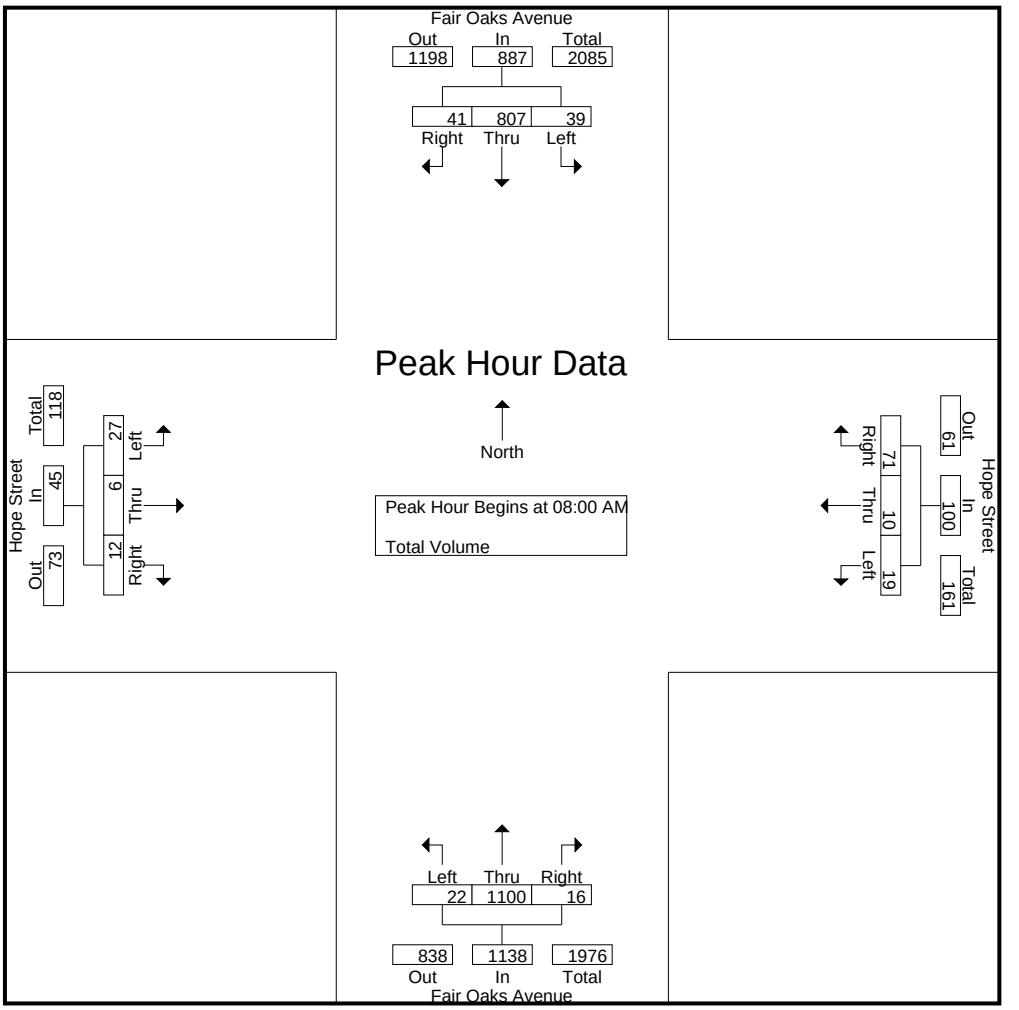
City of South Pasadena
N/S: Fair Oaks Avenue
E/W: Hope Street
Weather: Clear

File Name : 08_SPA_FO_Hope AM
Site Code : 2372336
Start Date : 4/11/2023



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				07:45 AM				07:30 AM				07:45 AM			
+0 mins.	7	**237**	7	**251**	5	**5**	10	20	**6**	280	3	289	7	**2**	3	12
+15 mins.	5	166	14	185	**6**	3	**22**	**31**	6	**295**	2	**303**	5	1	**5**	11
+30 mins.	**14**	190	4	208	4	3	19	26	5	276	**4**	285	6	1	4	11
+45 mins.	13	214	**16**	243	3	3	17	23	5	278	3	286	**10**	2	1	**13**
Total Volume	39	807	41	887	18	14	68	100	22	1129	12	1163	28	6	13	47
% App. Total	4.4	91	4.6		18	14	68		1.9	97.1	1		59.6	12.8	27.7	
PHF	.696	.851	.641	.883	.750	.700	.773	.806	.917	.957	.750	.960	.700	.750	.650	.904

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City of South Pasadena
N/S: Fair Oaks Avenue
E/W: Hope Street
Weather: Clear

File Name : 08_SPA_FO_Hope PM
Site Code : 2372336
Start Date : 4/11/2023
Page No : 1

Groups Printed- Total Volume

	Fair Oaks Avenue Southbound				Hope Street Westbound				Fair Oaks Avenue Northbound				Hope Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	24	322	19	365	3	4	10	17	3	236	9	248	7	4	5	16	646
04:15 PM	13	290	9	312	9	8	11	28	6	261	2	269	7	1	4	12	621
04:30 PM	17	303	14	334	4	4	10	18	5	233	10	248	12	5	11	28	628
04:45 PM	16	310	10	336	3	6	10	19	3	204	8	215	15	4	9	28	598
Total	70	1225	52	1347	19	22	41	82	17	934	29	980	41	14	29	84	2493
05:00 PM	19	314	15	348	4	6	10	20	6	266	9	281	9	6	9	24	673
05:15 PM	17	314	16	347	7	3	9	19	5	221	12	238	8	7	7	22	626
05:30 PM	25	297	19	341	6	4	11	21	1	255	12	268	16	5	6	27	657
05:45 PM	19	292	19	330	8	4	8	20	8	253	6	267	6	4	8	18	635
Total	80	1217	69	1366	25	17	38	80	20	995	39	1054	39	22	30	91	2591
Grand Total	150	2442	121	2713	44	39	79	162	37	1929	68	2034	80	36	59	175	5084
Apprch %	5.5	90	4.5		27.2	24.1	48.8		1.8	94.8	3.3		45.7	20.6	33.7		
Total %	3	48	2.4	53.4	0.9	0.8	1.6	3.2	0.7	37.9	1.3	40	1.6	0.7	1.2	3.4	

	Fair Oaks Avenue Southbound				Hope Street Westbound				Fair Oaks Avenue Northbound				Hope Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	19	**314**	15	**348**	4	**6**	10	20	6	**266**	9	**281**	9	6	**9**	24	**673**
05:15 PM	17	314	16	347	7	3	9	19	5	221	**12**	238	8	**7**	7	22	626
05:30 PM	**25**	297	**19**	341	6	4	**11**	**21**	1	255	12	268	**16**	5	6	**27**	657
05:45 PM	19	292	19	330	**8**	4	8	20	**8**	253	6	267	6	4	8	18	635
Total Volume	80	1217	69	1366	25	17	38	80	20	995	39	1054	39	22	30	91	2591
% App. Total	5.9	89.1	5.1		31.2	21.2	47.5		1.9	94.4	3.7		42.9	24.2	33		
PHF	.800	.969	.908	.981	.781	.708	.864	.952	.625	.935	.813	.938	.609	.786	.833	.843	.962

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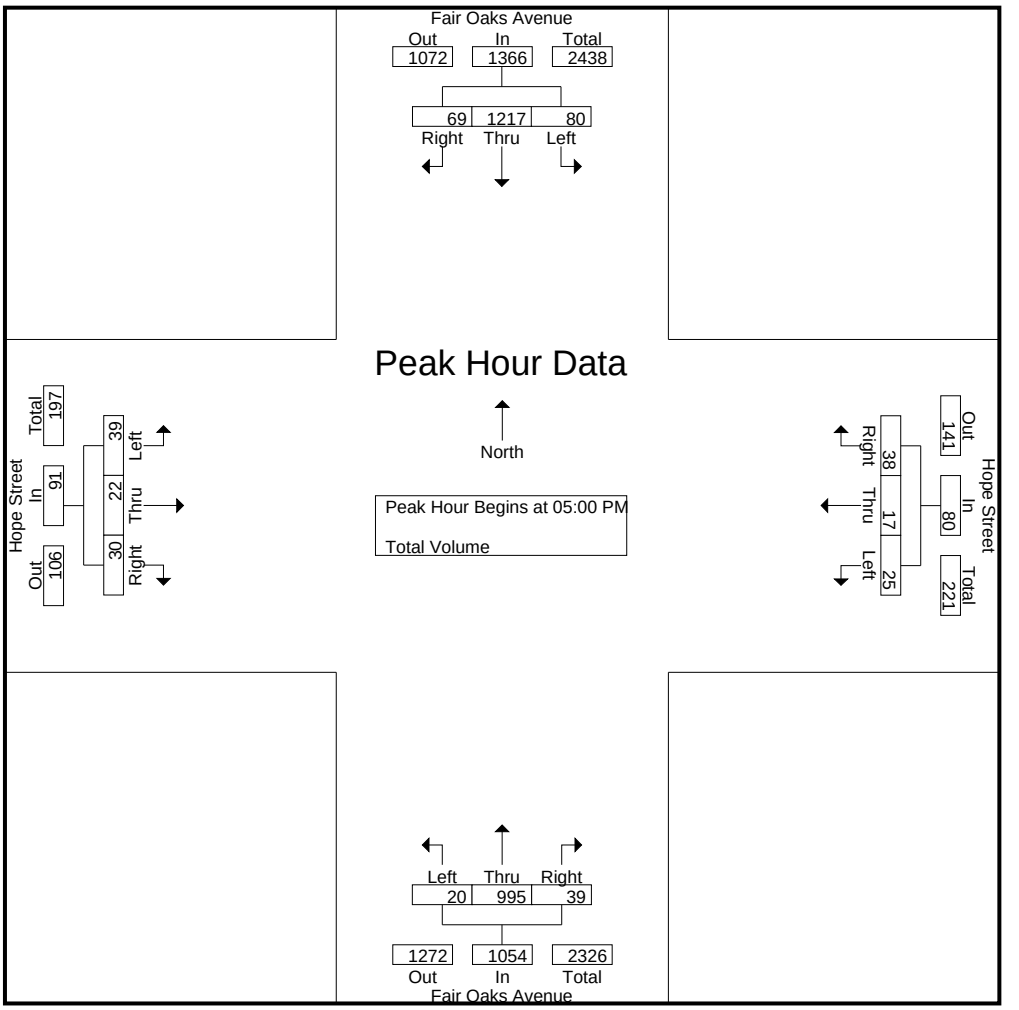
City of South Pasadena
N/S: Fair Oaks Avenue
E/W: Hope Street
Weather: Clear

File Name : 08_SPA_FO_Hope PM
Site Code : 2372336
Start Date : 4/11/2023



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:15 PM				05:00 PM				04:30 PM			
+0 mins.	16	310	10	336	**9**	**8**	**11**	**28**	6	**266**	9	**281**	12	5	**11**	**28**
+15 mins.	19	**314**	15	**348**	4	4	10	18	5	221	**12**	238	**15**	4	9	28
+30 mins.	17	314	16	347	3	6	10	19	1	255	12	268	9	6	9	24
+45 mins.	**25**	297	**19**	341	4	6	10	20	**8**	253	6	267	8	**7**	7	22
Total Volume	77	1235	60	1372	20	24	41	85	20	995	39	1054	44	22	36	102
% App. Total	5.6	90	4.4		23.5	28.2	48.2		1.9	94.4	3.7		43.1	21.6	35.3	
PHF	.770	.983	.789	.986	.556	.750	.932	.759	.625	.935	.813	.938	.733	.786	.818	.911

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City of South Pasadena
N/S: Mound Avenue
E/W: Magnolia Street
Weather: Clear

File Name : 09_SPA_MOUND_MAG AM
Site Code : 2372336
Start Date : 4/12/2023
Page No : 1

Groups Printed- Total Volume

	Mound Avenue Southbound				Magnolia Street Westbound				Mound Avenue Northbound				Magnolia Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
07:15 AM	0	2	0	2	0	0	0	0	0	4	0	4	5	0	0	5	11
07:30 AM	0	3	0	3	0	0	0	0	1	2	0	3	0	0	0	0	6
07:45 AM	0	2	0	2	0	0	0	0	0	8	0	8	3	0	0	3	13
Total	0	7	0	7	0	0	0	0	1	17	0	18	8	0	0	8	33
08:00 AM	0	1	0	1	0	0	0	0	2	3	0	5	2	0	3	5	11
08:15 AM	0	0	0	0	0	0	0	0	1	11	0	12	2	0	3	5	17
08:30 AM	0	0	0	0	0	0	0	0	2	7	0	9	1	0	0	1	10
08:45 AM	0	2	0	2	0	0	0	0	3	5	0	8	1	0	1	2	12
Total	0	3	0	3	0	0	0	0	8	26	0	34	6	0	7	13	50
Grand Total	0	10	0	10	0	0	0	0	9	43	0	52	14	0	7	21	83
Apprch %	0	100	0		0	0	0		17.3	82.7	0		66.7	0	33.3		
Total %	0	12	0	12	0	0	0	0	10.8	51.8	0	62.7	16.9	0	8.4	25.3	

	Mound Avenue Southbound				Magnolia Street Westbound				Mound Avenue Northbound				Magnolia Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	**2**	0	**2**	0	0	0	0	0	8	0	8	**3**	0	0	3	13
08:00 AM	0	1	0	1	0	0	0	0	**2**	3	0	5	2	0	**3**	**5**	11
08:15 AM	0	0	0	0	0	0	0	0	1	**11**	0	**12**	2	0	3	5	**17**
08:30 AM	0	0	0	0	0	0	0	0	2	7	0	9	1	0	0	1	10
Total Volume	0	3	0	3	0	0	0	0	5	29	0	34	8	0	6	14	51
% App. Total	0	100	0		0	0	0		14.7	85.3	0		57.1	0	42.9		
PHF	.000	.375	.000	.375	.000	.000	.000	.000	.625	.659	.000	.708	.667	.000	.500	.700	.750

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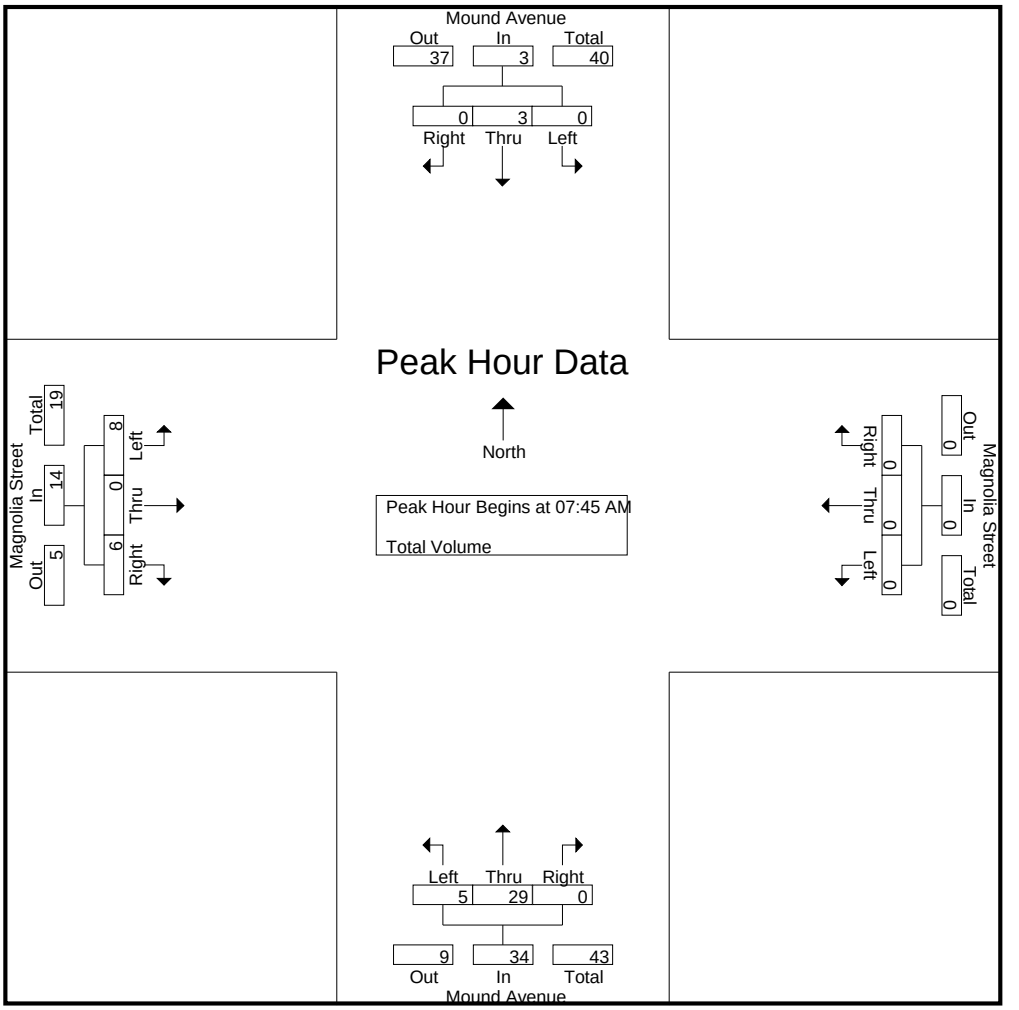
City of South Pasadena
N/S: Mound Avenue
E/W: Magnolia Street
Weather: Clear

File Name : 09_SPA_MOUND_MAG AM
Site Code : 2372336
Start Date : 4/12/2023



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:45 AM				07:45 AM			
+0 mins.	0	2	0	2	0	0	0	0	0	8	0	8	**3**	0	0	3
+15 mins.	0	**3**	0	**3**	0	0	0	0	**2**	3	0	5	2	0	**3**	**5**
+30 mins.	0	2	0	2	0	0	0	0	1	**11**	0	**12**	2	0	3	5
+45 mins.	0	1	0	1	0	0	0	0	2	7	0	9	1	0	0	1
Total Volume	0	8	0	8	0	0	0	0	5	29	0	34	8	0	6	14
% App. Total	0	100	0		0	0	0		14.7	85.3	0		57.1	0	42.9	
PHF	.000	.667	.000	.667	.000	.000	.000	.000	.625	.659	.000	.708	.667	.000	.500	.700

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of South Pasadena
N/S: Mound Avenue
E/W: Magnolia Street
Weather: Clear

File Name : 09_SPA_MOUND_MAG PM
Site Code : 2372336
Start Date : 4/12/2023
Page No : 1

Groups Printed- Total Volume

	Mound Avenue Southbound				Magnolia Street Westbound				Mound Avenue Northbound				Magnolia Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	9	1	10	0	0	0	0	3	7	0	10	1	0	1	2	22
04:15 PM	0	3	0	3	0	0	0	0	0	5	0	5	1	0	4	5	13
04:30 PM	0	2	3	5	0	0	0	0	0	5	0	5	0	0	6	6	16
04:45 PM	0	5	0	5	0	0	0	0	2	2	0	4	0	0	1	1	10
Total	0	19	4	23	0	0	0	0	5	19	0	24	2	0	12	14	61
05:00 PM	0	7	4	11	0	0	0	0	1	2	0	3	0	0	1	1	15
05:15 PM	0	5	0	5	0	0	0	0	2	4	0	6	1	0	2	3	14
05:30 PM	0	3	1	4	0	0	0	0	0	3	0	3	2	0	1	3	10
05:45 PM	0	4	1	5	0	0	0	0	3	4	0	7	0	0	0	0	12
Total	0	19	6	25	0	0	0	0	6	13	0	19	3	0	4	7	51
Grand Total	0	38	10	48	0	0	0	0	11	32	0	43	5	0	16	21	112
Apprch %	0	79.2	20.8		0	0	0		25.6	74.4	0		23.8	0	76.2		
Total %	0	33.9	8.9	42.9	0	0	0	0	9.8	28.6	0	38.4	4.5	0	14.3	18.8	

	Mound Avenue Southbound				Magnolia Street Westbound				Mound Avenue Northbound				Magnolia Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	**9**	1	**10**	0	0	0	0	**3**	**7**	0	**10**	**1**	0	1	2	**22**
04:15 PM	0	3	0	3	0	0	0	0	0	5	0	5	1	0	4	5	13
04:30 PM	0	2	**3**	5	0	0	0	0	0	5	0	5	0	0	**6**	**6**	16
04:45 PM	0	5	0	5	0	0	0	0	2	2	0	4	0	0	1	1	10
Total Volume	0	19	4	23	0	0	0	0	5	19	0	24	2	0	12	14	61
% App. Total	0	82.6	17.4		0	0	0		20.8	79.2	0		14.3	0	85.7		
PHF	.000	.528	.333	.575	.000	.000	.000	.000	.417	.679	.000	.600	.500	.000	.500	.583	.693

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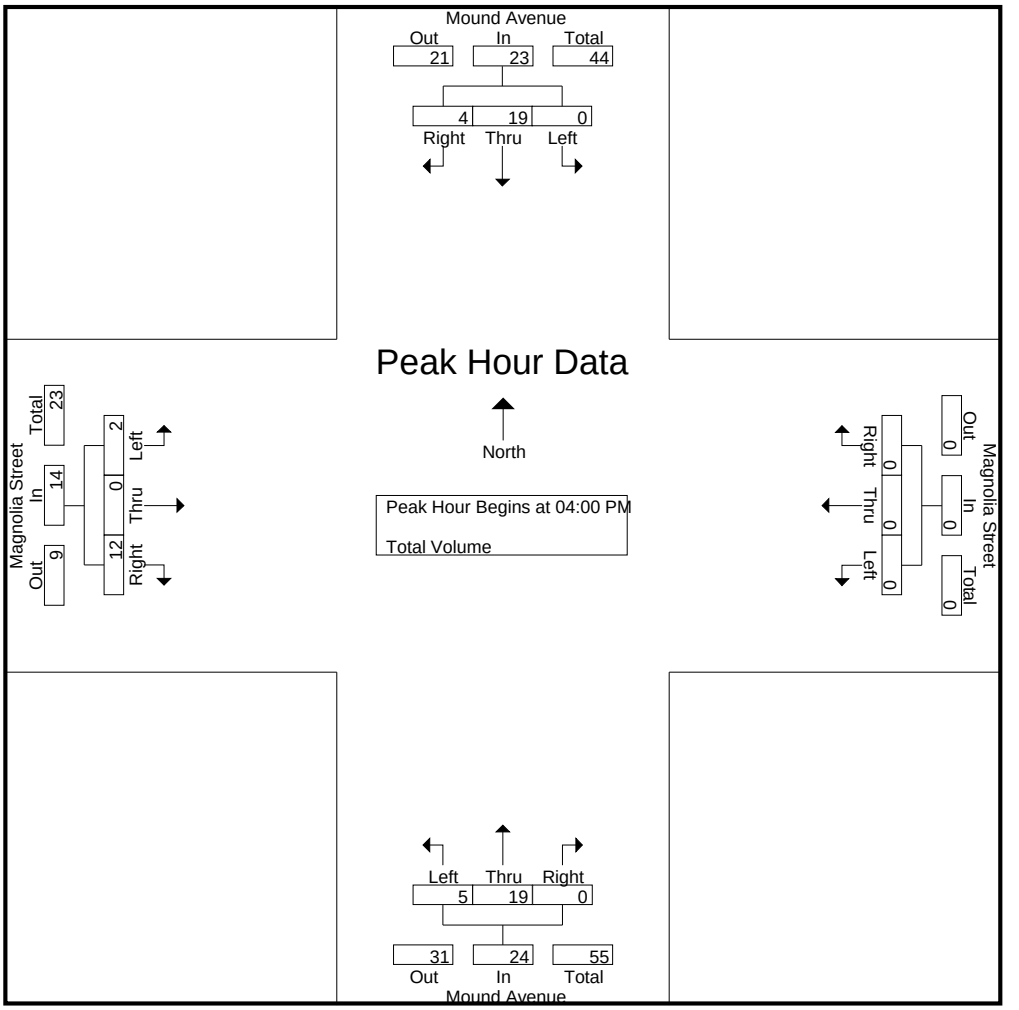
City of South Pasadena
N/S: Mound Avenue
E/W: Magnolia Street
Weather: Clear

File Name : 09_SPA_MOUND_MAG PM
Site Code : 2372336
Start Date : 4/12/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	2	3	5	0	0	0	0	**3**	**7**	0	**10**	**1**	0	1	2
+15 mins.	0	5	0	5	0	0	0	0	0	5	0	5	1	0	4	5
+30 mins.	0	**7**	**4**	**11**	0	0	0	0	0	5	0	5	0	0	**6**	**6**
+45 mins.	0	5	0	5	0	0	0	0	2	2	0	4	0	0	1	1
Total Volume	0	19	7	26	0	0	0	0	5	19	0	24	2	0	12	14
% App. Total	0	73.1	26.9		0	0	0		20.8	79.2	0		14.3	0	85.7	
PHF	.000	.679	.438	.591	.000	.000	.000	.000	.417	.679	.000	.600	.500	.000	.500	.583

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City of South Pasadena
Fair Oaks Avenue
B/ Grevelia Street - Hope Street
24 Hour Directional Volume Count

SPA002
Site Code: 237-23336

Start Time	4/11/23 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		13	240			24	275				
12:15		15	241			13	254				
12:30		7	236			26	247				
12:45		11	234	46	951	15	262	78	1038	124	1989
01:00		4	235			9	244				
01:15		5	244			8	254				
01:30		9	233			13	231				
01:45		8	264	26	976	5	263	35	992	61	1968
02:00		13	237			9	285				
02:15		4	234			5	266				
02:30		9	236			11	289				
02:45		5	261	31	968	7	273	32	1113	63	2081
03:00		6	277			5	260				
03:15		9	255			4	319				
03:30		15	243			9	305				
03:45		9	275	39	1050	7	**374**	25	1258	64	2308
04:00		11	249			5	**344**				
04:15		24	288			11	**330**				
04:30		32	282			9	**334**				
04:45		41	218	108	1037	20	343	45	1351	153	2388
05:00		34	285			24	347				
05:15		49	245			30	339				
05:30		94	**262**			43	338				
05:45		146	**273**	323	1065	51	331	148	1355	471	2420
06:00		145	**267**			57	305				
06:15		167	**303**			71	276				
06:30		203	231			96	288				
06:45		231	230	746	1031	100	256	324	1125	1070	2156
07:00		239	197			105	279				
07:15		267	188			145	238				
07:30		279	152			211	210				
07:45		**326**	148	1111	685	215	236	676	963	1787	1648
08:00		**294**	152			264	179				
08:15		**297**	129			186	155				
08:30		**303**	135			214	191				
08:45		292	113	1186	529	252	125	916	650	2102	1179
09:00		230	127			214	148				
09:15		245	105			184	140				
09:30		238	81			207	116				
09:45		235	92	948	405	222	96	827	500	1775	905
10:00		251	69			231	122				
10:15		236	57			180	100				
10:30		273	59			233	74				
10:45		219	43	979	228	237	61	881	357	1860	585
11:00		228	36			**250**	54				
11:15		247	52			**266**	58				
11:30		221	25			**234**	46				
11:45		251	24	947	137	**239**	27	989	185	1936	322
Total		6490	9062	6490	9062	4976	10887	4976	10887	11466	19949
Combined Total		15552		15552		15863		15863		31415	
AM Peak	-	07:45	-	-	-	11:00	-	-	-	-	-
Vol.	-	1220	-	-	-	989	-	-	-	-	-
P.H.F.		0.936				0.930					
PM Peak	-	-	05:30	-	-	-	03:45	-	-	-	-
Vol.	-	-	1105	-	-	-	1382	-	-	-	-
P.H.F.			0.912				0.924				
Percentage		41.7%	58.3%			31.4%	68.6%				
ADT/AADT		ADT 31,415		AADT 31,415							

Counts Unlimited, Inc.

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City of South Pasadena
Fremont Avenue
B/ Grevelia Street - Hope Street
24 Hour Directional Volume Count

SPA001
Site Code: 237-23336

Start Time	4/11/23 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		14	164			8	117				
12:15		12	123			10	112				
12:30		3	152			9	120				
12:45		9	145	38	584	11	116	38	465	76	1049
01:00		4	132			5	131				
01:15		3	143			6	120				
01:30		5	166			7	111				
01:45		5	148	17	589	7	108	25	470	42	1059
02:00		2	146			6	130				
02:15		3	155			3	143				
02:30		4	164			6	135				
02:45		1	162	10	627	2	145	17	553	27	1180
03:00		5	170			4	113				
03:15		2	156			6	163				
03:30		5	115			7	114				
03:45		4	164	16	605	6	105	23	495	39	1100
04:00		4	146			9	120				
04:15		15	156			15	97				
04:30		7	177			13	155				
04:45		13	157	39	636	23	**177**	60	549	99	1185
05:00		37	155			15	**181**				
05:15		36	**190**			30	**176**				
05:30		47	**162**			42	**167**				
05:45		65	**169**	185	676	46	146	133	670	318	1346
06:00		88	**191**			56	149				
06:15		76	151			78	134				
06:30		108	169			88	131				
06:45		102	145	374	656	122	130	344	544	718	1200
07:00		117	128			107	122				
07:15		175	93			137	100				
07:30		183	101			**163**	100				
07:45		185	101	660	423	**142**	89	549	411	1209	834
08:00		**186**	80			**140**	84				
08:15		**176**	73			**149**	75				
08:30		**198**	65			99	72				
08:45		**186**	53	746	271	147	76	535	307	1281	578
09:00		130	75			152	61				
09:15		114	54			97	64				
09:30		131	51			112	54				
09:45		158	34	533	214	127	44	488	223	1021	437
10:00		162	46			119	36				
10:15		177	28			118	49				
10:30		122	29			99	30				
10:45		142	26	603	129	103	29	439	144	1042	273
11:00		132	24			107	27				
11:15		131	18			117	24				
11:30		128	8			117	9				
11:45		174	11	565	61	120	9	461	69	1026	130
Total		3786	5471	3786	5471	3112	4900	3112	4900	6898	10371
Combined Total		9257		9257		8012		8012		17269	
AM Peak	-	08:00	-	-	-	07:30	-	-	-	-	-
Vol.	-	746	-	-	-	594	-	-	-	-	-
P.H.F.		0.942				0.911					
PM Peak	-	-	05:15	-	-	-	04:45	-	-	-	-
Vol.	-	-	712	-	-	-	701	-	-	-	-
P.H.F.			0.932				0.968				
Percentage		40.9%	59.1%			38.8%	61.2%				
ADT/AADT		ADT 17,269		AADT 17,269							

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City of South Pasadena
N/S: Mound Avenue
E/W: Magnolia Street
24 Hour Entering Volume Count

SPA001EW
Site Code: 237-23434

Start Time	5/3/23 Wed	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	3			0	0				
12:15		0	1			0	0				
12:30		0	1			0	0				
12:45		0	2	0	7	0	0	0	0	0	7
01:00		0	4			0	0				
01:15		0	2			0	0				
01:30		0	1			0	0				
01:45		0	1	0	8	0	0	0	0	0	8
02:00		0	2			0	0				
02:15		0	1			0	0				
02:30		0	4			0	0				
02:45		0	2	0	9	0	0	0	0	0	9
03:00		0	3			0	0				
03:15		0	2			0	0				
03:30		0	4			0	0				
03:45		0	2	0	11	0	0	0	0	0	11
04:00		0	1			0	0				
04:15		0	1			0	0				
04:30		0	4			0	0				
04:45		1	2	1	8	0	0	0	0	1	8
05:00		0	2			0	0				
05:15		1	2			0	0				
05:30		1	0			0	0				
05:45		1	**3**	3	7	0	0	0	0	3	7
06:00		0	**2**			0	0				
06:15		4	**2**			0	0				
06:30		1	**5**			0	0				
06:45		3	0	8	9	0	0	0	0	8	9
07:00		0	1			0	0				
07:15		2	2			0	0				
07:30		2	0			0	0				
07:45		**2**	0	6	3	0	0	0	0	6	3
08:00		**6**	0			0	0				
08:15		**2**	0			**0**	0				
08:30		**3**	1			**0**	0				
08:45		1	0	12	1	**0**	0	0	0	12	1
09:00		1	1			**1**	0				
09:15		1	0			0	0				
09:30		1	0			0	0				
09:45		2	0	5	1	0	0	1	0	6	1
10:00		2	3			0	0				
10:15		4	0			0	0				
10:30		0	0			0	0				
10:45		0	0	6	3	0	0	0	0	6	3
11:00		0	0			0	0				
11:15		3	0			0	0				
11:30		4	0			0	0				
11:45		1	0	8	0	0	0	0	0	8	0
Total		49	67	49	67	1	0	1	0	50	67
Combined Total		116		116		1		1		117	
AM Peak	-	07:45	-	-	-	08:15	-	-	-	-	-
Vol.	-	13	-	-	-	1	-	-	-	-	-
P.H.F.		0.542				0.250					
PM Peak	-	-	05:45	-	-	-	-	-	-	-	-
Vol.	-	-	12	-	-	-	-	-	-	-	-
P.H.F.			0.600								
Percentage		42.2%	57.8%			100.0%	0.0%				
ADT/AADT		ADT 117		AADT 117							

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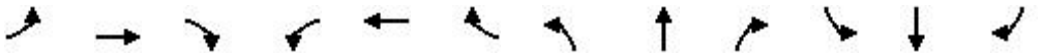
City of South Pasadena
N/S: Mound Avenue
E/W: Magnolia Street
24 Hour Entering Volume Count

SPA001NS
Site Code: 237-23434

Start Time	5/3/23 Wed	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	8			2	5				
12:15		1	5			0	1				
12:30		0	8			0	2				
12:45		0	2	1	23	1	3	3	11	4	34
01:00		1	4			0	6				
01:15		0	6			0	1				
01:30		0	8			0	2				
01:45		0	4	1	22	0	2	0	11	1	33
02:00		1	5			0	5				
02:15		0	1			1	2				
02:30		0	**4**			0	5				
02:45		0	**10**	1	20	0	4	1	16	2	36
03:00		0	**8**			0	4				
03:15		0	**9**			0	3				
03:30		0	3			0	1				
03:45		0	4	0	24	1	5	1	13	1	37
04:00		0	5			0	3				
04:15		0	5			0	**6**				
04:30		0	7			0	**4**				
04:45		0	7	0	24	0	**7**	0	20	0	44
05:00		0	8			0	**10**				
05:15		0	4			1	1				
05:30		0	3			0	5				
05:45		2	4	2	19	0	3	1	19	3	38
06:00		1	6			2	3				
06:15		1	10			0	2				
06:30		1	6			1	2				
06:45		3	5	6	27	3	3	6	10	12	37
07:00		8	3			3	2				
07:15		4	4			1	2				
07:30		4	3			**1**	1				
07:45		**10**	4	26	14	**4**	0	9	5	35	19
08:00		**7**	7			**2**	0				
08:15		**10**	2			**4**	0				
08:30		**9**	3			0	2				
08:45		1	3	27	15	0	1	6	3	33	18
09:00		2	1			3	2				
09:15		4	4			0	1				
09:30		7	2			2	3				
09:45		7	2	20	9	0	0	5	6	25	15
10:00		8	0			1	1				
10:15		9	0			3	0				
10:30		1	2			1	0				
10:45		6	0	24	2	1	0	6	1	30	3
11:00		4	0			1	3				
11:15		5	0			1	0				
11:30		4	0			1	2				
11:45		6	0	19	0	3	0	6	5	25	5
Total		127	199	127	199	44	120	44	120	171	319
Combined Total		326		326		164		164		490	
AM Peak	-	07:45	-	-	-	07:30	-	-	-	-	-
Vol.	-	36	-	-	-	11	-	-	-	-	-
P.H.F.		0.900				0.688					
PM Peak	-	-	02:30	-	-	-	04:15	-	-	-	-
Vol.	-	-	31	-	-	-	27	-	-	-	-
P.H.F.			0.775				0.675				
Percentage		39.0%	61.0%			26.8%	73.2%				
ADT/AADT		ADT 490		AADT 490							

Appendix B: Synchro Report (LOS)

Existing Condition

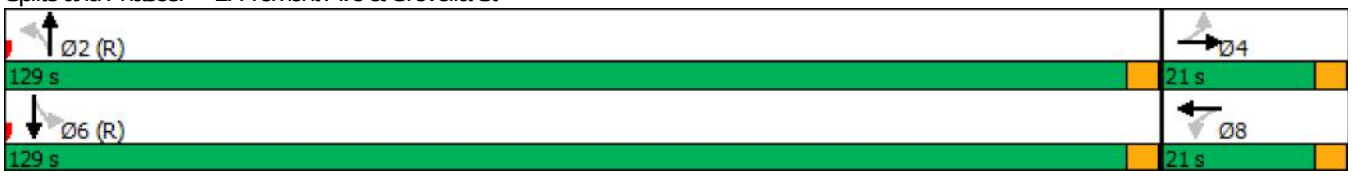


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	7	9	2	4	2	3	730	1	3	574	0
Future Volume (vph)	4	7	9	2	4	2	3	730	1	3	574	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt		0.943			0.973							
Flt Protected		0.987			0.980						0.999	
Satd. Flow (prot)	0	874	0	0	895	0	0	939	0	0	938	0
Flt Permitted		0.944			0.915			0.997			0.991	
Satd. Flow (perm)	0	836	0	0	836	0	0	936	0	0	930	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			4							
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		327			410			400			155	
Travel Time (s)		8.9			11.2			9.1			3.5	
Peak Hour Factor	0.50	0.71	0.70	0.25	0.50	0.55	0.58	0.92	0.50	0.45	0.95	0.38
Bus Blockages (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Parking (#/hr)	5	5	5	5	5	5	5	5	5	5	5	5
Adj. Flow (vph)	8	10	13	8	8	4	5	793	2	7	604	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	31	0	0	20	0	0	800	0	0	611	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.76	2.15	1.76	1.76	2.15	1.76	1.76	2.15	1.76	1.76	2.15	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	21.0	21.0		21.0	21.0		20.0	20.0		20.0	20.0	
Total Split (s)	21.0	21.0		21.0	21.0		129.0	129.0		129.0	129.0	
Total Split (%)	14.0%	14.0%		14.0%	14.0%		86.0%	86.0%		86.0%	86.0%	
Maximum Green (s)	17.0	17.0		17.0	17.0		125.0	125.0		125.0	125.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		17.0			17.0			125.0			125.0	
Actuated g/C Ratio		0.11			0.11			0.83			0.83	
v/c Ratio		0.29			0.20			1.03			0.79	
Control Delay		48.5			56.9			53.2			15.4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		48.5			56.9			53.2			15.4	
LOS		D			E			D			B	
Approach Delay		48.5			56.9			53.2			15.4	
Approach LOS		D			E			D			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 150	
Control Type: Pretimed	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 37.3	Intersection LOS: D
Intersection Capacity Utilization 74.2%	ICU Level of Service D
Analysis Period (min) 15	
* User Entered Value	

Splits and Phases: 1: Fremont Ave & Grevelia St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	6	0	0	10	3	719	1	7	583	4
Future Volume (vph)	1	0	6	0	0	10	3	719	1	7	583	4
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt		0.884			0.865						0.998	
Flt Protected		0.993					0.950			0.950		
Satd. Flow (prot)	0	981	0	0	967	0	1062	1118	0	1062	1115	0
Flt Permitted		0.993					0.950			0.950		
Satd. Flow (perm)	0	981	0	0	967	0	1062	1118	0	1062	1115	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		275			410			365			400	
Travel Time (s)		7.5			11.2			8.3			9.1	
Peak Hour Factor	0.25	0.92	0.25	0.50	0.92	0.62	0.62	0.98	0.50	0.62	0.97	0.50
Adj. Flow (vph)	4	0	24	0	0	16	5	734	2	11	601	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	28	0	0	16	0	5	736	0	11	609	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 70.0%		ICU Level of Service C	
Analysis Period (min) 15			

* User Entered Value

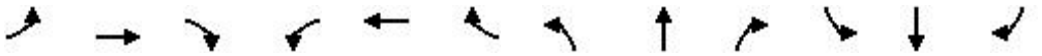
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	6	42	2	4	22	18	698	25	18	566	3
Future Volume (vph)	2	6	42	2	4	22	18	698	25	18	566	3
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt		0.888			0.891			0.989			0.999	
Flt Protected		0.998			0.998		0.950			0.950		
Satd. Flow (prot)	0	990	0	0	994	0	1062	1105	0	1062	1117	0
Flt Permitted		0.998			0.998		0.950			0.950		
Satd. Flow (perm)	0	990	0	0	994	0	1062	1105	0	1062	1117	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		262			410			182			365	
Travel Time (s)		7.1			11.2			4.1			8.3	
Peak Hour Factor	0.67	0.65	0.71	0.92	0.67	0.66	0.66	0.98	0.46	0.72	0.97	0.75
Adj. Flow (vph)	3	9	59	2	6	33	27	712	54	25	584	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	71	0	0	41	0	27	766	0	25	588	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 72.8%		ICU Level of Service C	
Analysis Period (min) 15			

* User Entered Value

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	7	4	0	0	10	16
Future Volume (vph)	7	4	0	0	10	16
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt	0.932				0.916	
Flt Protected					0.981	
Satd. Flow (prot)	1042	0	0	0	1004	0
Flt Permitted					0.981	
Satd. Flow (perm)	1042	0	0	0	1004	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	410			76	400	
Travel Time (s)	9.3			1.7	9.1	
Peak Hour Factor	0.62	0.36	0.92	0.92	0.62	0.62
Adj. Flow (vph)	11	11	0	0	16	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	0	0	0	42	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			
* User Entered Value			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	25	12	23	27	16	9	24	15	8	10	0
Future Volume (vph)	8	25	12	23	27	16	9	24	15	8	10	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt		0.957			0.967			0.965				
Flt Protected		0.991			0.983			0.992			0.979	
Satd. Flow (prot)	0	1060	0	0	1062	0	0	1070	0	0	1094	0
Flt Permitted		0.991			0.983			0.992			0.979	
Satd. Flow (perm)	0	1060	0	0	1062	0	0	1070	0	0	1094	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		410			390			181			285	
Travel Time (s)		11.2			10.6			4.9			7.8	
Peak Hour Factor	0.62	0.70	0.52	0.70	0.67	0.67	0.69	0.53	0.75	0.72	0.66	0.25
Adj. Flow (vph)	13	36	23	33	40	24	13	45	20	11	15	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	72	0	0	97	0	0	78	0	0	26	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.7%		ICU Level of Service A	
Analysis Period (min) 15			
* User Entered Value			

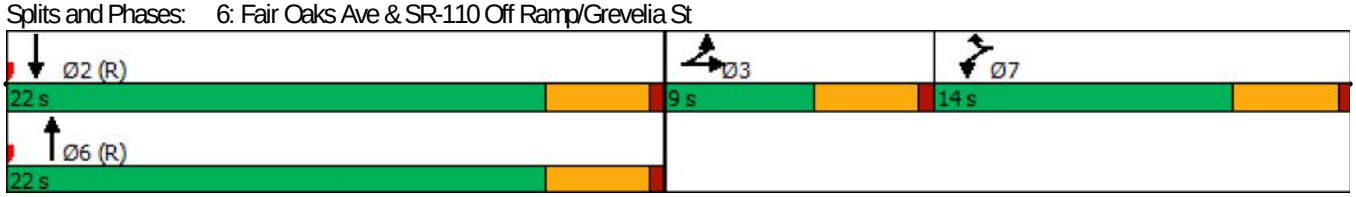
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	126	137	5	0	579	0	1202	20	0	771	0
Future Volume (vph)	230	126	137	5	0	579	0	1202	20	0	771	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	0		0
Storage Lanes	0		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	*0.95	*0.95	*0.95	*0.95	0.91	0.91	*0.95	0.95	*0.95
Ped Bike Factor		0.99		1.00				1.00				
Frt		0.955				0.850		0.996				
Flt Protected		0.977		0.950								
Satd. Flow (prot)	0	1738	0	836	0	748	0	2749	0	0	1878	0
Flt Permitted		0.977		0.950								
Satd. Flow (perm)	0	1738	0	833	0	748	0	2749	0	0	1878	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		117				121		9				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		241			567			394			172	
Travel Time (s)		5.5			12.9			9.0			3.9	
Confl. Peds. (#/hr)			8	7					36			
Confl. Bikes (#/hr)			4									
Peak Hour Factor	0.85	0.96	0.80	0.75	0.92	0.79	0.92	0.90	0.63	0.92	0.96	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	2	2	2	2	2	2
Parking (#/hr)	5	5	5	5	5	5	5	5	5	0	5	5
Mid-Block Traffic (%)		0%			0%			5%			5%	
Adj. Flow (vph)	271	131	171	7	0	733	0	1336	32	0	803	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	573	0	7	0	733	0	1368	0	0	803	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.99	2.14	1.99	2.31	1.99	2.31	1.99	2.09	1.99	1.99	2.15	1.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1		1		2			2	
Detector Template	Left	Thru		Left		Right		Thru			Thru	
Leading Detector (ft)	20	100		20		20		100			100	
Trailing Detector (ft)	0	0		0		0		0			0	
Detector 1 Position(ft)	0	0		0		0		0			0	
Detector 1 Size(ft)	20	6		20		20		6			6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0		0.0		0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0		0.0		0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0		0.0		0.0			0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	

Lanes, Volumes, Timings
6: Fair Oaks Ave & SR-110 Off Ramp/Grevelia St 07/05/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA		Prot		Prot		NA			NA	
Protected Phases	3	3		7		7		6			2	
Permitted Phases												
Detector Phase	3	3		7		7		6			2	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0		4.0		4.0			4.0	
Minimum Split (s)	8.0	8.0		8.0		8.0		20.0			20.0	
Total Split (s)	9.0	9.0		14.0		14.0		22.0			22.0	
Total Split (%)	20.0%	20.0%		31.1%		31.1%		48.9%			48.9%	
Maximum Green (s)	5.0	5.0		10.0		10.0		18.0			18.0	
Yellow Time (s)	3.5	3.5		3.5		3.5		3.5			3.5	
All-Red Time (s)	0.5	0.5		0.5		0.5		0.5			0.5	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0			0.0	
Total Lost Time (s)		4.0		4.0		4.0		4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0		3.0		3.0			3.0	
Recall Mode	None	None		None		None		C-Max			C-Max	
Walk Time (s)								5.0			5.0	
Flash Dont Walk (s)								11.0			11.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)		5.0		10.0		10.0		18.0			18.0	
Actuated g/C Ratio		0.11		0.22		0.22		0.40			0.40	
v/c Ratio		1.93		0.04		2.82		1.24			1.07	
Control Delay		448.6		14.4		844.2		133.8			71.8	
Queue Delay		0.0		0.0		0.0		0.0			13.4	
Total Delay		448.6		14.4		844.2		133.8			85.1	
LOS		F		B		F		F			F	
Approach Delay		448.6			836.3			133.8			85.1	
Approach LOS		F			F			F			F	

Intersection Summary			
Area Type:	CBD		
Cycle Length: 45			
Actuated Cycle Length: 45			
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green, Master Intersection			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 2.82			
Intersection Signal Delay: 323.6		Intersection LOS: F	
Intersection Capacity Utilization 140.6%		ICU Level of Service H	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 6: Fair Oaks Ave & SR-110 Off Ramp/Grevelia St



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	2	1185	900	13
Future Volume (vph)	0	0	2	1185	900	13
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0	0	50			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	*0.95	*0.95	*0.95	0.95	0.95	0.95
Ped Bike Factor						
Frt					0.996	
Flt Protected			0.950			
Satd. Flow (prot)	1006	0	948	1878	1871	0
Flt Permitted			0.950			
Satd. Flow (perm)	1006	0	948	1878	1871	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	109			380	394	
Travel Time (s)	2.5			8.6	9.0	
Confl. Bikes (#/hr)		4				4
Peak Hour Factor	0.25	0.43	0.93	0.92	0.97	0.50
Bus Blockages (#/hr)	0	0	2	2	2	2
Parking (#/hr)				5	5	5
Mid-Block Traffic (%)	0%			5%	5%	
Adj. Flow (vph)	0	0	2	1288	928	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	2	1288	954	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.99	1.99	2.01	2.15	2.15	1.99
Turning Speed (mph)	15	9	15			9
Sign Control	Yield			Free	Free	

Intersection Summary			
Area Type:	CBD		
Control Type: Unsignalized			
Intersection Capacity Utilization 61.0%		ICU Level of Service B	
Analysis Period (min) 15			
* User Entered Value			

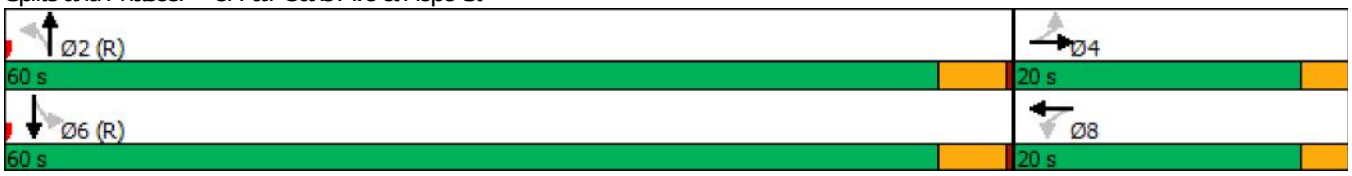
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	6	12	19	10	71	22	1100	16	39	807	41
Future Volume (vph)	27	6	12	19	10	71	22	1100	16	39	807	41
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	0.95	0.95	*0.95	0.95	0.95
Ped Bike Factor		0.99			0.98		0.99	1.00		0.99	1.00	
Frt		0.968			0.900			0.997			0.991	
Flt Protected		0.968			0.992		0.950			0.950		
Satd. Flow (prot)	0	935	0	0	882	0	956	1869	0	956	1855	0
Flt Permitted		0.798			0.956		0.294			0.203		
Satd. Flow (perm)	0	767	0	0	847	0	293	1869	0	202	1855	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			105			5			19	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		390			550			212			380	
Travel Time (s)		10.6			15.0			4.8			8.6	
Confl. Peds. (#/hr)	8		14	14		8	16		34	34		16
Confl. Bikes (#/hr)			3			1			1			3
Peak Hour Factor	0.57	0.71	0.69	0.83	0.67	0.66	0.75	0.95	0.75	0.82	0.96	0.77
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	2	0	2	2
Parking (#/hr)								5	5		5	5
Mid-Block Traffic (%)		0%			0%			5%			5%	
Adj. Flow (vph)	47	8	17	23	15	108	29	1158	21	48	841	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	72	0	0	146	0	29	1179	0	48	894	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.15	1.99	1.99	2.15	1.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.5	20.5		20.5	20.5	
Total Split (s)	20.0	20.0		20.0	20.0		60.0	60.0		60.0	60.0	
Total Split (%)	25.0%	25.0%		25.0%	25.0%		75.0%	75.0%		75.0%	75.0%	
Maximum Green (s)	17.0	17.0		17.0	17.0		55.5	55.5		55.5	55.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	0.0		0.0	0.0		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		3.0			3.0		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		17.0			17.0		55.5	55.5		55.5	55.5	
Actuated g/C Ratio		0.21			0.21		0.69	0.69		0.69	0.69	
v/c Ratio		0.41			0.56		0.14	0.91		0.34	0.69	
Control Delay		29.9			19.1		6.1	22.7		13.0	10.6	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		29.9			19.1		6.1	22.7		13.0	10.6	
LOS		C			B		A	C		B	B	
Approach Delay		29.9			19.1			22.3			10.7	
Approach LOS		C			B			C			B	

Intersection Summary			
Area Type:	CBD		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 80			
Control Type: Pretimed			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 17.7		Intersection LOS: B	
Intersection Capacity Utilization 77.4%		ICU Level of Service D	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 8: Fair Oaks Ave & Hope St

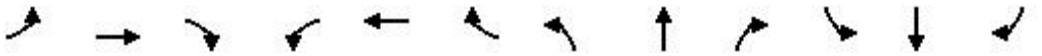


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	8	6	5	29	3	0
Future Volume (vph)	8	6	5	29	3	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.941					
Flt Protected	0.973			0.993		
Satd. Flow (prot)	1077	0	0	1168	1176	0
Flt Permitted	0.973			0.993		
Satd. Flow (perm)	1077	0	0	1168	1176	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	410			79	400	
Travel Time (s)	11.2			2.2	10.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	7	5	32	3	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	16	0	0	37	3	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.1%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	30	23	10	20	0	0
Future Volume (vph)	30	23	10	20	0	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.942		0.910			
Flt Protected	0.972					
Satd. Flow (prot)	1077	0	1071	0	0	1176
Flt Permitted	0.972					
Satd. Flow (perm)	1077	0	1071	0	0	1176
Link Speed (mph)	30		30			30
Link Distance (ft)	111		285			79
Travel Time (s)	2.5		6.5			1.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	25	11	22	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	58	0	33	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15	9		9	15	
Sign Control	Yield		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.9%		ICU Level of Service A	
Analysis Period (min) 15			

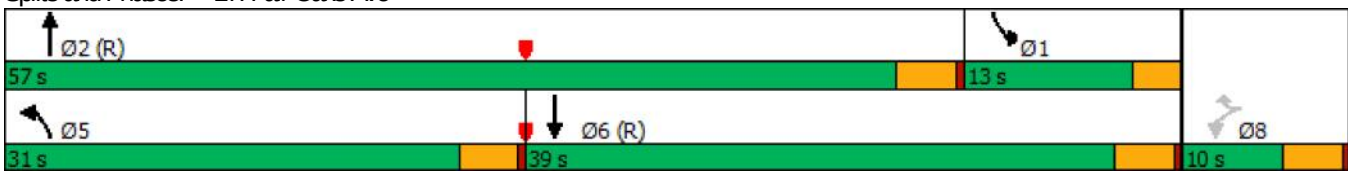


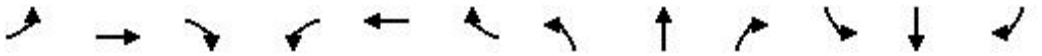
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	50	0	50	600	600	0	50	800	0
Future Volume (vph)	0	0	0	50	0	50	600	600	0	50	800	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	2		1	2		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	0.95	*0.95	*0.95	0.95	*0.95
Frt						0.850						
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	0	0	2124	0	950	2124	2235	0	1062	2235	0
Flt Permitted				0.950			0.950			0.950		
Satd. Flow (perm)	0	0	0	2124	0	950	2124	2235	0	1062	2235	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						123						
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		157			233			172			177	
Travel Time (s)		3.6			5.3			3.9			4.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	54	0	54	652	652	0	54	870	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	54	0	54	652	652	0	54	870	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1		1	1	2		1	2	
Detector Template				Left		Right	Left	Thru		Left	Thru	
Leading Detector (ft)				20		20	20	100		20	100	
Trailing Detector (ft)				0		0	0	0		0	0	
Detector 1 Position(ft)				0		0	0	0		0	0	
Detector 1 Size(ft)				20		20	20	6		20	6	
Detector 1 Type				Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0		0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)				0.0		0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)				0.0		0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type				Perm		Perm	Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases				8		8						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase				8		8	5	2		1	6	
Switch Phase												
Minimum Initial (s)				4.0		4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)				10.0		10.0	8.0	20.0		8.0	20.0	
Total Split (s)				10.0		10.0	31.0	57.0		13.0	39.0	
Total Split (%)				12.5%		12.5%	38.8%	71.3%		16.3%	48.8%	
Maximum Green (s)				6.0		6.0	27.0	53.0		10.0	35.0	
Yellow Time (s)				3.5		3.5	3.5	3.5		3.0	3.5	
All-Red Time (s)				0.5		0.5	0.5	0.5		0.0	0.5	
Lost Time Adjust (s)				0.0		0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)				4.0		4.0	4.0	4.0		3.0	4.0	
Lead/Lag							Lead	Lead		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)				3.0		3.0	3.0	3.0		3.0	3.0	
Recall Mode				None		None	None	C-Max		None	C-Max	
Walk Time (s)				5.0		5.0		5.0			5.0	
Flash Dont Walk (s)				11.0		11.0		11.0			11.0	
Pedestrian Calls (#/hr)				0		0		0			0	
Act Effct Green (s)				5.9		5.9	26.3	61.0		8.6	37.7	
Actuated g/C Ratio				0.07		0.07	0.33	0.76		0.11	0.47	
v/c Ratio				0.35		0.29	0.93	0.38		0.47	0.83	
Control Delay				41.6		4.0	48.7	5.8		47.1	28.3	
Queue Delay				0.0		0.0	49.7	1.5		0.0	0.0	
Total Delay				41.6		4.0	98.4	7.2		47.1	28.3	
LOS				D		A	F	A		D	C	
Approach Delay					22.8			52.8			29.4	
Approach LOS					C			D			C	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 42.2	Intersection LOS: D
Intersection Capacity Utilization 75.4%	ICU Level of Service D
Analysis Period (min) 15	
* User Entered Value	

Splits and Phases: 27: Fair Oaks Ave



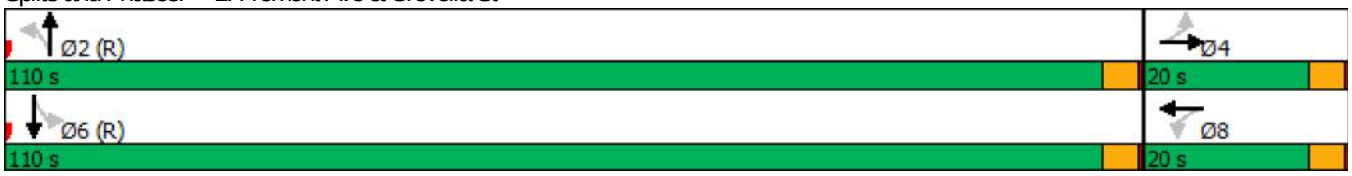


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	5	8	0	3	13	6	647	6	9	691	6
Future Volume (vph)	9	5	8	0	3	13	6	647	6	9	691	6
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt		0.959			0.892			0.998			0.997	
Flt Protected		0.976						0.999			0.999	
Satd. Flow (prot)	0	1004	0	0	957	0	0	952	0	0	951	0
Flt Permitted		0.873						0.989			0.973	
Satd. Flow (perm)	0	898	0	0	957	0	0	943	0	0	926	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			24			3			3	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		327			410			400			155	
Travel Time (s)		8.9			11.2			9.1			3.5	
Peak Hour Factor	0.50	0.71	0.70	0.25	0.50	0.55	0.58	0.92	0.50	0.45	0.95	0.38
Bus Blockages (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Parking (#/hr)								2	2		2	2
Adj. Flow (vph)	18	7	11	0	6	24	10	703	12	20	727	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	36	0	0	30	0	0	725	0	0	763	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.76	1.84	1.76	1.76	1.84	1.76	1.76	2.11	1.76	1.76	2.11	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		110.0	110.0		110.0	110.0	
Total Split (%)	15.4%	15.4%		15.4%	15.4%		84.6%	84.6%		84.6%	84.6%	
Maximum Green (s)	16.0	16.0		16.0	16.0		106.0	106.0		106.0	106.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		16.0			16.0			106.0			106.0	
Actuated g/C Ratio		0.12			0.12			0.82			0.82	
v/c Ratio		0.30			0.22			0.94			1.01	
Control Delay		46.5			26.7			33.0			49.2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		46.5			26.7			33.0			49.2	
LOS		D			C			C			D	
Approach Delay		46.5			26.7			33.0			49.2	
Approach LOS		D			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 130			
Control Type: Pretimed			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 41.1		Intersection LOS: D	
Intersection Capacity Utilization 82.5%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Fremont Ave & Grevelia St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	0	7	2	1	4	2	672	2	1	681	7
Future Volume (vph)	3	0	7	2	1	4	2	672	2	1	681	7
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.905			0.926			0.999			0.997	
Flt Protected		0.985			0.982		0.950			0.950		
Satd. Flow (prot)	0	1049	0	0	1070	0	1118	1175	0	1118	1173	0
Flt Permitted		0.985			0.982		0.950			0.950		
Satd. Flow (perm)	0	1049	0	0	1070	0	1118	1175	0	1118	1173	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		275			410			365			400	
Travel Time (s)		7.5			11.2			8.3			9.1	
Peak Hour Factor	0.25	0.92	0.25	0.50	0.92	0.62	0.62	0.98	0.50	0.62	0.97	0.50
Adj. Flow (vph)	12	0	28	4	1	6	3	686	4	2	702	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	0	0	11	0	3	690	0	2	716	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

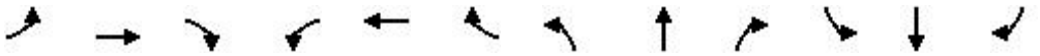
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 67.4%		ICU Level of Service C	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	20	38	7	9	25	26	649	32	27	660	5
Future Volume (vph)	3	20	38	7	9	25	26	649	32	27	660	5
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.918			0.913			0.986			0.998	
Flt Protected		0.998			0.993		0.950			0.950		
Satd. Flow (prot)	0	1078	0	0	1067	0	1118	1160	0	1118	1174	0
Flt Permitted		0.998			0.993		0.950			0.950		
Satd. Flow (perm)	0	1078	0	0	1067	0	1118	1160	0	1118	1174	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		262			410			182			365	
Travel Time (s)		7.1			11.2			4.1			8.3	
Peak Hour Factor	0.67	0.65	0.71	0.92	0.67	0.66	0.66	0.98	0.46	0.72	0.97	0.75
Adj. Flow (vph)	4	31	54	8	13	38	39	662	70	38	680	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	0	0	59	0	39	732	0	38	687	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 71.6%		ICU Level of Service C	
Analysis Period (min) 15			

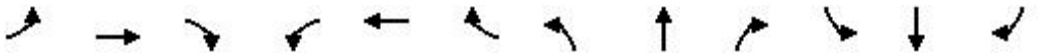
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	15	7	0	0	17	12
Future Volume (vph)	15	7	0	0	17	12
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt	0.940				0.944	
Flt Protected					0.971	
Satd. Flow (prot)	1051	0	0	0	1024	0
Flt Permitted					0.971	
Satd. Flow (perm)	1051	0	0	0	1024	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	410			76	400	
Travel Time (s)	9.3			1.7	9.1	
Peak Hour Factor	0.62	0.36	0.92	0.92	0.62	0.62
Adj. Flow (vph)	24	19	0	0	27	19
Shared Lane Traffic (%)						
Lane Group Flow (vph)	43	0	0	0	46	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			
* User Entered Value			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	56	20	56	33	9	6	16	21	20	11	0
Future Volume (vph)	4	56	20	56	33	9	6	16	21	20	11	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.959			0.988			0.944				
Flt Protected		0.998			0.973			0.993			0.970	
Satd. Flow (prot)	0	1126	0	0	1131	0	0	1103	0	0	1141	0
Flt Permitted		0.998			0.973			0.993			0.970	
Satd. Flow (perm)	0	1126	0	0	1131	0	0	1103	0	0	1141	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		410			390			181			285	
Travel Time (s)		11.2			10.6			4.9			7.8	
Peak Hour Factor	0.62	0.70	0.52	0.70	0.67	0.67	0.69	0.53	0.75	0.72	0.66	0.25
Adj. Flow (vph)	6	80	38	80	49	13	9	30	28	28	17	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	124	0	0	142	0	0	67	0	0	45	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.7%		ICU Level of Service A	
Analysis Period (min) 15			



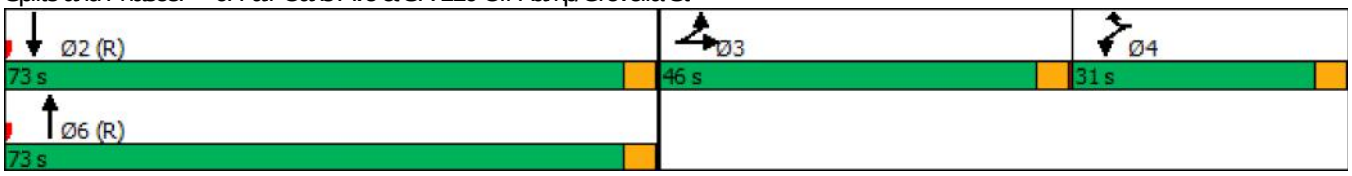
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	157	378	220	11	0	320	0	1021	37	0	1203	0
Future Volume (vph)	157	378	220	11	0	320	0	1021	37	0	1203	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	0		0
Storage Lanes	0		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	*0.95	*0.95	*0.95	*0.95	0.91	0.91	*0.95	0.95	*0.95
Ped Bike Factor		0.99		1.00				1.00				
Frt		0.952				0.850		0.993				
Flt Protected		0.989		0.950								
Satd. Flow (prot)	0	1959	0	929	0	831	0	3043	0	0	2087	0
Flt Permitted		0.989		0.950								
Satd. Flow (perm)	0	1959	0	925	0	831	0	3043	0	0	2087	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		53				200		7				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		241			567			394			142	
Travel Time (s)		5.5			12.9			9.0			3.2	
Confl. Peds. (#/hr)			8	8					8			
Confl. Bikes (#/hr)			2						3			
Peak Hour Factor	0.85	0.96	0.80	0.75	0.92	0.79	0.92	0.90	0.63	0.92	0.96	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	2	0	2	2
Parking (#/hr)	5	5	5	5	5	5		5	5		5	5
Mid-Block Traffic (%)		0%			0%			5%			5%	
Adj. Flow (vph)	185	394	275	15	0	405	0	1134	59	0	1253	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	854	0	15	0	405	0	1193	0	0	1253	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.76	1.90	1.76	2.05	1.76	2.05	1.76	1.85	1.76	1.76	1.90	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA		Prot		Prot		NA			NA	
Protected Phases	3	3		4		4		6			2	
Permitted Phases												
Minimum Split (s)	8.0	8.0		8.0		8.0		20.0			20.0	
Total Split (s)	46.0	46.0		31.0		31.0		73.0			73.0	
Total Split (%)	30.7%	30.7%		20.7%		20.7%		48.7%			48.7%	
Maximum Green (s)	42.0	42.0		27.0		27.0		69.0			69.0	
Yellow Time (s)	3.5	3.5		3.5		3.5		3.5			3.5	
All-Red Time (s)	0.5	0.5		0.5		0.5		0.5			0.5	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0			0.0	
Total Lost Time (s)		4.0		4.0		4.0		4.0			4.0	
Lead/Lag	Lead	Lead		Lag		Lag						
Lead-Lag Optimize?	Yes	Yes		Yes		Yes						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)								5.0			5.0	
Flash Dont Walk (s)								11.0			11.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)		42.0		27.0		27.0		69.0			69.0	
Actuated g/C Ratio		0.28		0.18		0.18		0.46			0.46	
v/c Ratio		1.46		0.09		1.29		0.85			1.31	
Control Delay		251.2		53.1		177.7		42.9			179.4	
Queue Delay		0.0		0.0		0.0		0.0			2.3	
Total Delay		251.2		53.1		177.7		42.9			181.8	
LOS		F		D		F		D			F	
Approach Delay		251.2			173.2			42.9			181.8	
Approach LOS		F			F			D			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 150			
Control Type: Pretimed			
Maximum v/c Ratio: 1.46			
Intersection Signal Delay: 152.2		Intersection LOS: F	
Intersection Capacity Utilization 109.1%		ICU Level of Service H	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 6: Fair Oaks Ave & SR-110 Off Ramp/Grevelia St



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	8	5	1072	1344	7
Future Volume (vph)	0	8	5	1072	1344	7
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0	0	50			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	*0.95	*0.95	*0.95	0.95	0.95	0.95
Ped Bike Factor						
Frt	0.865				0.998	
Flt Protected			0.950			
Satd. Flow (prot)	967	0	1062	2096	2091	0
Flt Permitted			0.950			
Satd. Flow (perm)	967	0	1062	2096	2091	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	109			380	394	
Travel Time (s)	2.5			8.6	9.0	
Confl. Bikes (#/hr)		4				4
Peak Hour Factor	0.25	0.43	0.93	0.92	0.97	0.50
Parking (#/hr)				5	5	5
Mid-Block Traffic (%)	0%			5%	5%	
Adj. Flow (vph)	0	19	5	1165	1386	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	0	5	1165	1400	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.76	1.76	1.76	1.90	1.90	1.76
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 69.2%		ICU Level of Service C	
Analysis Period (min) 15			

* User Entered Value

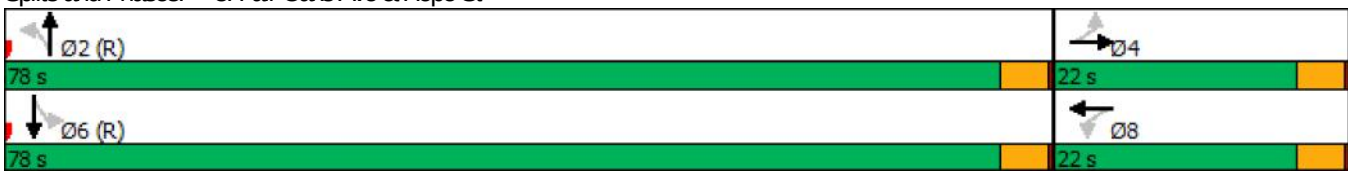
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	22	30	25	17	38	20	995	39	80	1217	69
Future Volume (vph)	39	22	30	25	17	38	20	995	39	80	1217	69
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	0.95	0.95	*0.95	0.95	0.95
Ped Bike Factor		0.98			0.97		0.99	0.99		0.98	0.99	
Frt		0.959			0.931			0.993			0.990	
Flt Protected		0.977			0.987		0.950			0.950		
Satd. Flow (prot)	0	813	0	0	789	0	956	1854	0	956	1849	0
Flt Permitted		0.768			0.902		0.165			0.231		
Satd. Flow (perm)	0	632	0	0	717	0	165	1854	0	228	1849	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			46			14			20	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		390			550			212			380	
Travel Time (s)		10.6			15.0			4.8			8.6	
Confl. Peds. (#/hr)	18		16	16		18	22		36	36		22
Confl. Bikes (#/hr)			3			3			2			2
Peak Hour Factor	0.57	0.71	0.69	0.83	0.67	0.66	0.75	0.95	0.75	0.82	0.96	0.77
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	2	0	2	2
Parking (#/hr)	5	5	5	5	5	5		5	5		5	5
Mid-Block Traffic (%)		0%			0%			5%			5%	
Adj. Flow (vph)	68	31	43	30	25	58	27	1047	52	98	1268	90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	142	0	0	113	0	27	1099	0	98	1358	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.99	2.31	1.99	1.99	2.31	1.99	1.99	2.15	1.99	1.99	2.15	1.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	22.0	22.0		22.0	22.0		78.0	78.0		78.0	78.0	
Total Split (%)	22.0%	22.0%		22.0%	22.0%		78.0%	78.0%		78.0%	78.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		74.0	74.0		74.0	74.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		18.0			18.0		74.0	74.0		74.0	74.0	
Actuated g/C Ratio		0.18			0.18		0.74	0.74		0.74	0.74	
v/c Ratio		1.10			0.68		0.22	0.80		0.58	0.99	
Control Delay		144.8			45.6		9.1	13.9		23.1	35.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		144.8			45.6		9.1	13.9		23.1	35.8	
LOS		F			D		A	B		C	D	
Approach Delay		144.8			45.6			13.8			35.0	
Approach LOS		F			D			B			C	

Intersection Summary			
Area Type:	CBD		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 100			
Control Type: Pretimed			
Maximum v/c Ratio: 1.10			
Intersection Signal Delay: 32.5		Intersection LOS: C	
Intersection Capacity Utilization 90.7%		ICU Level of Service E	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 8: Fair Oaks Ave & Hope St

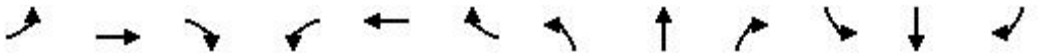


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	12	5	19	19	4
Future Volume (vph)	2	12	5	19	19	4
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.883				0.978	
Flt Protected	0.993			0.990		
Satd. Flow (prot)	1032	0	0	1165	1151	0
Flt Permitted	0.993			0.990		
Satd. Flow (perm)	1032	0	0	1165	1151	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	410			79	400	
Travel Time (s)	11.2			2.2	10.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	13	5	21	21	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	15	0	0	26	25	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.4%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	30	23	10	20	0	0
Future Volume (vph)	30	23	10	20	0	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.942		0.910			
Flt Protected	0.972					
Satd. Flow (prot)	1077	0	1071	0	0	1176
Flt Permitted	0.972					
Satd. Flow (perm)	1077	0	1071	0	0	1176
Link Speed (mph)	30		30			30
Link Distance (ft)	111		285			79
Travel Time (s)	2.5		6.5			1.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	25	11	22	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	58	0	33	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15	9		9	15	
Sign Control	Yield		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.9%		ICU Level of Service A	
Analysis Period (min) 15			

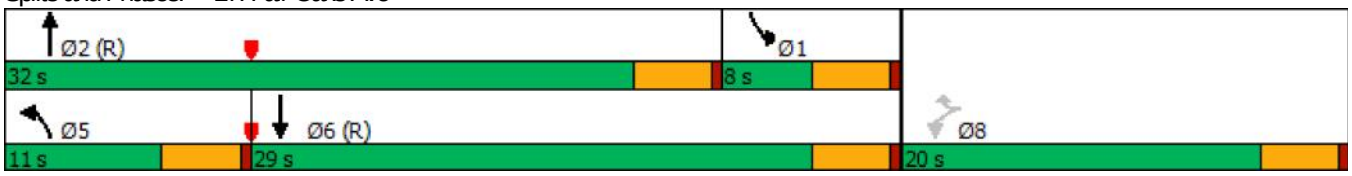


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	50	0	50	600	600	0	50	800	0
Future Volume (vph)	0	0	0	50	0	50	600	600	0	50	800	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	2		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.95	1.00	0.95	0.95	1.00
Frt						0.850						
Flt Protected				0.950			0.950				0.997	
Satd. Flow (prot)	0	0	0	2168	0	1000	2168	2235	0	0	2229	0
Flt Permitted				0.950			0.950				0.892	
Satd. Flow (perm)	0	0	0	2168	0	1000	2168	2235	0	0	1994	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						164						
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		211			278			142			65	
Travel Time (s)		4.8			6.3			3.2			1.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	54	0	54	652	652	0	54	870	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	54	0	54	652	652	0	0	924	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm		Perm	Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases				8		8						
Minimum Split (s)				20.0		20.0	8.0	20.0		8.0	20.0	
Total Split (s)				20.0		20.0	11.0	32.0		8.0	29.0	
Total Split (%)				33.3%		33.3%	18.3%	53.3%		13.3%	48.3%	
Maximum Green (s)				16.0		16.0	7.0	28.0		4.0	25.0	
Yellow Time (s)				3.5		3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)				0.5		0.5	0.5	0.5		0.5	0.5	
Lost Time Adjust (s)				0.0		0.0	0.0	0.0			0.0	
Total Lost Time (s)				4.0		4.0	4.0	4.0			4.0	
Lead/Lag							Lead	Lead		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Walk Time (s)				5.0		5.0		5.0			5.0	
Flash Dont Walk (s)				11.0		11.0		11.0			11.0	
Pedestrian Calls (#/hr)				0		0		0			0	
Act Effct Green (s)				16.0		16.0	7.0	28.0			25.0	
Actuated g/C Ratio				0.27		0.27	0.12	0.47			0.42	
v/c Ratio				0.09		0.14	2.59	0.63			4.28	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay				17.2		0.8	743.9	15.4			1497.9	
Queue Delay				0.0		0.0	0.5	53.8			0.0	
Total Delay				17.2		0.8	744.4	69.2			1497.9	
LOS				B		A	F	E			F	
Approach Delay					9.0			406.8			1497.9	
Approach LOS					A			F			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 4.28			
Intersection Signal Delay: 820.0		Intersection LOS: F	
Intersection Capacity Utilization 77.7%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 27: Fair Oaks Ave



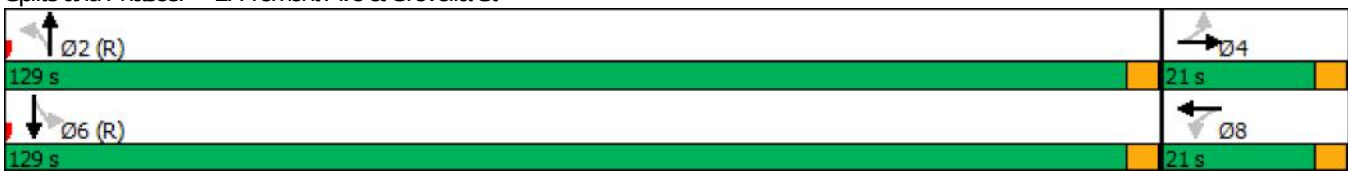
Existing Conditions + Project

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	9	9	2	6	2	3	730	1	3	574	0
Future Volume (vph)	4	9	9	2	6	2	3	730	1	3	574	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt		0.948			0.977							
Flt Protected		0.988			0.984						0.999	
Satd. Flow (prot)	0	879	0	0	903	0	0	939	0	0	938	0
Flt Permitted		0.948			0.927			0.997			0.991	
Satd. Flow (perm)	0	844	0	0	850	0	0	936	0	0	930	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			4							
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		327			410			400			155	
Travel Time (s)		8.9			11.2			9.1			3.5	
Peak Hour Factor	0.50	0.71	0.70	0.25	0.50	0.55	0.58	0.92	0.50	0.45	0.95	0.38
Bus Blockages (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Parking (#/hr)	5	5	5	5	5	5	5	5	5	5	5	5
Adj. Flow (vph)	8	13	13	8	12	4	5	793	2	7	604	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	34	0	0	24	0	0	800	0	0	611	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.76	2.15	1.76	1.76	2.15	1.76	1.76	2.15	1.76	1.76	2.15	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	21.0	21.0		21.0	21.0		20.0	20.0		20.0	20.0	
Total Split (s)	21.0	21.0		21.0	21.0		129.0	129.0		129.0	129.0	
Total Split (%)	14.0%	14.0%		14.0%	14.0%		86.0%	86.0%		86.0%	86.0%	
Maximum Green (s)	17.0	17.0		17.0	17.0		125.0	125.0		125.0	125.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		17.0			17.0			125.0			125.0	
Actuated g/C Ratio		0.11			0.11			0.83			0.83	
v/c Ratio		0.32			0.24			1.03			0.79	
Control Delay		51.1			59.6			53.2			15.4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		51.1			59.6			53.2			15.4	
LOS		D			E			D			B	
Approach Delay		51.1			59.6			53.2			15.4	
Approach LOS		D			E			D			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 150			
Control Type: Pretimed			
Maximum v/c Ratio: 1.03			
Intersection Signal Delay: 37.5		Intersection LOS: D	
Intersection Capacity Utilization 74.2%		ICU Level of Service D	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Fremont Ave & Grevelia St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	6	0	0	10	3	719	1	7	583	4
Future Volume (vph)	1	0	6	0	0	10	3	719	1	7	583	4
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt		0.884			0.865						0.998	
Flt Protected		0.993					0.950			0.950		
Satd. Flow (prot)	0	981	0	0	967	0	1062	1118	0	1062	1115	0
Flt Permitted		0.993					0.950			0.950		
Satd. Flow (perm)	0	981	0	0	967	0	1062	1118	0	1062	1115	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		275			410			365			400	
Travel Time (s)		7.5			11.2			8.3			9.1	
Peak Hour Factor	0.25	0.92	0.25	0.50	0.92	0.62	0.62	0.98	0.50	0.62	0.97	0.50
Adj. Flow (vph)	4	0	24	0	0	16	5	734	2	11	601	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	28	0	0	16	0	5	736	0	11	609	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 70.0%		ICU Level of Service C	
Analysis Period (min) 15			

* User Entered Value

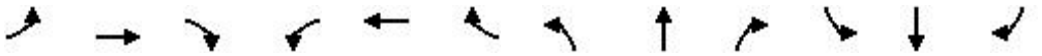
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	7	42	4	6	22	18	698	27	18	566	3
Future Volume (vph)	2	7	42	4	6	22	18	698	27	18	566	3
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt		0.891			0.903			0.989			0.999	
Flt Protected		0.998			0.996		0.950			0.950		
Satd. Flow (prot)	0	994	0	0	1005	0	1062	1105	0	1062	1117	0
Flt Permitted		0.998			0.996		0.950			0.950		
Satd. Flow (perm)	0	994	0	0	1005	0	1062	1105	0	1062	1117	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		262			410			182			365	
Travel Time (s)		7.1			11.2			4.1			8.3	
Peak Hour Factor	0.67	0.65	0.71	0.92	0.67	0.66	0.66	0.98	0.46	0.72	0.97	0.75
Adj. Flow (vph)	3	11	59	4	9	33	27	712	59	25	584	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	73	0	0	46	0	27	771	0	25	588	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 72.9%		ICU Level of Service C	
Analysis Period (min) 15			

* User Entered Value

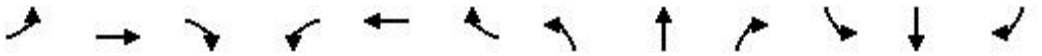
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	8	5	0	0	12	16
Future Volume (vph)	8	5	0	0	12	16
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt	0.930				0.922	
Flt Protected					0.979	
Satd. Flow (prot)	1039	0	0	0	1009	0
Flt Permitted					0.979	
Satd. Flow (perm)	1039	0	0	0	1009	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	410			76	400	
Travel Time (s)	9.3			1.7	9.1	
Peak Hour Factor	0.62	0.36	0.92	0.92	0.62	0.62
Adj. Flow (vph)	13	14	0	0	19	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	0	0	45	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			
* User Entered Value			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	25	12	23	27	16	9	26	15	13	10	3
Future Volume (vph)	11	25	12	23	27	16	9	26	15	13	10	3
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt		0.960			0.967			0.967			0.964	
Flt Protected		0.988			0.983			0.992			0.980	
Satd. Flow (prot)	0	1060	0	0	1062	0	0	1072	0	0	1056	0
Flt Permitted		0.988			0.983			0.992			0.980	
Satd. Flow (perm)	0	1060	0	0	1062	0	0	1072	0	0	1056	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		410			390			181			285	
Travel Time (s)		11.2			10.6			4.9			7.8	
Peak Hour Factor	0.62	0.70	0.52	0.70	0.67	0.67	0.69	0.53	0.75	0.72	0.66	0.25
Adj. Flow (vph)	18	36	23	33	40	24	13	49	20	18	15	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	77	0	0	97	0	0	82	0	0	45	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.1%		ICU Level of Service A	
Analysis Period (min) 15			
* User Entered Value			



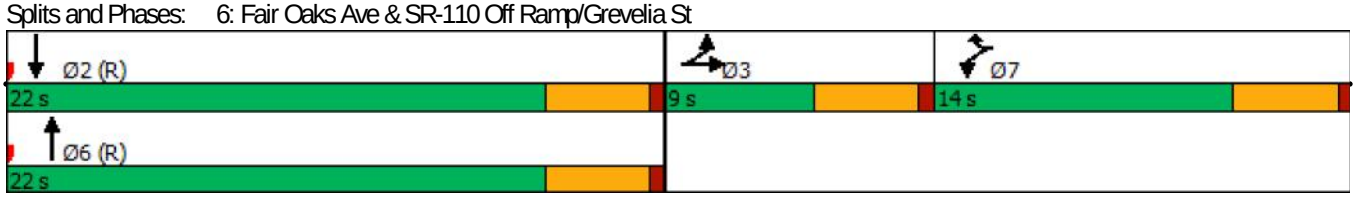
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	126	139	6	0	579	0	1222	22	0	778	0
Future Volume (vph)	230	126	139	6	0	579	0	1222	22	0	778	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	0		0
Storage Lanes	0		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	*0.95	*0.95	*0.95	*0.95	0.91	0.91	*0.95	0.95	*0.95
Ped Bike Factor		0.99		1.00				1.00				
Frt		0.955				0.850		0.996				
Flt Protected		0.977		0.950								
Satd. Flow (prot)	0	1738	0	836	0	748	0	2749	0	0	1878	0
Flt Permitted		0.977		0.950								
Satd. Flow (perm)	0	1738	0	833	0	748	0	2749	0	0	1878	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		121				121		10				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		241			567			68			172	
Travel Time (s)		5.5			12.9			1.5			3.9	
Confl. Peds. (#/hr)			8	7					36			
Confl. Bikes (#/hr)			4									
Peak Hour Factor	0.85	0.96	0.80	0.75	0.92	0.79	0.92	0.90	0.63	0.92	0.96	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	2	2	2	2	2	2
Parking (#/hr)	5	5	5	5	5	5	5	5	5	0	5	5
Mid-Block Traffic (%)		0%			0%			5%			5%	
Adj. Flow (vph)	271	131	174	8	0	733	0	1358	35	0	810	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	576	0	8	0	733	0	1393	0	0	810	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.99	2.14	1.99	2.31	1.99	2.31	1.99	2.09	1.99	1.99	2.15	1.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1		1		2			2	
Detector Template	Left	Thru		Left		Right		Thru			Thru	
Leading Detector (ft)	20	100		20		20		100			100	
Trailing Detector (ft)	0	0		0		0		0			0	
Detector 1 Position(ft)	0	0		0		0		0			0	
Detector 1 Size(ft)	20	6		20		20		6			6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0		0.0		0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0		0.0		0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0		0.0		0.0			0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	

Lanes, Volumes, Timings
6: Fair Oaks Ave & SR-110 Off Ramp/Grevelia St 07/05/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA		Prot		Prot		NA			NA	
Protected Phases	3	3		7		7		6			2	
Permitted Phases												
Detector Phase	3	3		7		7		6			2	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0		4.0		4.0			4.0	
Minimum Split (s)	8.0	8.0		8.0		8.0		20.0			20.0	
Total Split (s)	9.0	9.0		14.0		14.0		22.0			22.0	
Total Split (%)	20.0%	20.0%		31.1%		31.1%		48.9%			48.9%	
Maximum Green (s)	5.0	5.0		10.0		10.0		18.0			18.0	
Yellow Time (s)	3.5	3.5		3.5		3.5		3.5			3.5	
All-Red Time (s)	0.5	0.5		0.5		0.5		0.5			0.5	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0			0.0	
Total Lost Time (s)		4.0		4.0		4.0		4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0		3.0		3.0			3.0	
Recall Mode	None	None		None		None		C-Max			C-Max	
Walk Time (s)								5.0			5.0	
Flash Dont Walk (s)								11.0			11.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)		5.0		10.0		10.0		18.0			18.0	
Actuated g/C Ratio		0.11		0.22		0.22		0.40			0.40	
v/c Ratio		1.92		0.04		2.82		1.26			1.08	
Control Delay		444.4		14.5		844.2		143.6			74.9	
Queue Delay		0.0		0.0		0.0		0.0			9.8	
Total Delay		444.4		14.5		844.2		143.6			84.8	
LOS		F		B		F		F			F	
Approach Delay		444.4			835.2			143.6			84.8	
Approach LOS		F			F			F			F	

Intersection Summary			
Area Type:	CBD		
Cycle Length: 45			
Actuated Cycle Length: 45			
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green, Master Intersection			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 2.82			
Intersection Signal Delay: 324.8		Intersection LOS: F	
Intersection Capacity Utilization 141.5%		ICU Level of Service H	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 6: Fair Oaks Ave & SR-110 Off Ramp/Grevelia St



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	2	1185	900	13
Future Volume (vph)	0	0	2	1185	900	13
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0	0	50			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	*0.95	*0.95	*0.95	0.95	0.95	0.95
Ped Bike Factor						
Frt					0.996	
Flt Protected			0.950			
Satd. Flow (prot)	1006	0	948	1878	1871	0
Flt Permitted			0.950			
Satd. Flow (perm)	1006	0	948	1878	1871	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	109			380	326	
Travel Time (s)	2.5			8.6	7.4	
Confl. Bikes (#/hr)		4				4
Peak Hour Factor	0.25	0.43	0.93	0.92	0.97	0.50
Bus Blockages (#/hr)	0	0	2	2	2	2
Parking (#/hr)				5	5	5
Mid-Block Traffic (%)	0%			5%	5%	
Adj. Flow (vph)	0	0	2	1288	928	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	2	1288	954	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.99	1.99	2.01	2.15	2.15	1.99
Turning Speed (mph)	15	9	15			9
Sign Control	Yield			Free	Free	

Intersection Summary			
Area Type:	CBD		
Control Type: Unsignalized			
Intersection Capacity Utilization 61.0%		ICU Level of Service B	
Analysis Period (min) 15			
* User Entered Value			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	32	8	12	19	10	72	22	1104	16	2	39	812
Future Volume (vph)	32	8	12	19	10	72	22	1104	16	2	39	812
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0		50	
Storage Lanes	0		0	0		0	1		0		1	
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	0.95	0.95	0.95	*0.95	0.95
Ped Bike Factor		0.99			0.98		0.99	1.00			0.99	1.00
Frt		0.973			0.900			0.997				0.991
Flt Protected		0.968			0.992		0.950				0.950	
Satd. Flow (prot)	0	941	0	0	882	0	956	1869	0	0	956	1855
Flt Permitted		0.763			0.955		0.293				0.202	
Satd. Flow (perm)	0	738	0	0	846	0	292	1869	0	0	201	1855
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)		14			90			5				19
Link Speed (mph)		25			25			30				30
Link Distance (ft)		390			550			212				380
Travel Time (s)		10.6			15.0			4.8				8.6
Confl. Peds. (#/hr)	8		14	14		8	16		34		34	
Confl. Bikes (#/hr)			3			1			1			
Peak Hour Factor	0.57	0.71	0.69	0.83	0.67	0.66	0.75	0.95	0.75	0.92	0.82	0.96
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	2	0	0	2
Parking (#/hr)								5	5			5
Mid-Block Traffic (%)		0%			0%			5%				5%
Adj. Flow (vph)	56	11	17	23	15	109	29	1162	21	2	48	846
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	84	0	0	147	0	29	1183	0	0	50	899
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	R NA	Left	Left
Median Width(ft)		0			0			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane								Yes				Yes
Headway Factor	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.15	1.99	1.99	1.99	2.15
Turning Speed (mph)	15		9	15		9	15		9	9	15	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	Perm	NA
Protected Phases		4			8			2				6
Permitted Phases	4			8			2			6	6	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.5	20.5		20.5	20.5	20.5
Total Split (s)	20.0	20.0		20.0	20.0		60.0	60.0		60.0	60.0	60.0
Total Split (%)	25.0%	25.0%		25.0%	25.0%		75.0%	75.0%		75.0%	75.0%	75.0%
Maximum Green (s)	17.0	17.0		17.0	17.0		55.5	55.5		55.5	55.5	55.5
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	0.0	0.0		0.0	0.0		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)		0.0			0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)		3.0			3.0		4.5	4.5			4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												

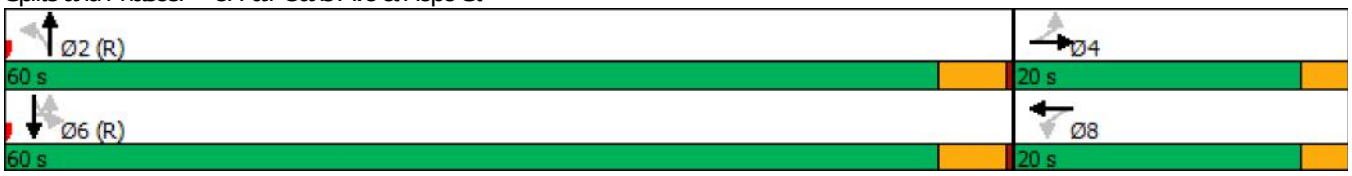
Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	41
Future Volume (vph)	41
Ideal Flow (vphpl)	1200
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Lane Util. Factor	0.95
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	16
Confl. Bikes (#/hr)	3
Peak Hour Factor	0.77
Bus Blockages (#/hr)	2
Parking (#/hr)	5
Mid-Block Traffic (%)	
Adj. Flow (vph)	53
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.99
Turning Speed (mph)	9
Turn Type	
Protected Phases	
Permitted Phases	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effct Green (s)		17.0			17.0		55.5	55.5			55.5	55.5
Actuated g/C Ratio		0.21			0.21		0.69	0.69			0.69	0.69
v/c Ratio		0.50			0.59		0.14	0.91			0.36	0.70
Control Delay		35.5			23.1		6.1	23.0			13.8	10.7
Queue Delay		0.0			0.0		0.0	0.0			0.0	0.0
Total Delay		35.5			23.1		6.1	23.0			13.8	10.7
LOS		D			C		A	C			B	B
Approach Delay		35.5			23.1			22.6				10.9
Approach LOS		D			C			C				B

Intersection Summary			
Area Type:	CBD		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 80			
Control Type: Pretimed			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 18.4		Intersection LOS: B	
Intersection Capacity Utilization 80.4%		ICU Level of Service D	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 8: Fair Oaks Ave & Hope St



Lane Group	SBR
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	8	6	5	29	3	0
Future Volume (vph)	8	6	5	29	3	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.941					
Flt Protected	0.973			0.993		
Satd. Flow (prot)	1077	0	0	1168	1176	0
Flt Permitted	0.973			0.993		
Satd. Flow (perm)	1077	0	0	1168	1176	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	410			79	400	
Travel Time (s)	11.2			2.2	10.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	7	5	32	3	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	16	0	0	37	3	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

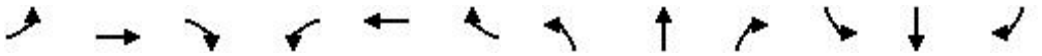
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.1%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	30	23	10	20	0	0
Future Volume (vph)	30	23	10	20	0	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.942		0.910			
Flt Protected	0.972					
Satd. Flow (prot)	1077	0	1071	0	0	1176
Flt Permitted	0.972					
Satd. Flow (perm)	1077	0	1071	0	0	1176
Link Speed (mph)	30		30			30
Link Distance (ft)	111		285			79
Travel Time (s)	2.5		6.5			1.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	25	11	22	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	58	0	33	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15	9		9	15	
Sign Control	Yield		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.9%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	6	0	0	0	0
Future Volume (vph)	0	6	0	0	0	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0	0	50			0
Storage Lanes	0	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1018	0	3212	2235	0
Flt Permitted						
Satd. Flow (perm)	0	1018	0	3212	2235	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	173			326	68	
Travel Time (s)	3.9			7.4	1.5	
Confl. Peds. (#/hr)		41				
Confl. Bikes (#/hr)		2				
Peak Hour Factor	0.59	0.59	0.92	0.91	0.96	0.92
Adj. Flow (vph)	0	10	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	10	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15	9	15			9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.3%		ICU Level of Service A	
Analysis Period (min) 15			

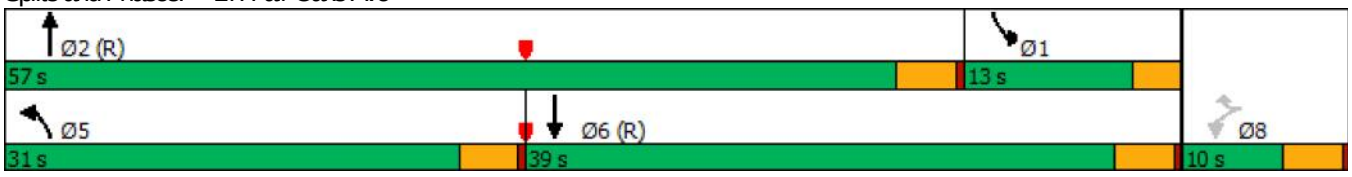


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	50	0	50	600	600	0	50	800	0
Future Volume (vph)	0	0	0	50	0	50	600	600	0	50	800	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	2		1	2		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	0.95	*0.95	*0.95	0.95	*0.95
Frt						0.850						
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	0	0	2124	0	950	2124	2235	0	1062	2235	0
Flt Permitted				0.950			0.950			0.950		
Satd. Flow (perm)	0	0	0	2124	0	950	2124	2235	0	1062	2235	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						123						
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		157			233			172			177	
Travel Time (s)		3.6			5.3			3.9			4.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	54	0	54	652	652	0	54	870	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	54	0	54	652	652	0	54	870	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1		1	1	2		1	2	
Detector Template				Left		Right	Left	Thru		Left	Thru	
Leading Detector (ft)				20		20	20	100		20	100	
Trailing Detector (ft)				0		0	0	0		0	0	
Detector 1 Position(ft)				0		0	0	0		0	0	
Detector 1 Size(ft)				20		20	20	6		20	6	
Detector 1 Type				Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0		0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)				0.0		0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)				0.0		0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type				Perm		Perm	Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases				8		8						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase				8		8	5	2		1	6	
Switch Phase												
Minimum Initial (s)				4.0		4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)				10.0		10.0	8.0	20.0		8.0	20.0	
Total Split (s)				10.0		10.0	31.0	57.0		13.0	39.0	
Total Split (%)				12.5%		12.5%	38.8%	71.3%		16.3%	48.8%	
Maximum Green (s)				6.0		6.0	27.0	53.0		10.0	35.0	
Yellow Time (s)				3.5		3.5	3.5	3.5		3.0	3.5	
All-Red Time (s)				0.5		0.5	0.5	0.5		0.0	0.5	
Lost Time Adjust (s)				0.0		0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)				4.0		4.0	4.0	4.0		3.0	4.0	
Lead/Lag							Lead	Lead		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)				3.0		3.0	3.0	3.0		3.0	3.0	
Recall Mode				None		None	None	C-Max		None	C-Max	
Walk Time (s)				5.0		5.0		5.0			5.0	
Flash Dont Walk (s)				11.0		11.0		11.0			11.0	
Pedestrian Calls (#/hr)				0		0		0			0	
Act Effct Green (s)				5.9		5.9	26.3	61.0		8.6	37.7	
Actuated g/C Ratio				0.07		0.07	0.33	0.76		0.11	0.47	
v/c Ratio				0.35		0.29	0.93	0.38		0.47	0.83	
Control Delay				41.6		4.0	48.7	5.8		47.1	28.3	
Queue Delay				0.0		0.0	49.7	1.5		0.0	0.0	
Total Delay				41.6		4.0	98.4	7.2		47.1	28.3	
LOS				D		A	F	A		D	C	
Approach Delay					22.8			52.8			29.4	
Approach LOS					C			D			C	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 42.2	Intersection LOS: D
Intersection Capacity Utilization 75.4%	ICU Level of Service D
Analysis Period (min) 15	
* User Entered Value	

Splits and Phases: 27: Fair Oaks Ave



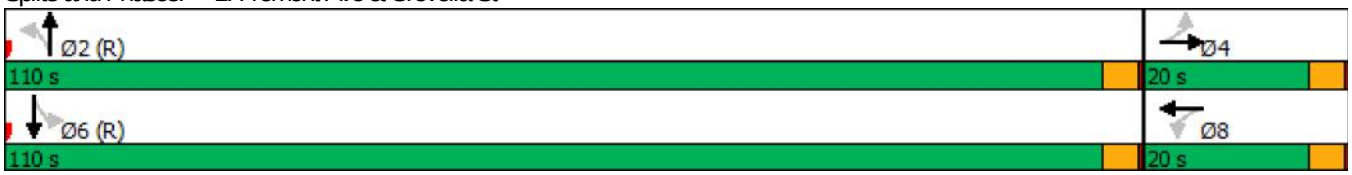
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	8	8	0	4	13	6	647	6	9	691	6
Future Volume (vph)	9	8	8	0	4	13	6	647	6	9	691	6
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt		0.963			0.899			0.998			0.997	
Flt Protected		0.978						0.999			0.999	
Satd. Flow (prot)	0	1011	0	0	965	0	0	952	0	0	951	0
Flt Permitted		0.882						0.989			0.973	
Satd. Flow (perm)	0	911	0	0	965	0	0	943	0	0	926	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			24			3			3	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		327			410			400			155	
Travel Time (s)		8.9			11.2			9.1			3.5	
Peak Hour Factor	0.50	0.71	0.70	0.25	0.50	0.55	0.58	0.92	0.50	0.45	0.95	0.38
Bus Blockages (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Parking (#/hr)								2	2		2	2
Adj. Flow (vph)	18	11	11	0	8	24	10	703	12	20	727	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	0	0	32	0	0	725	0	0	763	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.76	1.84	1.76	1.76	1.84	1.76	1.76	2.11	1.76	1.76	2.11	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		110.0	110.0		110.0	110.0	
Total Split (%)	15.4%	15.4%		15.4%	15.4%		84.6%	84.6%		84.6%	84.6%	
Maximum Green (s)	16.0	16.0		16.0	16.0		106.0	106.0		106.0	106.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		16.0			16.0			106.0			106.0	
Actuated g/C Ratio		0.12			0.12			0.82			0.82	
v/c Ratio		0.33			0.23			0.94			1.01	
Control Delay		48.8			28.2			33.0			49.2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		48.8			28.2			33.0			49.2	
LOS		D			C			C			D	
Approach Delay		48.8			28.2			33.0			49.2	
Approach LOS		D			C			C			D	
Stops (vph)		18			7			441			500	
Fuel Used(gal)		0			0			9			11	
CO Emissions (g/hr)		27			13			623			747	
NOx Emissions (g/hr)		5			3			121			145	
VOC Emissions (g/hr)		6			3			144			173	
Dilemma Vehicles (#)		0			0			0			0	
Queue Length 50th (ft)		24			6			411			~610	
Queue Length 95th (ft)		47			13			#882			#969	
Internal Link Dist (ft)		247			330			320			75	
Turn Bay Length (ft)												
Base Capacity (vph)		121			139			769			755	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.33			0.23			0.94			1.01	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 130			
Control Type: Pretimed			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 41.2		Intersection LOS: D	
Intersection Capacity Utilization 82.7%		ICU Level of Service E	
Analysis Period (min) 15			

* User Entered Value
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Fremont Ave & Grevelia St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	0	7	2	1	4	2	672	2	1	681	7
Future Volume (vph)	3	0	7	2	1	4	2	672	2	1	681	7
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.905			0.926			0.999			0.997	
Flt Protected		0.985			0.982		0.950			0.950		
Satd. Flow (prot)	0	1049	0	0	1070	0	1118	1175	0	1118	1173	0
Flt Permitted		0.985			0.982		0.950			0.950		
Satd. Flow (perm)	0	1049	0	0	1070	0	1118	1175	0	1118	1173	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		275			410			365			400	
Travel Time (s)		7.5			11.2			8.3			9.1	
Peak Hour Factor	0.25	0.92	0.25	0.50	0.92	0.62	0.62	0.98	0.50	0.62	0.97	0.50
Adj. Flow (vph)	12	0	28	4	1	6	3	686	4	2	702	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	0	0	11	0	3	690	0	2	716	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

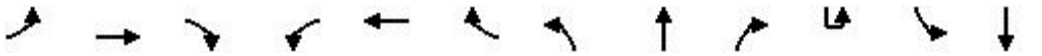
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 67.4%		ICU Level of Service C	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	22	38	8	10	25	26	649	35	27	660	5
Future Volume (vph)	3	22	38	8	10	25	26	649	35	27	660	5
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.921			0.917			0.985			0.998	
Flt Protected		0.998			0.993		0.950			0.950		
Satd. Flow (prot)	0	1081	0	0	1071	0	1118	1159	0	1118	1174	0
Flt Permitted		0.998			0.993		0.950			0.950		
Satd. Flow (perm)	0	1081	0	0	1071	0	1118	1159	0	1118	1174	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		262			410			182			365	
Travel Time (s)		7.1			11.2			4.1			8.3	
Peak Hour Factor	0.67	0.65	0.71	0.92	0.67	0.66	0.66	0.98	0.46	0.72	0.97	0.75
Adj. Flow (vph)	4	34	54	9	15	38	39	662	76	38	680	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	92	0	0	62	0	39	738	0	38	687	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 72.7%		ICU Level of Service C	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	17	9	0	0	18	12
Future Volume (vph)	17	9	0	0	18	12
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt	0.935				0.947	
Flt Protected					0.971	
Satd. Flow (prot)	1045	0	0	0	1028	0
Flt Permitted					0.971	
Satd. Flow (perm)	1045	0	0	0	1028	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	410			76	400	
Travel Time (s)	9.3			1.7	9.1	
Peak Hour Factor	0.62	0.36	0.92	0.92	0.62	0.62
Adj. Flow (vph)	27	25	0	0	29	19
Shared Lane Traffic (%)						
Lane Group Flow (vph)	52	0	0	0	48	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			
* User Entered Value			

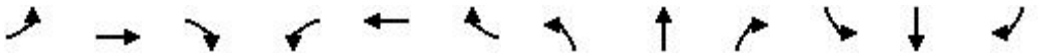


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	13	57	20	56	33	11	6	8	21	1	24	15
Future Volume (vph)	13	57	20	56	33	11	6	8	21	1	24	15
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.91	0.91
Frt		0.963			0.985			0.927				0.953
Flt Protected		0.993			0.973			0.991		0.950	0.950	0.996
Satd. Flow (prot)	0	1125	0	0	1128	0	0	1081	0	1062	1017	1016
Flt Permitted		0.993			0.973			0.991		0.950	0.950	0.996
Satd. Flow (perm)	0	1125	0	0	1128	0	0	1081	0	1062	1017	1016
Link Speed (mph)		25			25			25				25
Link Distance (ft)		410			390			181				285
Travel Time (s)		11.2			10.6			4.9				7.8
Peak Hour Factor	0.62	0.70	0.52	0.70	0.67	0.67	0.69	0.53	0.75	0.92	0.72	0.66
Adj. Flow (vph)	21	81	38	80	49	16	9	15	28	1	33	23
Shared Lane Traffic (%)										10%	10%	
Lane Group Flow (vph)	0	140	0	0	145	0	0	52	0	1	30	38
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	R NA	Left	Left
Median Width(ft)		0			0			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	9	15	
Sign Control		Free			Free			Stop				Stop

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.0%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	3
Future Volume (vph)	3
Ideal Flow (vphpl)	1200
Lane Util. Factor	1.00
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.25
Adj. Flow (vph)	12
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.76
Turning Speed (mph)	9
Sign Control	

Intersection Summary

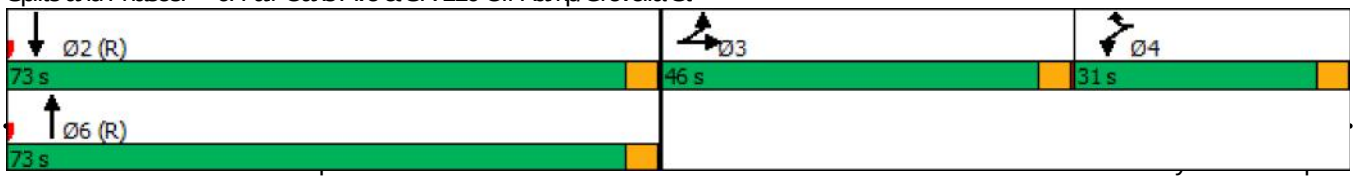


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	158	378	220	13	0	320	0	1040	38	0	1215	0
Future Volume (vph)	158	378	220	13	0	320	0	1040	38	0	1215	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	0		0
Storage Lanes	0		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	*0.95	*0.95	*0.95	*0.95	0.91	0.91	*0.95	0.95	*0.95
Ped Bike Factor		0.99		1.00				1.00				
Frt		0.952				0.850		0.993				
Flt Protected		0.989		0.950								
Satd. Flow (prot)	0	1959	0	929	0	831	0	3043	0	0	2087	0
Flt Permitted		0.989		0.950								
Satd. Flow (perm)	0	1959	0	925	0	831	0	3043	0	0	2087	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		52				197		7				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		241			567			68			142	
Travel Time (s)		5.5			12.9			1.5			3.2	
Confl. Peds. (#/hr)			8	8					8			
Confl. Bikes (#/hr)			2						3			
Peak Hour Factor	0.85	0.96	0.80	0.75	0.92	0.79	0.92	0.90	0.63	0.92	0.96	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	2	0	2	2
Parking (#/hr)	5	5	5	5	5	5		5	5		5	5
Mid-Block Traffic (%)		0%			0%			5%			5%	
Adj. Flow (vph)	186	394	275	17	0	405	0	1156	60	0	1266	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	855	0	17	0	405	0	1216	0	0	1266	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.76	1.90	1.76	2.05	1.76	2.05	1.76	1.85	1.76	1.76	1.90	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA		Prot		Prot		NA			NA	
Protected Phases	3	3		4		4		6			2	
Permitted Phases												
Minimum Split (s)	8.0	8.0		8.0		8.0		20.0			20.0	
Total Split (s)	46.0	46.0		31.0		31.0		73.0			73.0	
Total Split (%)	30.7%	30.7%		20.7%		20.7%		48.7%			48.7%	
Maximum Green (s)	42.0	42.0		27.0		27.0		69.0			69.0	
Yellow Time (s)	3.5	3.5		3.5		3.5		3.5			3.5	
All-Red Time (s)	0.5	0.5		0.5		0.5		0.5			0.5	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0			0.0	
Total Lost Time (s)		4.0		4.0		4.0		4.0			4.0	
Lead/Lag	Lead	Lead		Lag		Lag						
Lead-Lag Optimize?	Yes	Yes		Yes		Yes						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)								5.0			5.0	
Flash Dont Walk (s)								11.0			11.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)		42.0		27.0		27.0		69.0			69.0	
Actuated g/C Ratio		0.28		0.18		0.18		0.46			0.46	
v/c Ratio		1.46		0.10		1.30		0.87			1.32	
Control Delay		253.0		53.4		181.4		44.1			185.1	
Queue Delay		0.0		0.0		0.0		0.0			2.3	
Total Delay		253.0		53.4		181.4		44.1			187.4	
LOS		F		D		F		D			F	
Approach Delay		253.0			176.2			44.1			187.4	
Approach LOS		F			F			D			F	
Stops (vph)		520		12		119		938			944	
Fuel Used(gal)		43		0		14		15			52	
CO Emissions (g/hr)		3022		19		971		1078			3659	
NOx Emissions (g/hr)		588		4		189		210			712	
VOC Emissions (g/hr)		700		4		225		250			848	
Dilemma Vehicles (#)		0		0		0		0			0	
Queue Length 50th (ft)		~583		14		~357		384			~838	
Queue Length 95th (ft)		#721		33		#451		458			#980	
Internal Link Dist (ft)		161			487			1			62	
Turn Bay Length (ft)												
Base Capacity (vph)		585		167		311		1403			960	
Starvation Cap Reductn		0		0		0		0			309	
Spillback Cap Reductn		0		0		0		0			0	
Storage Cap Reductn		0		0		0		0			0	
Reduced v/c Ratio		1.46		0.10		1.30		0.87			1.94	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 150			
Control Type: Pretimed			
Maximum v/c Ratio: 1.46			
Intersection Signal Delay: 154.7		Intersection LOS: F	
Intersection Capacity Utilization 109.8%		ICU Level of Service H	
Analysis Period (min) 15			
* User Entered Value			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 6: Fair Oaks Ave & SR-110 Off Ramp/Grevelia St



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	7	12	14	1085	1344	7
Future Volume (vph)	7	12	14	1085	1344	7
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0	0	50			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	*0.95	*0.95	*0.95	0.95	0.95	0.95
Ped Bike Factor						
Frt	0.932				0.998	
Flt Protected	0.976		0.950			
Satd. Flow (prot)	1017	0	1062	2096	2091	0
Flt Permitted	0.976		0.950			
Satd. Flow (perm)	1017	0	1062	2096	2091	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	109			380	326	
Travel Time (s)	2.5			8.6	7.4	
Confl. Bikes (#/hr)		4				4
Peak Hour Factor	0.25	0.43	0.93	0.92	0.97	0.50
Parking (#/hr)				5	5	5
Mid-Block Traffic (%)	0%			5%	5%	
Adj. Flow (vph)	28	28	15	1179	1386	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	56	0	15	1179	1400	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.76	1.76	1.76	1.90	1.90	1.76
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 69.2%		ICU Level of Service C	
Analysis Period (min) 15			

* User Entered Value

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	43	23	30	25	17	40	20	1002	39	1	81	1221
Future Volume (vph)	43	23	30	25	17	40	20	1002	39	1	81	1221
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0		50	
Storage Lanes	0		0	0		0	1		0		2	
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	0.95	0.95	0.91	*0.95	0.95
Ped Bike Factor		0.98			0.97		0.99	0.99			0.98	0.99
Frt		0.961			0.929			0.993				0.990
Flt Protected		0.976			0.987		0.950			0.950	0.950	
Satd. Flow (prot)	0	815	0	0	786	0	956	1854	0	915	956	1849
Flt Permitted		0.740			0.900		0.164			0.228	0.228	
Satd. Flow (perm)	0	611	0	0	714	0	164	1854	0	220	225	1849
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)		18			49			14				20
Link Speed (mph)		25			25			30				30
Link Distance (ft)		390			550			212				380
Travel Time (s)		10.6			15.0			4.8				8.6
Confl. Peds. (#/hr)	18		16	16		18	22		36		36	
Confl. Bikes (#/hr)			3			3			2			
Peak Hour Factor	0.57	0.71	0.69	0.83	0.67	0.66	0.75	0.95	0.75	0.92	0.82	0.96
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	2	0	0	2
Parking (#/hr)	5	5	5	5	5	5		5	5			5
Mid-Block Traffic (%)		0%			0%			5%				5%
Adj. Flow (vph)	75	32	43	30	25	61	27	1055	52	1	99	1272
Shared Lane Traffic (%)										10%		
Lane Group Flow (vph)	0	150	0	0	116	0	27	1107	0	1	99	1362
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	R NA	Left	Left
Median Width(ft)		0			0			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane								Yes				Yes
Headway Factor	1.99	2.31	1.99	1.99	2.31	1.99	1.99	2.15	1.99	1.99	1.99	2.15
Turning Speed (mph)	15		9	15		9	15		9	9	15	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	Perm	NA
Protected Phases		4			8			2				6
Permitted Phases	4			8			2			6	6	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	22.0	22.0		22.0	22.0		78.0	78.0		78.0	78.0	78.0
Total Split (%)	22.0%	22.0%		22.0%	22.0%		78.0%	78.0%		78.0%	78.0%	78.0%
Maximum Green (s)	18.0	18.0		18.0	18.0		74.0	74.0		74.0	74.0	74.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	69
Future Volume (vph)	69
Ideal Flow (vphpl)	1200
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Lane Util. Factor	0.95
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	22
Confl. Bikes (#/hr)	2
Peak Hour Factor	0.77
Bus Blockages (#/hr)	2
Parking (#/hr)	5
Mid-Block Traffic (%)	
Adj. Flow (vph)	90
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.99
Turning Speed (mph)	9
Turn Type	
Protected Phases	
Permitted Phases	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effct Green (s)		18.0			18.0		74.0	74.0		74.0	74.0	74.0
Actuated g/C Ratio		0.18			0.18		0.74	0.74		0.74	0.74	0.74
v/c Ratio		1.21			0.69		0.22	0.81		0.01	0.60	0.99
Control Delay		181.7			45.6		9.2	14.2		4.0	24.5	36.5
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		181.7			45.6		9.2	14.2		4.0	24.5	36.5
LOS		F			D		A	B		A	C	D
Approach Delay		181.7			45.6			14.1				35.7
Approach LOS		F			D			B				D
Stops (vph)		62			45		7	652		0	47	971
Fuel Used(gal)		4			1		0	8		0	1	19
CO Emissions (g/hr)		284			92		8	582		0	63	1313
NOx Emissions (g/hr)		55			18		1	113		0	12	255
VOC Emissions (g/hr)		66			21		2	135		0	15	304
Dilemma Vehicles (#)		0			0		0	0		0	0	0
Queue Length 50th (ft)		~112			42		5	197		0	26	372
Queue Length 95th (ft)		#173			67		13	308		1	85	#608
Internal Link Dist (ft)		310			470			132				300
Turn Bay Length (ft)							50			50	50	
Base Capacity (vph)		124			168		121	1375		162	166	1373
Starvation Cap Reductn		0			0		0	0		0	0	0
Spillback Cap Reductn		0			0		0	0		0	0	0
Storage Cap Reductn		0			0		0	0		0	0	0
Reduced v/c Ratio		1.21			0.69		0.22	0.81		0.01	0.60	0.99

Intersection Summary			
Area Type:	CBD		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 110			
Control Type: Pretimed			
Maximum v/c Ratio: 1.21			
Intersection Signal Delay: 35.2		Intersection LOS: D	
Intersection Capacity Utilization 85.4%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 8: Fair Oaks Ave & Hope St

Lane Group	SBR
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	12	5	19	19	4
Future Volume (vph)	2	12	5	19	19	4
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.883				0.978	
Flt Protected	0.993			0.990		
Satd. Flow (prot)	1032	0	0	1165	1151	0
Flt Permitted	0.993			0.990		
Satd. Flow (perm)	1032	0	0	1165	1151	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	410			79	400	
Travel Time (s)	11.2			2.2	10.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	13	5	21	21	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	15	0	0	26	25	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

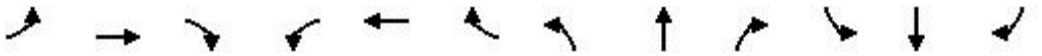
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.4%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	30	23	10	20	0	0
Future Volume (vph)	30	23	10	20	0	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.942		0.910			
Flt Protected	0.972					
Satd. Flow (prot)	1077	0	1071	0	0	1176
Flt Permitted	0.972					
Satd. Flow (perm)	1077	0	1071	0	0	1176
Link Speed (mph)	30		30			30
Link Distance (ft)	111		285			79
Travel Time (s)	2.5		6.5			1.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	25	11	22	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	58	0	33	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15	9		9	15	
Sign Control	Yield		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.9%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	26	0	1015	1214	0
Future Volume (vph)	0	26	0	1015	1214	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0	0	50			0
Storage Lanes	0	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1018	0	3212	2235	0
Flt Permitted						
Satd. Flow (perm)	0	1018	0	3212	2235	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	173			326	68	
Travel Time (s)	3.9			7.4	1.5	
Confl. Peds. (#/hr)		41				
Confl. Bikes (#/hr)		2				
Peak Hour Factor	0.59	0.59	0.92	0.91	0.96	0.92
Adj. Flow (vph)	0	44	0	1115	1265	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	44	0	1115	1265	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15	9	15			9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 71.3%		ICU Level of Service C	
Analysis Period (min) 15			



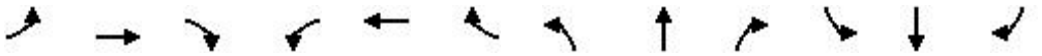
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	50	0	50	600	600	0	50	800	0
Future Volume (vph)	0	0	0	50	0	50	600	600	0	50	800	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	2		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.95	1.00	0.95	0.95	1.00
Frt						0.850						
Flt Protected				0.950			0.950				0.997	
Satd. Flow (prot)	0	0	0	2168	0	1000	2168	2235	0	0	2229	0
Flt Permitted				0.950			0.950				0.892	
Satd. Flow (perm)	0	0	0	2168	0	1000	2168	2235	0	0	1994	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						164						
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		211			278			142			65	
Travel Time (s)		4.8			6.3			3.2			1.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	54	0	54	652	652	0	54	870	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	54	0	54	652	652	0	0	924	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm		Perm	Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases				8		8						
Minimum Split (s)				20.0		20.0	8.0	20.0		8.0	20.0	
Total Split (s)				20.0		20.0	11.0	32.0		8.0	29.0	
Total Split (%)				33.3%		33.3%	18.3%	53.3%		13.3%	48.3%	
Maximum Green (s)				16.0		16.0	7.0	28.0		4.0	25.0	
Yellow Time (s)				3.5		3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)				0.5		0.5	0.5	0.5		0.5	0.5	
Lost Time Adjust (s)				0.0		0.0	0.0	0.0			0.0	
Total Lost Time (s)				4.0		4.0	4.0	4.0			4.0	
Lead/Lag							Lead	Lead		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Walk Time (s)				5.0		5.0		5.0			5.0	
Flash Dont Walk (s)				11.0		11.0		11.0			11.0	
Pedestrian Calls (#/hr)				0		0		0			0	
Act Effct Green (s)				16.0		16.0	7.0	28.0			25.0	
Actuated g/C Ratio				0.27		0.27	0.12	0.47			0.42	
v/c Ratio				0.09		0.14	2.59	0.63			4.28	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay				17.2		0.8	743.9	15.4			1497.9	
Queue Delay				0.0		0.0	0.5	53.8			0.0	
Total Delay				17.2		0.8	744.4	69.2			1497.9	
LOS				B		A	F	E			F	
Approach Delay					9.0			406.8			1497.9	
Approach LOS					A			F			F	
Stops (vph)				38		0	552	429			1085	
Fuel Used(gal)				0		0	95	5			266	
CO Emissions (g/hr)				34		8	6612	343			18567	
NOx Emissions (g/hr)				7		2	1286	67			3613	
VOC Emissions (g/hr)				8		2	1532	80			4303	
Dilemma Vehicles (#)				0		0	0	0			0	
Queue Length 50th (ft)				7		0	~210	87			~329	
Queue Length 95th (ft)				19		0	#302	137			#437	
Internal Link Dist (ft)		131			198			62			1	
Turn Bay Length (ft)							100					
Base Capacity (vph)				578		386	252	1043			216	
Starvation Cap Reductn				0		0	9	539			0	
Spillback Cap Reductn				0		0	0	0			0	
Storage Cap Reductn				0		0	0	0			0	
Reduced v/c Ratio				0.09		0.14	2.68	1.29			4.28	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 4.28			
Intersection Signal Delay: 820.0		Intersection LOS: F	
Intersection Capacity Utilization 77.7%		ICU Level of Service D	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 27: Fair Oaks Ave

Future Conditions

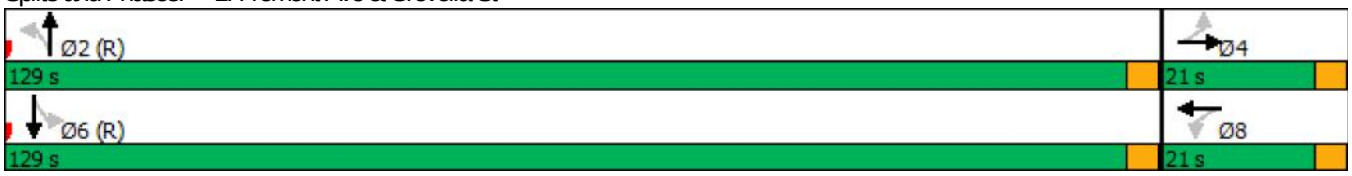


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	7	9	2	4	2	3	749	1	3	586	0
Future Volume (vph)	4	7	9	2	4	2	3	749	1	3	586	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt		0.943			0.973							
Flt Protected		0.987			0.980						0.999	
Satd. Flow (prot)	0	874	0	0	895	0	0	939	0	0	938	0
Flt Permitted		0.944			0.915			0.997			0.991	
Satd. Flow (perm)	0	836	0	0	836	0	0	936	0	0	930	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			4							
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		327			410			400			155	
Travel Time (s)		8.9			11.2			9.1			3.5	
Peak Hour Factor	0.50	0.71	0.70	0.25	0.50	0.55	0.58	0.92	0.50	0.45	0.95	0.38
Bus Blockages (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Parking (#/hr)	5	5	5	5	5	5	5	5	5	5	5	5
Adj. Flow (vph)	8	10	13	8	8	4	5	814	2	7	617	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	31	0	0	20	0	0	821	0	0	624	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.76	2.15	1.76	1.76	2.15	1.76	1.76	2.15	1.76	1.76	2.15	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	21.0	21.0		21.0	21.0		20.0	20.0		20.0	20.0	
Total Split (s)	21.0	21.0		21.0	21.0		129.0	129.0		129.0	129.0	
Total Split (%)	14.0%	14.0%		14.0%	14.0%		86.0%	86.0%		86.0%	86.0%	
Maximum Green (s)	17.0	17.0		17.0	17.0		125.0	125.0		125.0	125.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		17.0			17.0			125.0			125.0	
Actuated g/C Ratio		0.11			0.11			0.83			0.83	
v/c Ratio		0.29			0.20			1.05			0.81	
Control Delay		48.5			56.9			61.7			16.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		48.5			56.9			61.7			16.5	
LOS		D			E			E			B	
Approach Delay		48.5			56.9			61.7			16.5	
Approach LOS		D			E			E			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 150			
Control Type: Pretimed			
Maximum v/c Ratio: 1.05			
Intersection Signal Delay: 42.5		Intersection LOS: D	
Intersection Capacity Utilization 75.8%		ICU Level of Service D	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Fremont Ave & Grevelia St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	6	0	0	10	3	733	1	7	595	4
Future Volume (vph)	1	0	6	0	0	10	3	733	1	7	595	4
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt		0.884			0.865						0.998	
Flt Protected		0.993					0.950			0.950		
Satd. Flow (prot)	0	981	0	0	967	0	1062	1118	0	1062	1115	0
Flt Permitted		0.993					0.950			0.950		
Satd. Flow (perm)	0	981	0	0	967	0	1062	1118	0	1062	1115	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		275			410			365			400	
Travel Time (s)		7.5			11.2			8.3			9.1	
Peak Hour Factor	0.25	0.92	0.25	0.50	0.92	0.62	0.62	0.98	0.50	0.62	0.97	0.50
Adj. Flow (vph)	4	0	24	0	0	16	5	748	2	11	613	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	28	0	0	16	0	5	750	0	11	621	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 71.2%		ICU Level of Service C	
Analysis Period (min) 15			

* User Entered Value

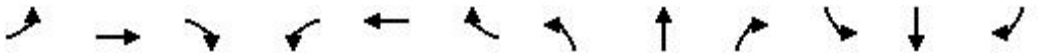
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	6	43	2	4	22	18	710	26	18	577	3
Future Volume (vph)	2	6	43	2	4	22	18	710	26	18	577	3
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt		0.887			0.891			0.989			0.999	
Flt Protected		0.998			0.998		0.950			0.950		
Satd. Flow (prot)	0	989	0	0	994	0	1062	1105	0	1062	1117	0
Flt Permitted		0.998			0.998		0.950			0.950		
Satd. Flow (perm)	0	989	0	0	994	0	1062	1105	0	1062	1117	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		262			410			182			365	
Travel Time (s)		7.1			11.2			4.1			8.3	
Peak Hour Factor	0.67	0.65	0.71	0.92	0.67	0.66	0.66	0.98	0.46	0.72	0.97	0.75
Adj. Flow (vph)	3	9	61	2	6	33	27	724	57	25	595	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	73	0	0	41	0	27	781	0	25	599	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 74.0%		ICU Level of Service D	
Analysis Period (min) 15			

* User Entered Value

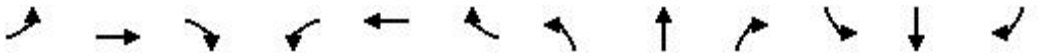
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	7	4	0	0	10	16
Future Volume (vph)	7	4	0	0	10	16
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt	0.932				0.916	
Flt Protected					0.981	
Satd. Flow (prot)	1042	0	0	0	1004	0
Flt Permitted					0.981	
Satd. Flow (perm)	1042	0	0	0	1004	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	410			76	400	
Travel Time (s)	9.3			1.7	9.1	
Peak Hour Factor	0.62	0.36	0.92	0.92	0.62	0.62
Adj. Flow (vph)	11	11	0	0	16	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	0	0	0	42	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			
* User Entered Value			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	26	12	23	28	16	9	24	15	8	10	0
Future Volume (vph)	8	26	12	23	28	16	9	24	15	8	10	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt		0.957			0.967			0.965				
Flt Protected		0.991			0.984			0.992			0.979	
Satd. Flow (prot)	0	1060	0	0	1063	0	0	1070	0	0	1094	0
Flt Permitted		0.991			0.984			0.992			0.979	
Satd. Flow (perm)	0	1060	0	0	1063	0	0	1070	0	0	1094	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		410			390			181			285	
Travel Time (s)		11.2			10.6			4.9			7.8	
Peak Hour Factor	0.62	0.70	0.52	0.70	0.67	0.67	0.69	0.53	0.75	0.72	0.66	0.25
Adj. Flow (vph)	13	37	23	33	42	24	13	45	20	11	15	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	73	0	0	99	0	0	78	0	0	26	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.9%		ICU Level of Service A	
Analysis Period (min) 15			
* User Entered Value			



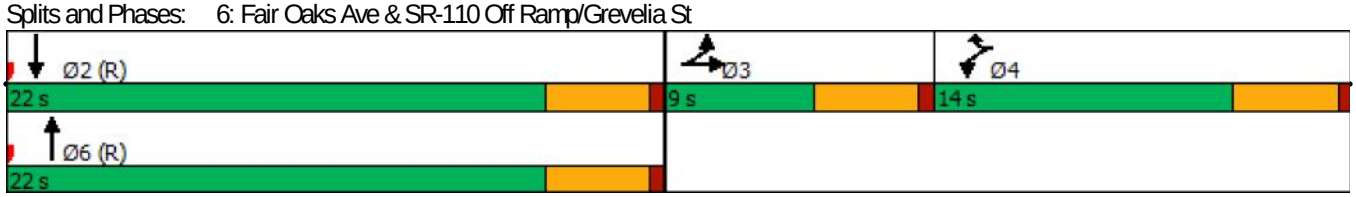
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	235	129	140	5	0	591	0	1226	20	0	786	0
Future Volume (vph)	235	129	140	5	0	591	0	1226	20	0	786	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	0		0
Storage Lanes	0		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	*0.95	*0.95	*0.95	*0.95	0.91	0.91	*0.95	0.95	*0.95
Ped Bike Factor		0.99		1.00				1.00				
Frt		0.955				0.850		0.997				
Flt Protected		0.977		0.950								
Satd. Flow (prot)	0	1738	0	836	0	748	0	2752	0	0	1878	0
Flt Permitted		0.977		0.950								
Satd. Flow (perm)	0	1738	0	833	0	748	0	2752	0	0	1878	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		118				121		9				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		241			567			68			172	
Travel Time (s)		5.5			12.9			1.5			3.9	
Confl. Peds. (#/hr)			8	7					36			
Confl. Bikes (#/hr)			4									
Peak Hour Factor	0.85	0.96	0.80	0.75	0.92	0.79	0.92	0.90	0.63	0.92	0.96	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	2	2	2	2	2	2
Parking (#/hr)	5	5	5	5	5	5	5	5	5	0	5	5
Mid-Block Traffic (%)		0%			0%			5%			5%	
Adj. Flow (vph)	276	134	175	7	0	748	0	1362	32	0	819	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	585	0	7	0	748	0	1394	0	0	819	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.99	2.14	1.99	2.31	1.99	2.31	1.99	2.09	1.99	1.99	2.15	1.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1		1		2			2	
Detector Template	Left	Thru		Left		Right		Thru			Thru	
Leading Detector (ft)	20	100		20		20		100			100	
Trailing Detector (ft)	0	0		0		0		0			0	
Detector 1 Position(ft)	0	0		0		0		0			0	
Detector 1 Size(ft)	20	6		20		20		6			6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0		0.0		0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0		0.0		0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0		0.0		0.0			0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	

Lanes, Volumes, Timings
6: Fair Oaks Ave & SR-110 Off Ramp/Grevelia St 07/05/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA		Prot		Prot		NA			NA	
Protected Phases	3	3		4		4		6			2	
Permitted Phases												
Detector Phase	3	3		4		4		6			2	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0		4.0		4.0			4.0	
Minimum Split (s)	8.0	8.0		8.0		8.0		20.0			20.0	
Total Split (s)	9.0	9.0		14.0		14.0		22.0			22.0	
Total Split (%)	20.0%	20.0%		31.1%		31.1%		48.9%			48.9%	
Maximum Green (s)	5.0	5.0		10.0		10.0		18.0			18.0	
Yellow Time (s)	3.5	3.5		3.5		3.5		3.5			3.5	
All-Red Time (s)	0.5	0.5		0.5		0.5		0.5			0.5	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0			0.0	
Total Lost Time (s)		4.0		4.0		4.0		4.0			4.0	
Lead/Lag	Lead	Lead		Lag		Lag						
Lead-Lag Optimize?	Yes	Yes		Yes		Yes						
Vehicle Extension (s)	3.0	3.0		3.0		3.0		3.0			3.0	
Recall Mode	None	None		None		None		C-Max			C-Max	
Walk Time (s)								5.0			5.0	
Flash Dont Walk (s)								11.0			11.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)		5.0		10.0		10.0		18.0			18.0	
Actuated g/C Ratio		0.11		0.22		0.22		0.40			0.40	
v/c Ratio		1.96		0.04		2.88		1.26			1.09	
Control Delay		463.5		14.4		869.8		143.5			79.2	
Queue Delay		0.0		0.0		0.0		0.0			5.1	
Total Delay		463.5		14.4		869.8		143.5			84.3	
LOS		F		B		F		F			F	
Approach Delay		463.5			861.9			143.5			84.3	
Approach LOS		F			F			F			F	

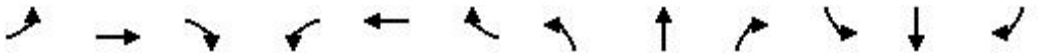
Intersection Summary			
Area Type:	CBD		
Cycle Length: 45			
Actuated Cycle Length: 45			
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green, Master Intersection			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 2.88			
Intersection Signal Delay: 335.2		Intersection LOS: F	
Intersection Capacity Utilization 143.3%		ICU Level of Service H	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 6: Fair Oaks Ave & SR-110 Off Ramp/Grevelia St



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	2	1209	918	13
Future Volume (vph)	0	0	2	1209	918	13
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0	0	50			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	*0.95	*0.95	*0.95	0.95	0.95	0.95
Ped Bike Factor						
Frt					0.996	
Flt Protected			0.950			
Satd. Flow (prot)	1006	0	948	1878	1871	0
Flt Permitted			0.950			
Satd. Flow (perm)	1006	0	948	1878	1871	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	109			380	326	
Travel Time (s)	2.5			8.6	7.4	
Confl. Bikes (#/hr)		4				4
Peak Hour Factor	0.25	0.43	0.93	0.92	0.97	0.50
Bus Blockages (#/hr)	0	0	2	2	2	2
Parking (#/hr)				5	5	5
Mid-Block Traffic (%)	0%			5%	5%	
Adj. Flow (vph)	0	0	2	1314	946	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	2	1314	972	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.99	1.99	2.01	2.15	2.15	1.99
Turning Speed (mph)	15	9	15			9
Sign Control	Yield			Free	Free	

Intersection Summary			
Area Type:	CBD		
Control Type: Unsignalized			
Intersection Capacity Utilization 62.1%		ICU Level of Service B	
Analysis Period (min) 15			
* User Entered Value			



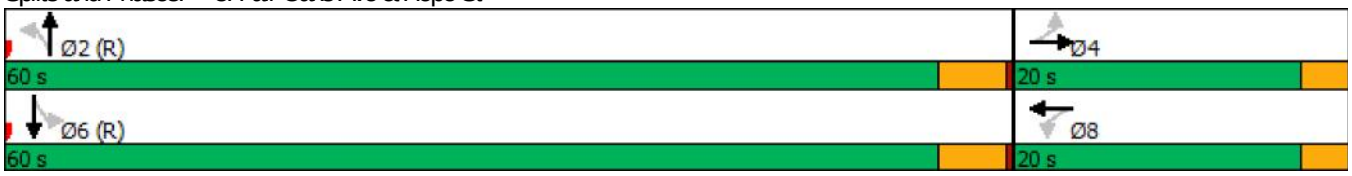
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	6	12	19	10	72	22	1122	16	40	823	42
Future Volume (vph)	28	6	12	19	10	72	22	1122	16	40	823	42
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	0.95	0.95	*0.95	0.95	0.95
Ped Bike Factor		0.99			0.98		0.99	1.00		0.99	1.00	
Frt		0.969			0.900			0.997			0.991	
Flt Protected		0.968			0.992		0.950			0.950		
Satd. Flow (prot)	0	936	0	0	882	0	956	1869	0	956	1855	0
Flt Permitted		0.787			0.956		0.288			0.197		
Satd. Flow (perm)	0	757	0	0	847	0	287	1869	0	196	1855	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			100			5			19	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		390			550			212			380	
Travel Time (s)		10.6			15.0			4.8			8.6	
Confl. Peds. (#/hr)	8		14	14		8	16		34	34		16
Confl. Bikes (#/hr)			3			1			1			3
Peak Hour Factor	0.57	0.71	0.69	0.83	0.67	0.66	0.75	0.95	0.75	0.82	0.96	0.77
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	2	0	2	2
Parking (#/hr)								5	5		5	5
Mid-Block Traffic (%)		0%			0%			5%			5%	
Adj. Flow (vph)	49	8	17	23	15	109	29	1181	21	49	857	55
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	74	0	0	147	0	29	1202	0	49	912	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.15	1.99	1.99	2.15	1.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.5	20.5		20.5	20.5	
Total Split (s)	20.0	20.0		20.0	20.0		60.0	60.0		60.0	60.0	
Total Split (%)	25.0%	25.0%		25.0%	25.0%		75.0%	75.0%		75.0%	75.0%	
Maximum Green (s)	17.0	17.0		17.0	17.0		55.5	55.5		55.5	55.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	0.0		0.0	0.0		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		3.0			3.0		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		17.0			17.0		55.5	55.5		55.5	55.5	
Actuated g/C Ratio		0.21			0.21		0.69	0.69		0.69	0.69	
v/c Ratio		0.43			0.57		0.15	0.93		0.36	0.71	
Control Delay		30.7			20.5		6.2	24.9		14.1	11.0	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		30.7			20.5		6.2	24.9		14.1	11.0	
LOS		C			C		A	C		B	B	
Approach Delay		30.7			20.5			24.4			11.1	
Approach LOS		C			C			C			B	

Intersection Summary			
Area Type:	CBD		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 80			
Control Type: Pretimed			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 19.1		Intersection LOS: B	
Intersection Capacity Utilization 78.9%		ICU Level of Service D	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 8: Fair Oaks Ave & Hope St



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	8	6	5	30	3	0
Future Volume (vph)	8	6	5	30	3	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.941					
Flt Protected	0.973			0.993		
Satd. Flow (prot)	1077	0	0	1168	1176	0
Flt Permitted	0.973			0.993		
Satd. Flow (perm)	1077	0	0	1168	1176	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	410			79	400	
Travel Time (s)	11.2			2.2	10.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	7	5	33	3	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	16	0	0	38	3	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

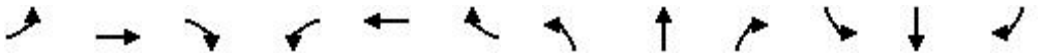
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.2%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	30	23	10	20	0	0
Future Volume (vph)	30	23	10	20	0	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.942		0.910			
Flt Protected	0.972					
Satd. Flow (prot)	1077	0	1071	0	0	1176
Flt Permitted	0.972					
Satd. Flow (perm)	1077	0	1071	0	0	1176
Link Speed (mph)	30		30			30
Link Distance (ft)	111		285			79
Travel Time (s)	2.5		6.5			1.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	25	11	22	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	58	0	33	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15	9		9	15	
Sign Control	Yield		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.9%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	6	0	1202	883	0
Future Volume (vph)	0	6	0	1202	883	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0	0	50			0
Storage Lanes	0	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1018	0	3212	2235	0
Flt Permitted						
Satd. Flow (perm)	0	1018	0	3212	2235	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	173			326	68	
Travel Time (s)	3.9			7.4	1.5	
Confl. Peds. (#/hr)		41				
Confl. Bikes (#/hr)		2				
Peak Hour Factor	0.59	0.59	0.92	0.91	0.96	0.92
Adj. Flow (vph)	0	10	0	1321	920	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	10	0	1321	920	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15	9	15			9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.3%		ICU Level of Service B	
Analysis Period (min) 15			

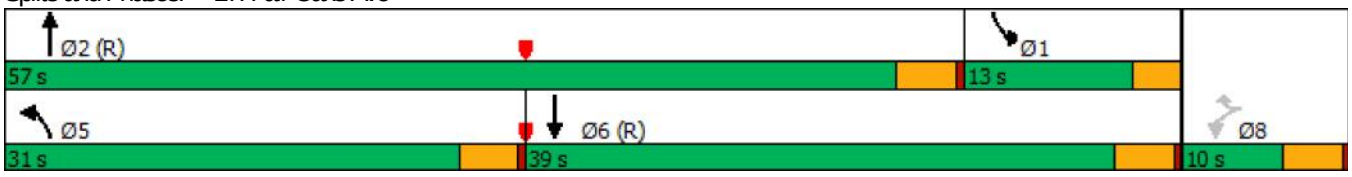


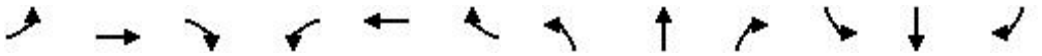
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	50	0	50	600	600	0	50	800	0
Future Volume (vph)	0	0	0	50	0	50	600	600	0	50	800	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	2		1	2		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	0.95	*0.95	*0.95	0.95	*0.95
Frt						0.850						
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	0	0	2124	0	950	2124	2235	0	1062	2235	0
Flt Permitted				0.950			0.950			0.950		
Satd. Flow (perm)	0	0	0	2124	0	950	2124	2235	0	1062	2235	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						123						
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		157			233			172			177	
Travel Time (s)		3.6			5.3			3.9			4.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	54	0	54	652	652	0	54	870	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	54	0	54	652	652	0	54	870	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1		1	1	2		1	2	
Detector Template				Left		Right	Left	Thru		Left	Thru	
Leading Detector (ft)				20		20	20	100		20	100	
Trailing Detector (ft)				0		0	0	0		0	0	
Detector 1 Position(ft)				0		0	0	0		0	0	
Detector 1 Size(ft)				20		20	20	6		20	6	
Detector 1 Type				Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0		0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)				0.0		0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)				0.0		0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type				Perm		Perm	Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases				8		8						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase				8		8	5	2		1	6	
Switch Phase												
Minimum Initial (s)				4.0		4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)				10.0		10.0	8.0	20.0		8.0	20.0	
Total Split (s)				10.0		10.0	31.0	57.0		13.0	39.0	
Total Split (%)				12.5%		12.5%	38.8%	71.3%		16.3%	48.8%	
Maximum Green (s)				6.0		6.0	27.0	53.0		10.0	35.0	
Yellow Time (s)				3.5		3.5	3.5	3.5		3.0	3.5	
All-Red Time (s)				0.5		0.5	0.5	0.5		0.0	0.5	
Lost Time Adjust (s)				0.0		0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)				4.0		4.0	4.0	4.0		3.0	4.0	
Lead/Lag							Lead	Lead		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)				3.0		3.0	3.0	3.0		3.0	3.0	
Recall Mode				None		None	None	C-Max		None	C-Max	
Walk Time (s)				5.0		5.0		5.0			5.0	
Flash Dont Walk (s)				11.0		11.0		11.0			11.0	
Pedestrian Calls (#/hr)				0		0		0			0	
Act Effct Green (s)				5.9		5.9	26.3	61.0		8.6	37.7	
Actuated g/C Ratio				0.07		0.07	0.33	0.76		0.11	0.47	
v/c Ratio				0.35		0.29	0.93	0.38		0.47	0.83	
Control Delay				41.6		4.0	48.7	5.8		47.1	28.3	
Queue Delay				0.0		0.0	49.7	1.5		0.0	0.0	
Total Delay				41.6		4.0	98.4	7.2		47.1	28.3	
LOS				D		A	F	A		D	C	
Approach Delay					22.8			52.8			29.4	
Approach LOS					C			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 42.2		Intersection LOS: D	
Intersection Capacity Utilization 75.4%		ICU Level of Service D	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 27: Fair Oaks Ave



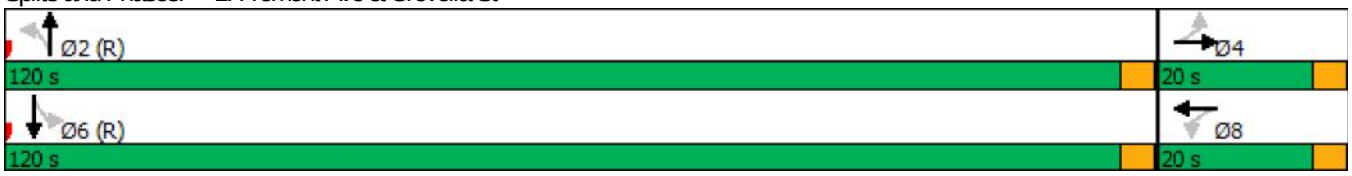


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	5	8	0	3	13	6	660	6	9	705	6
Future Volume (vph)	9	5	8	0	3	13	6	660	6	9	705	6
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt		0.959			0.892			0.998			0.997	
Flt Protected		0.976						0.999			0.999	
Satd. Flow (prot)	0	1004	0	0	957	0	0	952	0	0	951	0
Flt Permitted		0.870						0.988			0.973	
Satd. Flow (perm)	0	895	0	0	957	0	0	942	0	0	926	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			24			2			3	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		327			410			400			155	
Travel Time (s)		8.9			11.2			9.1			3.5	
Peak Hour Factor	0.50	0.71	0.70	0.25	0.50	0.55	0.58	0.92	0.50	0.45	0.95	0.38
Bus Blockages (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Parking (#/hr)								2	2		2	2
Adj. Flow (vph)	18	7	11	0	6	24	10	717	12	20	742	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	36	0	0	30	0	0	739	0	0	778	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.76	1.84	1.76	1.76	1.84	1.76	1.76	2.11	1.76	1.76	2.11	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		120.0	120.0		120.0	120.0	
Total Split (%)	14.3%	14.3%		14.3%	14.3%		85.7%	85.7%		85.7%	85.7%	
Maximum Green (s)	16.0	16.0		16.0	16.0		116.0	116.0		116.0	116.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		16.0			16.0			116.0			116.0	
Actuated g/C Ratio		0.11			0.11			0.83			0.83	
v/c Ratio		0.32			0.23			0.95			1.01	
Control Delay		51.5			29.2			33.4			49.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		51.5			29.2			33.4			49.8	
LOS		D			C			C			D	
Approach Delay		51.5			29.3			33.4			49.8	
Approach LOS		D			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 140			
Control Type: Pretimed			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 41.8		Intersection LOS: D	
Intersection Capacity Utilization 83.7%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Fremont Ave & Grevelia St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	0	7	2	1	4	2	686	2	1	695	7
Future Volume (vph)	3	0	7	2	1	4	2	686	2	1	695	7
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.905			0.926			0.999			0.997	
Flt Protected		0.985			0.982		0.950			0.950		
Satd. Flow (prot)	0	1049	0	0	1070	0	1118	1175	0	1118	1173	0
Flt Permitted		0.985			0.982		0.950			0.950		
Satd. Flow (perm)	0	1049	0	0	1070	0	1118	1175	0	1118	1173	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		275			410			365			400	
Travel Time (s)		7.5			11.2			8.3			9.1	
Peak Hour Factor	0.25	0.92	0.25	0.50	0.92	0.62	0.62	0.98	0.50	0.62	0.97	0.50
Adj. Flow (vph)	12	0	28	4	1	6	3	700	4	2	716	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	0	0	11	0	3	704	0	2	730	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

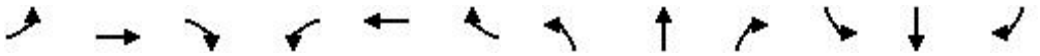
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 68.6%		ICU Level of Service C	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	20	39	7	9	26	27	662	33	28	673	5
Future Volume (vph)	3	20	39	7	9	26	27	662	33	28	673	5
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.917			0.912			0.986			0.999	
Flt Protected		0.998			0.993		0.950			0.950		
Satd. Flow (prot)	0	1077	0	0	1065	0	1118	1160	0	1118	1175	0
Flt Permitted		0.998			0.993		0.950			0.950		
Satd. Flow (perm)	0	1077	0	0	1065	0	1118	1160	0	1118	1175	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		262			410			182			365	
Travel Time (s)		7.1			11.2			4.1			8.3	
Peak Hour Factor	0.67	0.65	0.71	0.92	0.67	0.66	0.66	0.98	0.46	0.72	0.97	0.75
Adj. Flow (vph)	4	31	55	8	13	39	41	676	72	39	694	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	90	0	0	60	0	41	748	0	39	701	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 72.9%		ICU Level of Service C	
Analysis Period (min) 15			

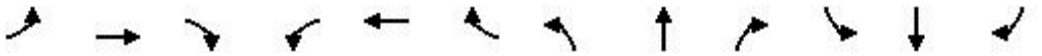
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	15	7	0	0	17	12
Future Volume (vph)	15	7	0	0	17	12
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt	0.940				0.944	
Flt Protected					0.971	
Satd. Flow (prot)	1051	0	0	0	1024	0
Flt Permitted					0.971	
Satd. Flow (perm)	1051	0	0	0	1024	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	410			76	400	
Travel Time (s)	9.3			1.7	9.1	
Peak Hour Factor	0.62	0.36	0.92	0.92	0.62	0.62
Adj. Flow (vph)	24	19	0	0	27	19
Shared Lane Traffic (%)						
Lane Group Flow (vph)	43	0	0	0	46	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			
* User Entered Value			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	57	20	57	34	9	6	16	21	20	11	0
Future Volume (vph)	4	57	20	57	34	9	6	16	21	20	11	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.959			0.988			0.944				
Flt Protected		0.998			0.973			0.993			0.970	
Satd. Flow (prot)	0	1126	0	0	1131	0	0	1103	0	0	1141	0
Flt Permitted		0.998			0.973			0.993			0.970	
Satd. Flow (perm)	0	1126	0	0	1131	0	0	1103	0	0	1141	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		410			390			181			285	
Travel Time (s)		11.2			10.6			4.9			7.8	
Peak Hour Factor	0.62	0.70	0.52	0.70	0.67	0.67	0.69	0.53	0.75	0.72	0.66	0.25
Adj. Flow (vph)	6	81	38	81	51	13	9	30	28	28	17	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	125	0	0	145	0	0	67	0	0	45	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.9%		ICU Level of Service A	
Analysis Period (min) 15			



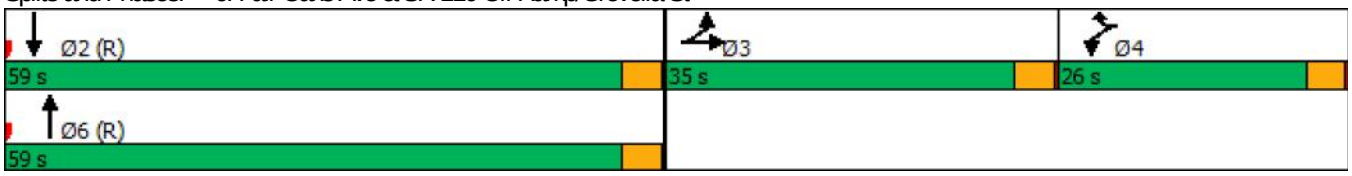
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	386	224	11	0	326	0	1225	38	0	1227	0
Future Volume (vph)	160	386	224	11	0	326	0	1225	38	0	1227	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	0		0
Storage Lanes	0		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	*0.95	*0.95	*0.95	*0.95	0.91	0.91	*0.95	0.95	*0.95
Ped Bike Factor		0.99		1.00				1.00				
Frt		0.952				0.850		0.994				
Flt Protected		0.989		0.950								
Satd. Flow (prot)	0	1959	0	929	0	831	0	3047	0	0	2087	0
Flt Permitted		0.989		0.950								
Satd. Flow (perm)	0	1959	0	925	0	831	0	3047	0	0	2087	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		64				165		7				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		241			567			68			142	
Travel Time (s)		5.5			12.9			1.5			3.2	
Confl. Peds. (#/hr)			8	8					8			
Confl. Bikes (#/hr)			2						3			
Peak Hour Factor	0.85	0.96	0.80	0.75	0.92	0.79	0.92	0.90	0.63	0.92	0.96	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	2	0	2	2
Parking (#/hr)	5	5	5	5	5	5		5	5		5	5
Mid-Block Traffic (%)		0%			0%			5%			5%	
Adj. Flow (vph)	188	402	280	15	0	413	0	1361	60	0	1278	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	870	0	15	0	413	0	1421	0	0	1278	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.76	1.90	1.76	2.05	1.76	2.05	1.76	1.85	1.76	1.76	1.90	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA		Prot		Prot		NA			NA	
Protected Phases	3	3		4		4		6			2	
Permitted Phases												
Minimum Split (s)	8.0	8.0		8.0		8.0		20.0			20.0	
Total Split (s)	35.0	35.0		26.0		26.0		59.0			59.0	
Total Split (%)	29.2%	29.2%		21.7%		21.7%		49.2%			49.2%	
Maximum Green (s)	31.0	31.0		22.0		22.0		55.0			55.0	
Yellow Time (s)	3.5	3.5		3.5		3.5		3.5			3.5	
All-Red Time (s)	0.5	0.5		0.5		0.5		0.5			0.5	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0			0.0	
Total Lost Time (s)		4.0		4.0		4.0		4.0			4.0	
Lead/Lag	Lead	Lead		Lag		Lag						
Lead-Lag Optimize?	Yes	Yes		Yes		Yes						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)								5.0			5.0	
Flash Dont Walk (s)								11.0			11.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)		31.0		22.0		22.0		55.0			55.0	
Actuated g/C Ratio		0.26		0.18		0.18		0.46			0.46	
v/c Ratio		1.57		0.09		1.44		1.01			1.34	
Control Delay		296.4		42.5		239.1		60.4			182.6	
Queue Delay		0.3		0.0		7.4		36.2			6.2	
Total Delay		296.7		42.5		246.5		96.6			188.8	
LOS		F		D		F		F			F	
Approach Delay		296.7			239.3			96.6			188.8	
Approach LOS		F			F			F			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 120			
Control Type: Pretimed			
Maximum v/c Ratio: 1.57			
Intersection Signal Delay: 184.9		Intersection LOS: F	
Intersection Capacity Utilization 116.7%		ICU Level of Service H	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 6: Fair Oaks Ave & SR-110 Off Ramp/Grevelia St



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	8	5	1094	1371	7
Future Volume (vph)	0	8	5	1094	1371	7
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0	0	50			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	*0.95	*0.95	*0.95	0.95	0.95	0.95
Ped Bike Factor						
Frt	0.865				0.999	
Flt Protected			0.950			
Satd. Flow (prot)	967	0	1062	2096	2093	0
Flt Permitted			0.950			
Satd. Flow (perm)	967	0	1062	2096	2093	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	109			380	326	
Travel Time (s)	2.5			8.6	7.4	
Confl. Bikes (#/hr)		4				4
Peak Hour Factor	0.25	0.43	0.93	0.92	0.97	0.50
Parking (#/hr)				5	5	5
Mid-Block Traffic (%)	0%			5%	5%	
Adj. Flow (vph)	0	19	5	1189	1413	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	0	5	1189	1427	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.76	1.76	1.76	1.90	1.90	1.76
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 70.4%		ICU Level of Service C	
Analysis Period (min) 15			

* User Entered Value

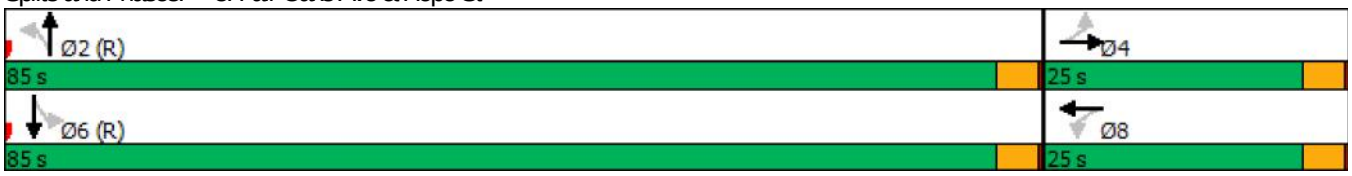
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	22	31	26	17	39	20	1015	40	82	1242	70
Future Volume (vph)	40	22	31	26	17	39	20	1015	40	82	1242	70
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	0.95	0.95	*0.95	0.95	0.95
Ped Bike Factor		0.97			0.97		0.99	0.99		0.98	0.99	
Frt		0.958			0.931			0.993			0.990	
Flt Protected		0.977			0.987		0.950			0.950		
Satd. Flow (prot)	0	812	0	0	787	0	956	1853	0	956	1848	0
Flt Permitted		0.764			0.898		0.157			0.222		
Satd. Flow (perm)	0	627	0	0	713	0	157	1853	0	219	1848	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			43			12			18	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		390			550			212			380	
Travel Time (s)		10.6			15.0			4.8			8.6	
Confl. Peds. (#/hr)	18		16	16		18	22		36	36		22
Confl. Bikes (#/hr)			3			3			2			2
Peak Hour Factor	0.57	0.71	0.69	0.83	0.67	0.66	0.75	0.95	0.75	0.82	0.96	0.77
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	2	0	2	2
Parking (#/hr)	5	5	5	5	5	5		5	5		5	5
Mid-Block Traffic (%)		0%			0%			5%			5%	
Adj. Flow (vph)	70	31	45	31	25	59	27	1068	53	100	1294	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	0	0	115	0	27	1121	0	100	1385	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.99	2.31	1.99	1.99	2.31	1.99	1.99	2.15	1.99	1.99	2.15	1.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0		25.0	25.0		85.0	85.0		85.0	85.0	
Total Split (%)	22.7%	22.7%		22.7%	22.7%		77.3%	77.3%		77.3%	77.3%	
Maximum Green (s)	21.0	21.0		21.0	21.0		81.0	81.0		81.0	81.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.0			21.0		81.0	81.0		81.0	81.0	
Actuated g/C Ratio		0.19			0.19		0.74	0.74		0.74	0.74	
v/c Ratio		1.09			0.68		0.23	0.82		0.62	1.01	
Control Delay		142.2			47.3		10.3	16.0		27.6	43.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		142.2			47.3		10.3	16.0		27.6	43.8	
LOS		F			D		B	B		C	D	
Approach Delay		142.2			47.3			15.9			42.7	
Approach LOS		F			D			B			D	

Intersection Summary			
Area Type:	CBD		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 110			
Control Type: Pretimed			
Maximum v/c Ratio: 1.09			
Intersection Signal Delay: 37.3		Intersection LOS: D	
Intersection Capacity Utilization 92.2%		ICU Level of Service F	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 8: Fair Oaks Ave & Hope St



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	12	5	19	19	4
Future Volume (vph)	2	12	5	19	19	4
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.883				0.978	
Flt Protected	0.993			0.990		
Satd. Flow (prot)	1032	0	0	1165	1151	0
Flt Permitted	0.993			0.990		
Satd. Flow (perm)	1032	0	0	1165	1151	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	410			79	400	
Travel Time (s)	11.2			2.2	10.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	13	5	21	21	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	15	0	0	26	25	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

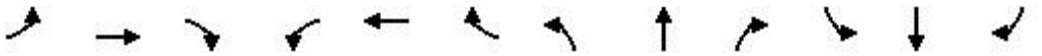
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.4%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	30	23	10	20	0	0
Future Volume (vph)	30	23	10	20	0	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.942		0.910			
Flt Protected	0.972					
Satd. Flow (prot)	1077	0	1071	0	0	1176
Flt Permitted	0.972					
Satd. Flow (perm)	1077	0	1071	0	0	1176
Link Speed (mph)	30		30			30
Link Distance (ft)	111		285			79
Travel Time (s)	2.5		6.5			1.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	25	11	22	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	58	0	33	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15	9		9	15	
Sign Control	Yield		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.9%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	26	0	1015	1214	0
Future Volume (vph)	0	26	0	1015	1214	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0	0	50			0
Storage Lanes	0	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1018	0	3212	2235	0
Flt Permitted						
Satd. Flow (perm)	0	1018	0	3212	2235	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	173			326	68	
Travel Time (s)	3.9			7.4	1.5	
Confl. Peds. (#/hr)		41				
Confl. Bikes (#/hr)		2				
Peak Hour Factor	0.59	0.59	0.92	0.91	0.96	0.92
Adj. Flow (vph)	0	44	0	1115	1265	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	44	0	1115	1265	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15	9	15			9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 71.3%		ICU Level of Service C	
Analysis Period (min) 15			

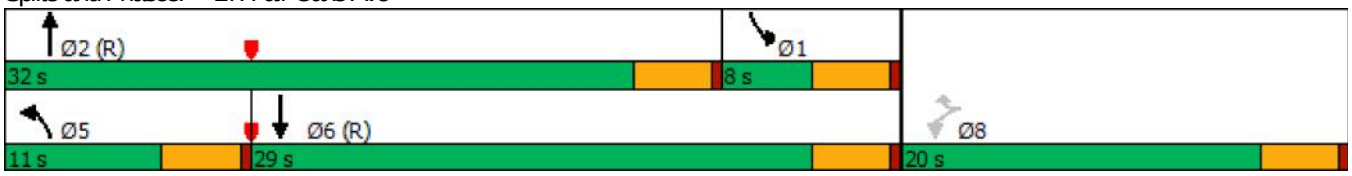


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	50	0	50	600	600	0	50	800	0
Future Volume (vph)	0	0	0	50	0	50	600	600	0	50	800	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	2		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.95	1.00	0.95	0.95	1.00
Frt						0.850						
Flt Protected				0.950			0.950				0.997	
Satd. Flow (prot)	0	0	0	2168	0	1000	2168	2235	0	0	2229	0
Flt Permitted				0.950			0.950				0.892	
Satd. Flow (perm)	0	0	0	2168	0	1000	2168	2235	0	0	1994	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						164						
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		211			278			142			65	
Travel Time (s)		4.8			6.3			3.2			1.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	54	0	54	652	652	0	54	870	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	54	0	54	652	652	0	0	924	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm		Perm	Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases				8		8						
Minimum Split (s)				20.0		20.0	8.0	20.0		8.0	20.0	
Total Split (s)				20.0		20.0	11.0	32.0		8.0	29.0	
Total Split (%)				33.3%		33.3%	18.3%	53.3%		13.3%	48.3%	
Maximum Green (s)				16.0		16.0	7.0	28.0		4.0	25.0	
Yellow Time (s)				3.5		3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)				0.5		0.5	0.5	0.5		0.5	0.5	
Lost Time Adjust (s)				0.0		0.0	0.0	0.0			0.0	
Total Lost Time (s)				4.0		4.0	4.0	4.0			4.0	
Lead/Lag							Lead	Lead		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Walk Time (s)				5.0		5.0		5.0			5.0	
Flash Dont Walk (s)				11.0		11.0		11.0			11.0	
Pedestrian Calls (#/hr)				0		0		0			0	
Act Effct Green (s)				16.0		16.0	7.0	28.0			25.0	
Actuated g/C Ratio				0.27		0.27	0.12	0.47			0.42	
v/c Ratio				0.09		0.14	2.59	0.63			4.28	

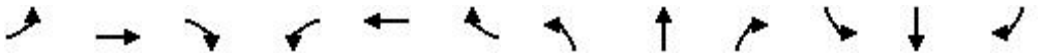
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay				17.2		0.8	735.5	15.2			1497.9	
Queue Delay				0.3		0.0	0.6	55.4			10.9	
Total Delay				17.5		0.8	736.0	70.6			1508.7	
LOS				B		A	F	E			F	
Approach Delay					9.1			403.3			1508.7	
Approach LOS					A			F			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 4.28			
Intersection Signal Delay: 822.3		Intersection LOS: F	
Intersection Capacity Utilization 77.7%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 27: Fair Oaks Ave



Future Conditions + Project

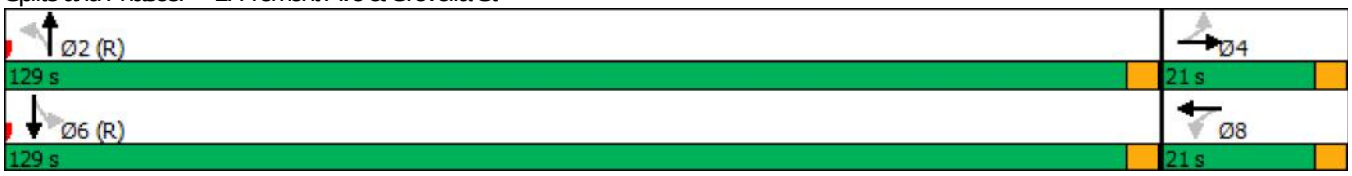


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	7	9	2	4	2	3	749	1	3	586	0
Future Volume (vph)	4	7	9	2	4	2	3	749	1	3	586	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt		0.943			0.973							
Flt Protected		0.987			0.980						0.999	
Satd. Flow (prot)	0	874	0	0	895	0	0	939	0	0	938	0
Flt Permitted		0.944			0.915			0.997			0.991	
Satd. Flow (perm)	0	836	0	0	836	0	0	936	0	0	930	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			4							
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		327			410			400			155	
Travel Time (s)		8.9			11.2			9.1			3.5	
Peak Hour Factor	0.50	0.71	0.70	0.25	0.50	0.55	0.58	0.92	0.50	0.45	0.95	0.38
Bus Blockages (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Parking (#/hr)	5	5	5	5	5	5	5	5	5	5	5	5
Adj. Flow (vph)	8	10	13	8	8	4	5	814	2	7	617	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	31	0	0	20	0	0	821	0	0	624	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.76	2.15	1.76	1.76	2.15	1.76	1.76	2.15	1.76	1.76	2.15	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	21.0	21.0		21.0	21.0		20.0	20.0		20.0	20.0	
Total Split (s)	21.0	21.0		21.0	21.0		129.0	129.0		129.0	129.0	
Total Split (%)	14.0%	14.0%		14.0%	14.0%		86.0%	86.0%		86.0%	86.0%	
Maximum Green (s)	17.0	17.0		17.0	17.0		125.0	125.0		125.0	125.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		17.0			17.0			125.0			125.0	
Actuated g/C Ratio		0.11			0.11			0.83			0.83	
v/c Ratio		0.29			0.20			1.05			0.81	
Control Delay		48.5			56.9			61.7			16.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		48.5			56.9			61.7			16.5	
LOS		D			E			E			B	
Approach Delay		48.5			56.9			61.7			16.5	
Approach LOS		D			E			E			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 150			
Control Type: Pretimed			
Maximum v/c Ratio: 1.05			
Intersection Signal Delay: 42.5		Intersection LOS: D	
Intersection Capacity Utilization 75.8%		ICU Level of Service D	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Fremont Ave & Grevelia St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	6	0	0	10	3	733	1	7	595	4
Future Volume (vph)	1	0	6	0	0	10	3	733	1	7	595	4
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt		0.884			0.865						0.998	
Flt Protected		0.993					0.950			0.950		
Satd. Flow (prot)	0	981	0	0	967	0	1062	1118	0	1062	1115	0
Flt Permitted		0.993					0.950			0.950		
Satd. Flow (perm)	0	981	0	0	967	0	1062	1118	0	1062	1115	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		275			410			365			400	
Travel Time (s)		7.5			11.2			8.3			9.1	
Peak Hour Factor	0.25	0.92	0.25	0.50	0.92	0.62	0.62	0.98	0.50	0.62	0.97	0.50
Adj. Flow (vph)	4	0	24	0	0	16	5	748	2	11	613	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	28	0	0	16	0	5	750	0	11	621	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 71.2%		ICU Level of Service C	
Analysis Period (min) 15			

* User Entered Value

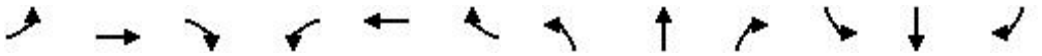
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	7	43	4	6	22	18	710	28	18	577	3
Future Volume (vph)	2	7	43	4	6	22	18	710	28	18	577	3
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt		0.890			0.903			0.988			0.999	
Flt Protected		0.998			0.996		0.950			0.950		
Satd. Flow (prot)	0	993	0	0	1005	0	1062	1104	0	1062	1117	0
Flt Permitted		0.998			0.996		0.950			0.950		
Satd. Flow (perm)	0	993	0	0	1005	0	1062	1104	0	1062	1117	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		262			410			182			365	
Travel Time (s)		7.1			11.2			4.1			8.3	
Peak Hour Factor	0.67	0.65	0.71	0.92	0.67	0.66	0.66	0.98	0.46	0.72	0.97	0.75
Adj. Flow (vph)	3	11	61	4	9	33	27	724	61	25	595	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	75	0	0	46	0	27	785	0	25	599	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 74.1%		ICU Level of Service D	
Analysis Period (min) 15			

* User Entered Value

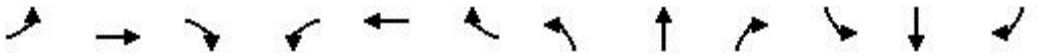
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	8	5	0	0	12	16
Future Volume (vph)	8	5	0	0	12	16
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt	0.930				0.922	
Flt Protected					0.979	
Satd. Flow (prot)	1039	0	0	0	1009	0
Flt Permitted					0.979	
Satd. Flow (perm)	1039	0	0	0	1009	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	410			76	400	
Travel Time (s)	9.3			1.7	9.1	
Peak Hour Factor	0.62	0.36	0.92	0.92	0.62	0.62
Adj. Flow (vph)	13	14	0	0	19	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	0	0	45	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			
* User Entered Value			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	26	12	23	28	16	9	26	15	13	10	3
Future Volume (vph)	11	26	12	23	28	16	9	26	15	13	10	3
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt		0.960			0.967			0.967			0.964	
Flt Protected		0.989			0.984			0.992			0.980	
Satd. Flow (prot)	0	1061	0	0	1063	0	0	1072	0	0	1056	0
Flt Permitted		0.989			0.984			0.992			0.980	
Satd. Flow (perm)	0	1061	0	0	1063	0	0	1072	0	0	1056	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		410			390			181			285	
Travel Time (s)		11.2			10.6			4.9			7.8	
Peak Hour Factor	0.62	0.70	0.52	0.70	0.67	0.67	0.69	0.53	0.75	0.72	0.66	0.25
Adj. Flow (vph)	18	37	23	33	42	24	13	49	20	18	15	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	78	0	0	99	0	0	82	0	0	45	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.3%		ICU Level of Service A	
Analysis Period (min) 15			
* User Entered Value			



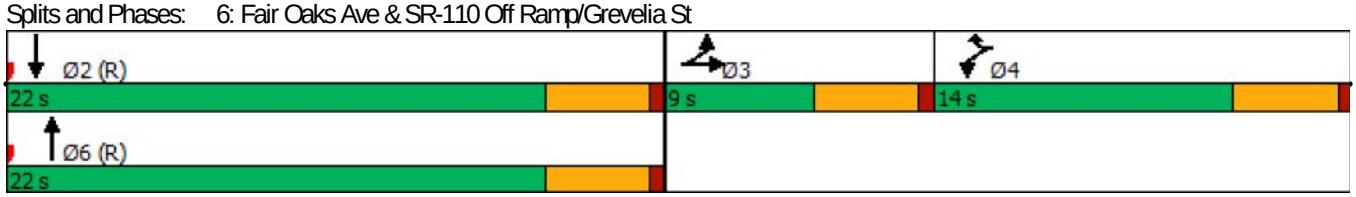
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	235	129	142	6	0	591	0	1246	22	0	793	0
Future Volume (vph)	235	129	142	6	0	591	0	1246	22	0	793	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	0		0
Storage Lanes	0		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	*0.95	*0.95	*0.95	*0.95	0.91	0.91	*0.95	0.95	*0.95
Ped Bike Factor		0.99		1.00				1.00				
Frt		0.955				0.850		0.996				
Flt Protected		0.977		0.950								
Satd. Flow (prot)	0	1738	0	836	0	748	0	2749	0	0	1878	0
Flt Permitted		0.977		0.950								
Satd. Flow (perm)	0	1738	0	833	0	748	0	2749	0	0	1878	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		122				121		10				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		241			567			68			172	
Travel Time (s)		5.5			12.9			1.5			3.9	
Confl. Peds. (#/hr)			8	7					36			
Confl. Bikes (#/hr)			4									
Peak Hour Factor	0.85	0.96	0.80	0.75	0.92	0.79	0.92	0.90	0.63	0.92	0.96	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	2	2	2	2	2	2
Parking (#/hr)	5	5	5	5	5	5	5	5	5	0	5	5
Mid-Block Traffic (%)		0%			0%			5%			5%	
Adj. Flow (vph)	276	134	178	8	0	748	0	1384	35	0	826	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	588	0	8	0	748	0	1419	0	0	826	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.99	2.14	1.99	2.31	1.99	2.31	1.99	2.09	1.99	1.99	2.15	1.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1		1		2			2	
Detector Template	Left	Thru		Left		Right		Thru			Thru	
Leading Detector (ft)	20	100		20		20		100			100	
Trailing Detector (ft)	0	0		0		0		0			0	
Detector 1 Position(ft)	0	0		0		0		0			0	
Detector 1 Size(ft)	20	6		20		20		6			6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0		0.0		0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0		0.0		0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0		0.0		0.0			0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	

Lanes, Volumes, Timings
6: Fair Oaks Ave & SR-110 Off Ramp/Grevelia St 07/05/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Split	NA		Prot		Prot		NA			NA	
Protected Phases	3	3		4		4		6			2	
Permitted Phases												
Detector Phase	3	3		4		4		6			2	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0		4.0		4.0			4.0	
Minimum Split (s)	8.0	8.0		8.0		8.0		20.0			20.0	
Total Split (s)	9.0	9.0		14.0		14.0		22.0			22.0	
Total Split (%)	20.0%	20.0%		31.1%		31.1%		48.9%			48.9%	
Maximum Green (s)	5.0	5.0		10.0		10.0		18.0			18.0	
Yellow Time (s)	3.5	3.5		3.5		3.5		3.5			3.5	
All-Red Time (s)	0.5	0.5		0.5		0.5		0.5			0.5	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0			0.0	
Total Lost Time (s)		4.0		4.0		4.0		4.0			4.0	
Lead/Lag	Lead	Lead		Lag		Lag						
Lead-Lag Optimize?	Yes	Yes		Yes		Yes						
Vehicle Extension (s)	3.0	3.0		3.0		3.0		3.0			3.0	
Recall Mode	None	None		None		None		C-Max			C-Max	
Walk Time (s)								5.0			5.0	
Flash Dont Walk (s)								11.0			11.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)		5.0		10.0		10.0		18.0			18.0	
Actuated g/C Ratio		0.11		0.22		0.22		0.40			0.40	
v/c Ratio		1.95		0.04		2.88		1.28			1.10	
Control Delay		459.1		14.5		869.8		153.8			82.5	
Queue Delay		0.0		0.0		0.0		0.0			1.4	
Total Delay		459.1		14.5		869.8		153.8			83.9	
LOS		F		B		F		F			F	
Approach Delay		459.1			860.8			153.8			83.9	
Approach LOS		F			F			F			F	

Intersection Summary			
Area Type:	CBD		
Cycle Length: 45			
Actuated Cycle Length: 45			
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green, Master Intersection			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 2.88			
Intersection Signal Delay: 336.6		Intersection LOS: F	
Intersection Capacity Utilization 144.2%		ICU Level of Service H	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 6: Fair Oaks Ave & SR-110 Off Ramp/Grevelia St



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	2	1209	918	13
Future Volume (vph)	0	0	2	1209	918	13
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0	0	50			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	*0.95	*0.95	*0.95	0.95	0.95	0.95
Ped Bike Factor						
Frt					0.996	
Flt Protected			0.950			
Satd. Flow (prot)	1006	0	948	1878	1871	0
Flt Permitted			0.950			
Satd. Flow (perm)	1006	0	948	1878	1871	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	109			380	326	
Travel Time (s)	2.5			8.6	7.4	
Confl. Bikes (#/hr)		4				4
Peak Hour Factor	0.25	0.43	0.93	0.92	0.97	0.50
Bus Blockages (#/hr)	0	0	2	2	2	2
Parking (#/hr)				5	5	5
Mid-Block Traffic (%)	0%			5%	5%	
Adj. Flow (vph)	0	0	2	1314	946	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	2	1314	972	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.99	1.99	2.01	2.15	2.15	1.99
Turning Speed (mph)	15	9	15			9
Sign Control	Yield			Free	Free	

Intersection Summary			
Area Type:	CBD		
Control Type: Unsignalized			
Intersection Capacity Utilization 62.1%		ICU Level of Service B	
Analysis Period (min) 15			
* User Entered Value			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	33	8	12	19	10	73	22	1126	16	2	40	828
Future Volume (vph)	33	8	12	19	10	73	22	1126	16	2	40	828
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0		50	
Storage Lanes	0		0	0		0	1		0		2	
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	0.95	0.95	0.91	*0.95	0.95
Ped Bike Factor		0.99			0.98		0.99	1.00			0.99	1.00
Frt		0.973			0.899			0.997				0.991
Flt Protected		0.967			0.992		0.950			0.950	0.950	
Satd. Flow (prot)	0	940	0	0	880	0	956	1869	0	915	956	1855
Flt Permitted		0.751			0.955		0.286			0.196	0.196	
Satd. Flow (perm)	0	726	0	0	845	0	285	1869	0	189	195	1855
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)		14			86			5				19
Link Speed (mph)		25			25			30				30
Link Distance (ft)		390			550			212				380
Travel Time (s)		10.6			15.0			4.8				8.6
Confl. Peds. (#/hr)	8		14	14		8	16		34		34	
Confl. Bikes (#/hr)			3			1			1			
Peak Hour Factor	0.57	0.71	0.69	0.83	0.67	0.66	0.75	0.95	0.75	0.92	0.82	0.96
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	2	0	0	2
Parking (#/hr)								5	5			5
Mid-Block Traffic (%)		0%			0%			5%				5%
Adj. Flow (vph)	58	11	17	23	15	111	29	1185	21	2	49	863
Shared Lane Traffic (%)										10%		
Lane Group Flow (vph)	0	86	0	0	149	0	29	1206	0	2	49	918
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	R NA	Left	Left
Median Width(ft)		0			0			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane								Yes				Yes
Headway Factor	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.15	1.99	1.99	1.99	2.15
Turning Speed (mph)	15		9	15		9	15		9	9	15	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	Perm	NA
Protected Phases		4			8			2				6
Permitted Phases	4			8			2			6	6	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.5	20.5		20.5	20.5	20.5
Total Split (s)	20.0	20.0		20.0	20.0		60.0	60.0		60.0	60.0	60.0
Total Split (%)	25.0%	25.0%		25.0%	25.0%		75.0%	75.0%		75.0%	75.0%	75.0%
Maximum Green (s)	17.0	17.0		17.0	17.0		55.5	55.5		55.5	55.5	55.5
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	0.0	0.0		0.0	0.0		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		3.0			3.0		4.5	4.5		4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												

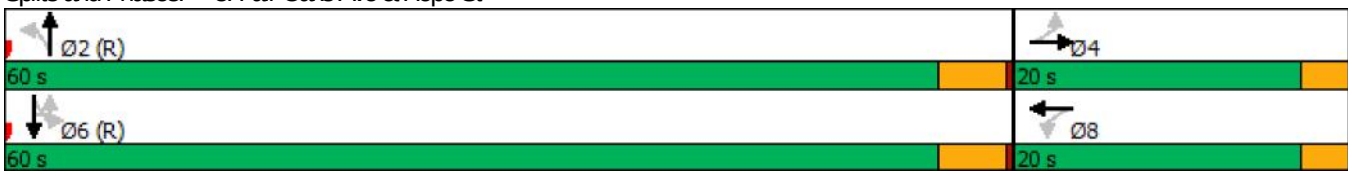
Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	42
Future Volume (vph)	42
Ideal Flow (vphpl)	1200
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Lane Util. Factor	0.95
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	16
Confl. Bikes (#/hr)	3
Peak Hour Factor	0.77
Bus Blockages (#/hr)	2
Parking (#/hr)	5
Mid-Block Traffic (%)	
Adj. Flow (vph)	55
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.99
Turning Speed (mph)	9
Turn Type	
Protected Phases	
Permitted Phases	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effct Green (s)		17.0			17.0		55.5	55.5		55.5	55.5	55.5
Actuated g/C Ratio		0.21			0.21		0.69	0.69		0.69	0.69	0.69
v/c Ratio		0.52			0.60		0.15	0.93		0.02	0.36	0.71
Control Delay		36.6			24.9		6.2	25.3		4.0	14.1	11.1
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		36.6			24.9		6.2	25.3		4.0	14.1	11.1
LOS		D			C		A	C		A	B	B
Approach Delay		36.6			24.9			24.9				11.2
Approach LOS		D			C			C				B

Intersection Summary			
Area Type:	CBD		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 80			
Control Type: Pretimed			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 19.9		Intersection LOS: B	
Intersection Capacity Utilization 76.1%		ICU Level of Service D	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 8: Fair Oaks Ave & Hope St



Lane Group	SBR
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	8	6	5	30	3	0
Future Volume (vph)	8	6	5	30	3	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.941					
Flt Protected	0.973			0.993		
Satd. Flow (prot)	1077	0	0	1168	1176	0
Flt Permitted	0.973			0.993		
Satd. Flow (perm)	1077	0	0	1168	1176	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	410			79	400	
Travel Time (s)	11.2			2.2	10.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	7	5	33	3	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	16	0	0	38	3	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

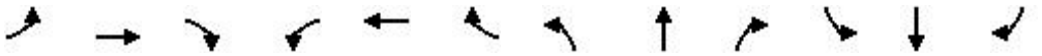
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.2%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	30	23	10	20	0	0
Future Volume (vph)	30	23	10	20	0	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.942		0.910			
Flt Protected	0.972					
Satd. Flow (prot)	1077	0	1071	0	0	1176
Flt Permitted	0.972					
Satd. Flow (perm)	1077	0	1071	0	0	1176
Link Speed (mph)	30		30			30
Link Distance (ft)	111		285			79
Travel Time (s)	2.5		6.5			1.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	25	11	22	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	58	0	33	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15	9		9	15	
Sign Control	Yield		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.9%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	6	0	1202	883	0
Future Volume (vph)	0	6	0	1202	883	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0	0	50			0
Storage Lanes	0	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1018	0	3212	2235	0
Flt Permitted						
Satd. Flow (perm)	0	1018	0	3212	2235	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	173			326	68	
Travel Time (s)	3.9			7.4	1.5	
Confl. Peds. (#/hr)		41				
Confl. Bikes (#/hr)		2				
Peak Hour Factor	0.59	0.59	0.92	0.91	0.96	0.92
Adj. Flow (vph)	0	10	0	1321	920	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	10	0	1321	920	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15	9	15			9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.3%		ICU Level of Service B	
Analysis Period (min) 15			

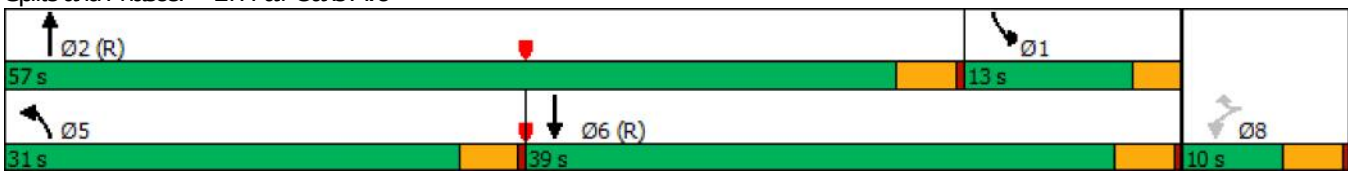


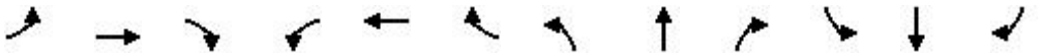
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	50	0	50	600	600	0	50	800	0
Future Volume (vph)	0	0	0	50	0	50	600	600	0	50	800	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	2		1	2		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	0.95	*0.95	*0.95	0.95	*0.95
Frt						0.850						
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	0	0	2124	0	950	2124	2235	0	1062	2235	0
Flt Permitted				0.950			0.950			0.950		
Satd. Flow (perm)	0	0	0	2124	0	950	2124	2235	0	1062	2235	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						123						
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		157			233			172			177	
Travel Time (s)		3.6			5.3			3.9			4.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	54	0	54	652	652	0	54	870	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	54	0	54	652	652	0	54	870	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1		1	1	2		1	2	
Detector Template				Left		Right	Left	Thru		Left	Thru	
Leading Detector (ft)				20		20	20	100		20	100	
Trailing Detector (ft)				0		0	0	0		0	0	
Detector 1 Position(ft)				0		0	0	0		0	0	
Detector 1 Size(ft)				20		20	20	6		20	6	
Detector 1 Type				Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0		0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)				0.0		0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)				0.0		0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type				Perm		Perm	Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases				8		8						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase				8		8	5	2		1	6	
Switch Phase												
Minimum Initial (s)				4.0		4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)				10.0		10.0	8.0	20.0		8.0	20.0	
Total Split (s)				10.0		10.0	31.0	57.0		13.0	39.0	
Total Split (%)				12.5%		12.5%	38.8%	71.3%		16.3%	48.8%	
Maximum Green (s)				6.0		6.0	27.0	53.0		10.0	35.0	
Yellow Time (s)				3.5		3.5	3.5	3.5		3.0	3.5	
All-Red Time (s)				0.5		0.5	0.5	0.5		0.0	0.5	
Lost Time Adjust (s)				0.0		0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)				4.0		4.0	4.0	4.0		3.0	4.0	
Lead/Lag							Lead	Lead		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)				3.0		3.0	3.0	3.0		3.0	3.0	
Recall Mode				None		None	None	C-Max		None	C-Max	
Walk Time (s)				5.0		5.0		5.0			5.0	
Flash Dont Walk (s)				11.0		11.0		11.0			11.0	
Pedestrian Calls (#/hr)				0		0		0			0	
Act Effct Green (s)				5.9		5.9	26.3	61.0		8.6	37.7	
Actuated g/C Ratio				0.07		0.07	0.33	0.76		0.11	0.47	
v/c Ratio				0.35		0.29	0.93	0.38		0.47	0.83	
Control Delay				41.6		4.0	48.7	5.8		47.1	28.3	
Queue Delay				0.0		0.0	49.7	1.5		0.0	0.0	
Total Delay				41.6		4.0	98.4	7.2		47.1	28.3	
LOS				D		A	F	A		D	C	
Approach Delay					22.8			52.8			29.4	
Approach LOS					C			D			C	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 42.2	Intersection LOS: D
Intersection Capacity Utilization 75.4%	ICU Level of Service D
Analysis Period (min) 15	
* User Entered Value	

Splits and Phases: 27: Fair Oaks Ave



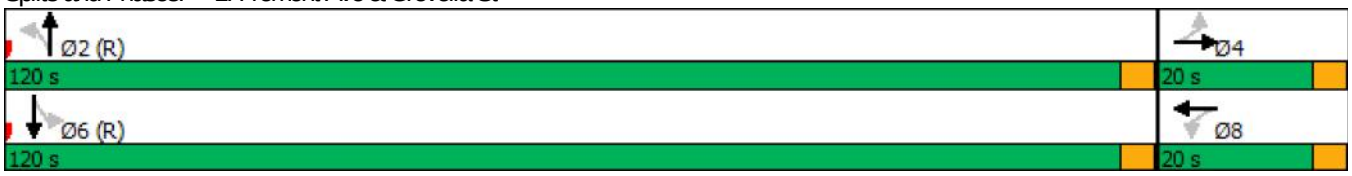


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	8	8	0	4	13	6	660	6	9	705	6
Future Volume (vph)	9	8	8	0	4	13	6	660	6	9	705	6
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt		0.963			0.899			0.998			0.997	
Flt Protected		0.978						0.999			0.999	
Satd. Flow (prot)	0	1011	0	0	965	0	0	952	0	0	951	0
Flt Permitted		0.880						0.988			0.973	
Satd. Flow (perm)	0	909	0	0	965	0	0	942	0	0	926	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			24			2			3	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		327			410			400			155	
Travel Time (s)		8.9			11.2			9.1			3.5	
Peak Hour Factor	0.50	0.71	0.70	0.25	0.50	0.55	0.58	0.92	0.50	0.45	0.95	0.38
Bus Blockages (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Parking (#/hr)								2	2		2	2
Adj. Flow (vph)	18	11	11	0	8	24	10	717	12	20	742	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	0	0	32	0	0	739	0	0	778	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.76	1.84	1.76	1.76	1.84	1.76	1.76	2.11	1.76	1.76	2.11	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		120.0	120.0		120.0	120.0	
Total Split (%)	14.3%	14.3%		14.3%	14.3%		85.7%	85.7%		85.7%	85.7%	
Maximum Green (s)	16.0	16.0		16.0	16.0		116.0	116.0		116.0	116.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		16.0			16.0			116.0			116.0	
Actuated g/C Ratio		0.11			0.11			0.83			0.83	
v/c Ratio		0.35			0.24			0.95			1.01	
Control Delay		54.0			30.6			33.4			49.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		54.0			30.6			33.4			49.8	
LOS		D			C			C			D	
Approach Delay		54.0			30.6			33.4			49.8	
Approach LOS		D			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 140			
Control Type: Pretimed			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 41.9		Intersection LOS: D	
Intersection Capacity Utilization 83.9%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Fremont Ave & Grevelia St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	0	7	2	1	4	2	686	2	1	695	7
Future Volume (vph)	3	0	7	2	1	4	2	686	2	1	695	7
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.905			0.926			0.999			0.997	
Flt Protected		0.985			0.982		0.950			0.950		
Satd. Flow (prot)	0	1049	0	0	1070	0	1118	1175	0	1118	1173	0
Flt Permitted		0.985			0.982		0.950			0.950		
Satd. Flow (perm)	0	1049	0	0	1070	0	1118	1175	0	1118	1173	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		275			410			365			400	
Travel Time (s)		7.5			11.2			8.3			9.1	
Peak Hour Factor	0.25	0.92	0.25	0.50	0.92	0.62	0.62	0.98	0.50	0.62	0.97	0.50
Adj. Flow (vph)	12	0	28	4	1	6	3	700	4	2	716	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	0	0	11	0	3	704	0	2	730	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

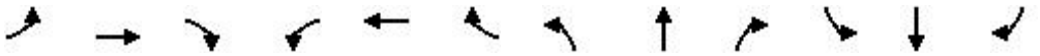
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 68.6%		ICU Level of Service C	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	22	39	8	10	26	27	662	36	28	673	5
Future Volume (vph)	3	22	39	8	10	26	27	662	36	28	673	5
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.920			0.916			0.984			0.999	
Flt Protected		0.998			0.993		0.950			0.950		
Satd. Flow (prot)	0	1080	0	0	1070	0	1118	1158	0	1118	1175	0
Flt Permitted		0.998			0.993		0.950			0.950		
Satd. Flow (perm)	0	1080	0	0	1070	0	1118	1158	0	1118	1175	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		262			410			182			365	
Travel Time (s)		7.1			11.2			4.1			8.3	
Peak Hour Factor	0.67	0.65	0.71	0.92	0.67	0.66	0.66	0.98	0.46	0.72	0.97	0.75
Adj. Flow (vph)	4	34	55	9	15	39	41	676	78	39	694	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	93	0	0	63	0	41	754	0	39	701	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 74.0%		ICU Level of Service D	
Analysis Period (min) 15			

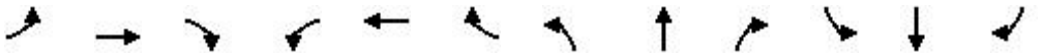
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	17	9	0	0	18	12
Future Volume (vph)	17	9	0	0	18	12
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95
Frt	0.935				0.947	
Flt Protected					0.971	
Satd. Flow (prot)	1045	0	0	0	1028	0
Flt Permitted					0.971	
Satd. Flow (perm)	1045	0	0	0	1028	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	410			76	400	
Travel Time (s)	9.3			1.7	9.1	
Peak Hour Factor	0.62	0.36	0.92	0.92	0.62	0.62
Adj. Flow (vph)	27	25	0	0	29	19
Shared Lane Traffic (%)						
Lane Group Flow (vph)	52	0	0	0	48	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			
* User Entered Value			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	57	20	57	34	9	6	19	21	24	11	3
Future Volume (vph)	9	57	20	57	34	9	6	19	21	24	11	3
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.962			0.988			0.948			0.974	
Flt Protected		0.994			0.973			0.994			0.974	
Satd. Flow (prot)	0	1125	0	0	1131	0	0	1109	0	0	1116	0
Flt Permitted		0.994			0.973			0.994			0.974	
Satd. Flow (perm)	0	1125	0	0	1131	0	0	1109	0	0	1116	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		410			390			181			285	
Travel Time (s)		11.2			10.6			4.9			7.8	
Peak Hour Factor	0.62	0.70	0.52	0.70	0.67	0.67	0.69	0.53	0.75	0.72	0.66	0.25
Adj. Flow (vph)	15	81	38	81	51	13	9	36	28	33	17	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	134	0	0	145	0	0	73	0	0	62	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.0%		ICU Level of Service A	
Analysis Period (min) 15			



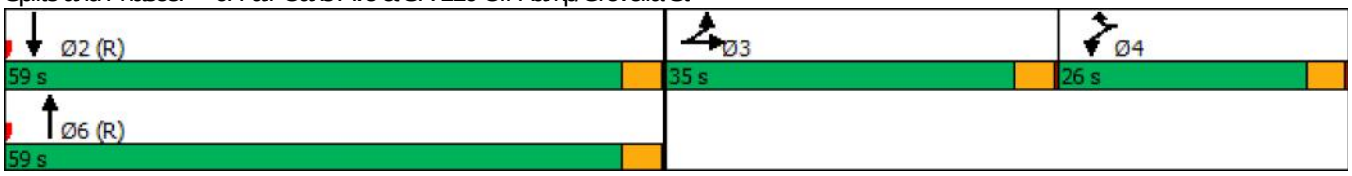
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	386	225	13	0	326	0	1244	39	0	1239	0
Future Volume (vph)	160	386	225	13	0	326	0	1244	39	0	1239	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0	0		0
Storage Lanes	0		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	*0.95	*0.95	*0.95	*0.95	0.91	0.91	*0.95	0.95	*0.95
Ped Bike Factor		0.99		1.00				1.00				
Frt		0.952				0.850		0.994				
Flt Protected		0.989		0.950								
Satd. Flow (prot)	0	1959	0	929	0	831	0	3047	0	0	2087	0
Flt Permitted		0.989		0.950								
Satd. Flow (perm)	0	1959	0	925	0	831	0	3047	0	0	2087	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		64				165		7				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		241			567			68			142	
Travel Time (s)		5.5			12.9			1.5			3.2	
Confl. Peds. (#/hr)			8	8					8			
Confl. Bikes (#/hr)			2						3			
Peak Hour Factor	0.85	0.96	0.80	0.75	0.92	0.79	0.92	0.90	0.63	0.92	0.96	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	2	0	2	2
Parking (#/hr)	5	5	5	5	5	5		5	5		5	5
Mid-Block Traffic (%)		0%			0%			5%			5%	
Adj. Flow (vph)	188	402	281	17	0	413	0	1382	62	0	1291	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	871	0	17	0	413	0	1444	0	0	1291	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.76	1.90	1.76	2.05	1.76	2.05	1.76	1.85	1.76	1.76	1.90	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Split	NA		Prot		Prot		NA			NA	
Protected Phases	3	3		4		4		6			2	
Permitted Phases												
Minimum Split (s)	8.0	8.0		8.0		8.0		20.0			20.0	
Total Split (s)	35.0	35.0		26.0		26.0		59.0			59.0	
Total Split (%)	29.2%	29.2%		21.7%		21.7%		49.2%			49.2%	
Maximum Green (s)	31.0	31.0		22.0		22.0		55.0			55.0	
Yellow Time (s)	3.5	3.5		3.5		3.5		3.5			3.5	
All-Red Time (s)	0.5	0.5		0.5		0.5		0.5			0.5	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0			0.0	
Total Lost Time (s)		4.0		4.0		4.0		4.0			4.0	
Lead/Lag	Lead	Lead		Lag		Lag						
Lead-Lag Optimize?	Yes	Yes		Yes		Yes						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)								5.0			5.0	
Flash Dont Walk (s)								11.0			11.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)		31.0		22.0		22.0		55.0			55.0	
Actuated g/C Ratio		0.26		0.18		0.18		0.46			0.46	
v/c Ratio		1.58		0.10		1.44		1.03			1.35	
Control Delay		297.2		42.7		239.1		64.9			188.5	
Queue Delay		0.3		0.0		7.3		31.1			6.1	
Total Delay		297.5		42.7		246.4		95.9			194.6	
LOS		F		D		F		F			F	
Approach Delay		297.5			238.3			95.9			194.6	
Approach LOS		F			F			F			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 120			
Control Type: Pretimed			
Maximum v/c Ratio: 1.58			
Intersection Signal Delay: 186.2		Intersection LOS: F	
Intersection Capacity Utilization 117.3%		ICU Level of Service H	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 6: Fair Oaks Ave & SR-110 Off Ramp/Grevelia St



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	7	12	14	1109	1371	7
Future Volume (vph)	7	12	14	1109	1371	7
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0	0	50			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	*0.95	*0.95	*0.95	0.95	0.95	0.95
Ped Bike Factor						
Frt	0.932				0.999	
Flt Protected	0.976		0.950			
Satd. Flow (prot)	1017	0	1062	2096	2093	0
Flt Permitted	0.976		0.950			
Satd. Flow (perm)	1017	0	1062	2096	2093	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	109			380	326	
Travel Time (s)	2.5			8.6	7.4	
Confl. Bikes (#/hr)		4				4
Peak Hour Factor	0.25	0.43	0.93	0.92	0.97	0.50
Parking (#/hr)				5	5	5
Mid-Block Traffic (%)	0%			5%	5%	
Adj. Flow (vph)	28	28	15	1205	1413	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	56	0	15	1205	1427	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.76	1.76	1.76	1.90	1.90	1.76
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 70.4%		ICU Level of Service C	
Analysis Period (min) 15			

* User Entered Value

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	44	23	31	26	17	41	20	1022	40	1	82	1246
Future Volume (vph)	44	23	31	26	17	41	20	1022	40	1	82	1246
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	50		0		50	
Storage Lanes	0		0	0		0	1		0		2	
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	*0.95	0.95	0.95	0.91	*0.95	0.95
Ped Bike Factor		0.97			0.97		0.99	0.99			0.98	0.99
Frt		0.961			0.929			0.993				0.990
Flt Protected		0.976			0.987		0.950			0.950	0.950	
Satd. Flow (prot)	0	814	0	0	785	0	956	1853	0	915	956	1848
Flt Permitted		0.737			0.896		0.156			0.220	0.220	
Satd. Flow (perm)	0	607	0	0	709	0	156	1853	0	212	217	1848
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)		17			45			12				18
Link Speed (mph)		25			25			30				30
Link Distance (ft)		390			550			212				380
Travel Time (s)		10.6			15.0			4.8				8.6
Confl. Peds. (#/hr)	18		16	16		18	22		36		36	
Confl. Bikes (#/hr)			3			3			2			
Peak Hour Factor	0.57	0.71	0.69	0.83	0.67	0.66	0.75	0.95	0.75	0.92	0.82	0.96
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	2	0	0	2
Parking (#/hr)	5	5	5	5	5	5		5	5			5
Mid-Block Traffic (%)		0%			0%			5%				5%
Adj. Flow (vph)	77	32	45	31	25	62	27	1076	53	1	100	1298
Shared Lane Traffic (%)										10%		
Lane Group Flow (vph)	0	154	0	0	118	0	27	1129	0	1	100	1389
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	R NA	Left	Left
Median Width(ft)		0			0			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane								Yes				Yes
Headway Factor	1.99	2.31	1.99	1.99	2.31	1.99	1.99	2.15	1.99	1.99	1.99	2.15
Turning Speed (mph)	15		9	15		9	15		9	9	15	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	Perm	NA
Protected Phases		4			8			2				6
Permitted Phases	4			8			2			6	6	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	25.0	25.0		25.0	25.0		85.0	85.0		85.0	85.0	85.0
Total Split (%)	22.7%	22.7%		22.7%	22.7%		77.3%	77.3%		77.3%	77.3%	77.3%
Maximum Green (s)	21.0	21.0		21.0	21.0		81.0	81.0		81.0	81.0	81.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												

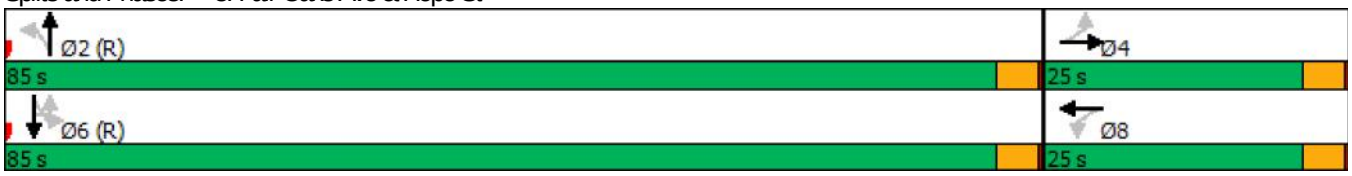
Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	70
Future Volume (vph)	70
Ideal Flow (vphpl)	1200
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Lane Util. Factor	0.95
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	22
Confl. Bikes (#/hr)	2
Peak Hour Factor	0.77
Bus Blockages (#/hr)	2
Parking (#/hr)	5
Mid-Block Traffic (%)	
Adj. Flow (vph)	91
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.99
Turning Speed (mph)	9
Turn Type	
Protected Phases	
Permitted Phases	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effct Green (s)		21.0			21.0		81.0	81.0		81.0	81.0	81.0
Actuated g/C Ratio		0.19			0.19		0.74	0.74		0.74	0.74	0.74
v/c Ratio		1.19			0.69		0.24	0.83		0.01	0.63	1.02
Control Delay		176.7			48.0		10.4	16.4		4.0	28.5	44.7
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		176.7			48.0		10.4	16.4		4.0	28.5	44.7
LOS		F			D		B	B		A	C	D
Approach Delay		176.7			48.0			16.2				43.6
Approach LOS		F			D			B				D

Intersection Summary			
Area Type:	CBD		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 90			
Control Type: Pretimed			
Maximum v/c Ratio: 1.19			
Intersection Signal Delay: 39.9		Intersection LOS: D	
Intersection Capacity Utilization 86.9%		ICU Level of Service E	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 8: Fair Oaks Ave & Hope St



Lane Group	SBR
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	12	5	19	19	4
Future Volume (vph)	2	12	5	19	19	4
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.883				0.978	
Flt Protected	0.993			0.990		
Satd. Flow (prot)	1032	0	0	1165	1151	0
Flt Permitted	0.993			0.990		
Satd. Flow (perm)	1032	0	0	1165	1151	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	410			79	400	
Travel Time (s)	11.2			2.2	10.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	13	5	21	21	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	15	0	0	26	25	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

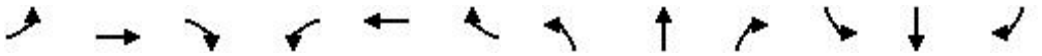
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.4%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	30	23	10	20	0	0
Future Volume (vph)	30	23	10	20	0	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.942		0.910			
Flt Protected	0.972					
Satd. Flow (prot)	1077	0	1071	0	0	1176
Flt Permitted	0.972					
Satd. Flow (perm)	1077	0	1071	0	0	1176
Link Speed (mph)	30		30			30
Link Distance (ft)	111		285			79
Travel Time (s)	2.5		6.5			1.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	25	11	22	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	58	0	33	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15	9		9	15	
Sign Control	Yield		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.9%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	26	0	1015	1214	0
Future Volume (vph)	0	26	0	1015	1214	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0	0	50			0
Storage Lanes	0	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1018	0	3212	2235	0
Flt Permitted						
Satd. Flow (perm)	0	1018	0	3212	2235	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	173			326	68	
Travel Time (s)	3.9			7.4	1.5	
Confl. Peds. (#/hr)		41				
Confl. Bikes (#/hr)		2				
Peak Hour Factor	0.59	0.59	0.92	0.91	0.96	0.92
Adj. Flow (vph)	0	44	0	1115	1265	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	44	0	1115	1265	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15	9	15			9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 71.3%		ICU Level of Service C	
Analysis Period (min) 15			

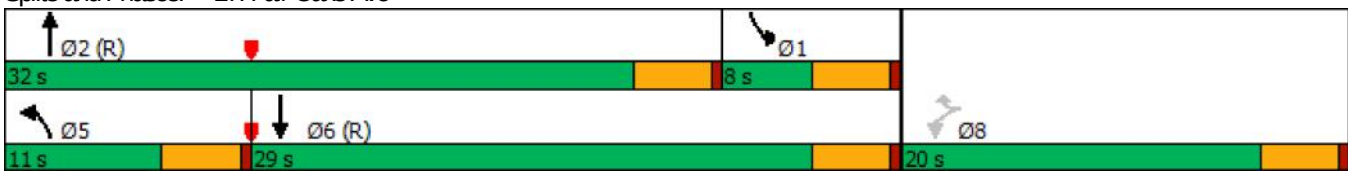


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	50	0	50	600	600	0	50	800	0
Future Volume (vph)	0	0	0	50	0	50	600	600	0	50	800	0
Ideal Flow (vphpl)	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Storage Length (ft)	0		0	0		0	100		0	0		0
Storage Lanes	0		0	2		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.95	1.00	0.95	0.95	1.00
Frt						0.850						
Flt Protected				0.950			0.950				0.997	
Satd. Flow (prot)	0	0	0	2168	0	1000	2168	2235	0	0	2229	0
Flt Permitted				0.950			0.950				0.892	
Satd. Flow (perm)	0	0	0	2168	0	1000	2168	2235	0	0	1994	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						164						
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		211			278			142			65	
Travel Time (s)		4.8			6.3			3.2			1.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	54	0	54	652	652	0	54	870	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	54	0	54	652	652	0	0	924	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm		Perm	Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases				8		8						
Minimum Split (s)				20.0		20.0	8.0	20.0		8.0	20.0	
Total Split (s)				20.0		20.0	11.0	32.0		8.0	29.0	
Total Split (%)				33.3%		33.3%	18.3%	53.3%		13.3%	48.3%	
Maximum Green (s)				16.0		16.0	7.0	28.0		4.0	25.0	
Yellow Time (s)				3.5		3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)				0.5		0.5	0.5	0.5		0.5	0.5	
Lost Time Adjust (s)				0.0		0.0	0.0	0.0			0.0	
Total Lost Time (s)				4.0		4.0	4.0	4.0			4.0	
Lead/Lag							Lead	Lead		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Walk Time (s)				5.0		5.0		5.0			5.0	
Flash Dont Walk (s)				11.0		11.0		11.0			11.0	
Pedestrian Calls (#/hr)				0		0		0			0	
Act Effct Green (s)				16.0		16.0	7.0	28.0			25.0	
Actuated g/C Ratio				0.27		0.27	0.12	0.47			0.42	
v/c Ratio				0.09		0.14	2.59	0.63			4.28	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay				17.2		0.8	735.5	15.2			1497.9	
Queue Delay				0.3		0.0	0.6	55.5			11.1	
Total Delay				17.5		0.8	736.0	70.7			1508.9	
LOS				B		A	F	E			F	
Approach Delay					9.1			403.3			1508.9	
Approach LOS					A			F			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 4.28			
Intersection Signal Delay: 822.4		Intersection LOS: F	
Intersection Capacity Utilization 77.7%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 27: Fair Oaks Ave



Appendix C: Signal Warrant Analysis

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 1 of 5)

COUNT DATE 5/3/23

DIST ____ CO ____ RTE ____ PM ____

CALC ____ DATE ____

CHK ____ DATE ____

Major St: Mound Avenue

Minor St: Magnolia Street

Critical Approach Speed ____ mph

Critical Approach Speed ____ mph

Speed limit or critical speed on major street traffic > 40 mph..... ☐

or

In built up area of isolated community of < 10,000 population..... ☐ **RURAL (R)**

☒ **URBAN (U)**

WARRANT 1 - Eight Hour Vehicular Volume **SATISFIED YES ☐ NO ☒**

(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume **100% SATISFIED YES ☐ NO ☒**

80% SATISFIED YES ☐ NO ☒

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM
	U	R	U	R								Hour
APPROACH LANES	1		2 or More									
Both Approaches Major Street	500 (400)	350 (280)	600 (480)	420 (336)	25	34	33	36	37	44	38	37
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)	0	7	8	9	11	8	7	9

Condition B - Interruption of Continuous Traffic **100% SATISFIED YES ☐ NO ☒**

80% SATISFIED YES ☐ NO ☒

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM
	U	R	U	R								Hour
APPROACH LANES	1		2 or More									
Both Approaches Major Street	750 (600)	525 (420)	900 (720)	630 (504)	25	34	33	36	37	44	38	37
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)	0	7	8	9	11	8	7	9

Combination of Conditions A & B **SATISFIED YES ☐ NO ☒**

REQUIREMENT	CONDITION	✓	FULFILLED
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME		Yes ☐ No ☒
	AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC		
AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			Yes ☐ No ☒

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☒**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	3:00 PM	4:00 PM	5:00 PM	6:00 PM (Hour)
Both Approaches - Major Street	X		37	44	38	37
Higher Approach - Minor Street	X		11	8	7	9

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐	No ☒
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐	No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☐ NO ☒**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☒**
(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐	No ☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐	No ☒
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐	No ☒

PART B **SATISFIED YES ☐ NO ☒**

APPROACH LANES	One	2 or More	4:00 PM (Hour)
Both Approaches - Major Street	X		44
Higher Approach - Minor Street	X		8

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐	No ☒
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐	No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 3 of 5)

NOT APPLICABLE

WARRANT 4 - Pedestrian Volume
(Parts 1 and 2 Must Be Satisfied)

SATISFIED YES ☐ NO ☒

Part 1 **(Parts A or B must be satisfied)**

	Hours - - ->				
A.	Vehicles per hour for any 4 hours				
	Pedestrians per hour for any 4 hours				

Figure 4C-5 or Figure 4C-6
SATISFIED YES ☐ NO ☒

	Hours - - ->				
B.	Vehicles per hour for any 1 hour				
	Pedestrians per hour for any 1 hour				

Figure 4C-7 or Figure 4C-8
SATISFIED YES ☐ NO ☒

Part 2 **SATISFIED YES ☒ NO ☐**

AND, The distance to the nearest traffic signal along the major street is greater than 300 ft	Yes ☒ No ☐
OR, The proposed traffic signal will not restrict progressive traffic flow along the major street.	Yes ☐ No ☐

NOT APPLICABLE

WARRANT 5 - School Crossing
(Parts A and B Must Be Satisfied)

SATISFIED YES ☐ NO ☒

Part A
Gap/Minutes and # of Children

SATISFIED YES ☐ NO ☒

		Hour
Gaps vs Minutes	Minutes Children Using Crossing	
	Number of Adequate Gaps	
School Age Pedestrians Crossing Street / hr		

Gaps < Minutes YES ☐ NO ☐
AND Children > 20/hr YES ☐ NO ☐

AND, Consideration has been given to less restrictive remedial measures.	Yes ☐ No ☐

Part B **SATISFIED YES ☐ NO ☒**

The distance to the nearest traffic signal along the major street is greater than 300 ft	Yes ☐ No ☐
OR, The proposed signal will not restrict the progressive movement of traffic.	Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 4 of 5)

NOT APPLICABLE

WARRANT 6 - Coordinated Signal System **SATISFIED YES ☐ NO ☒**
(All Parts Must Be Satisfied)

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNAL	
≥ 1000 ft	N _____ ft, S _____ ft, E _____ ft, W _____ ft	Yes ☐ No ☒
On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.		Yes ☐ No ☒
OR, On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.		

WARRANT 7 - Crash Experience Warrant **SATISFIED YES ☐ NO ☒**
(All Parts Must Be Satisfied)

Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency.			Yes ☐ No ☐
REQUIREMENTS	Number of crashes reported within a 12 month period susceptible to correction by a traffic signal, and involving injury or damage exceeding the requirements for a reportable crash.		Yes ☐ No ☒
5 OR MORE			
REQUIREMENTS	CONDITIONS	✓	
ONE CONDITION SATISFIED 80%	Warrant 1, Condition A - Minimum Vehicular Volume		Yes ☐ No ☒
	OR, Warrant 1, Condition B - Interruption of Continuous Traffic		
	OR, Warrant 4, Pedestrian Volume Condition Ped Vol ≥ 80% of Figure 4C-5 through Figure 4C-8		

WARRANT 8 - Roadway Network **SATISFIED YES ☐ NO ☒**
(All Parts Must Be Satisfied)

MINIMUM VOLUME REQUIREMENTS	ENTERING VOLUMES - ALL APPROACHES		✓	FULFILLED
1000 Veh/Hr	During Typical Weekday Peak Hour 44 Veh/Hr and has 5-year projected traffic volumes that meet one or more of Warrants 1, 2, and 3 during an average weekday.			Yes ☐ No ☒
	OR During Each of Any 5 Hrs. of a Sat. or Sun _____ Veh/Hr			
CHARACTERISTICS OF MAJOR ROUTES		MAJOR ROUTE A	MAJOR ROUTE B	
Hwy. System Serving as Principal Network for Through Traffic				
Rural or Suburban Highway Outside Of, Entering, or Traversing a City				
Appears as Major Route on an Official Plan				
Any Major Route Characteristics Met, Both Streets				Yes ☐ No ☒

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 5 of 5)

WARRANT 9 - Intersection Near a Grade Crossing **SATISFIED YES ☐ NO ☒**
(Both Parts A and B Must Be Satisfied)

PART A A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach. Track Center Line to Limit Line _____ ft	Yes ☐ No ☒
PART B **There is one minor street approach lane at the track crossing -** During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-9. Major Street - Total of both approaches: _____ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): _____ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = _____ VPH	Yes ☐ No ☒
OR, There are two or more minor street approach lanes at the track crossing - During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-10. Major Street - Total of both approaches : _____ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): _____ VPH X AF (Use Tables 4C-2, 3, & 4 below to calcualte AF) = _____ VPH	

The minor street approach volume may be multiplied by up to three following adjustment factors (AF) as described in Section 4C.10.

1- Number of Rail Traffic per Day_____ Adjustment factor from table 4C-2____

2- Percentage of High-Occupancy Buses on Minor Street Approach_____ Adjustment factor from table 4C-3____

3- Percentage of Tractor-Trailer Trucks on Minor Street Approach_____ Adjustment factor from table 4C-4____

NOTE: If no data is availale or known, then use AF = 1 (no adjustment)

ITEM 3

Approval of Minutes of the Regular Mobility and Transportation Infrastructure Commission Meeting on January 16, 2024

CITY OF SOUTH PASADENA
MOBILITY AND TRANSPORTATION INFRASTRUCTURE COMMISSION

MINUTES
REGULAR MEETING
TUESDAY, JANUARY 16, 2024

CALL TO ORDER:

Chair Dunlap called the Meeting of the South Pasadena Mobility and Transportation Infrastructure Commission to order on Tuesday, January 16, 2024 at 6:37 P.M. in the City Council Chambers, 1424 Mission Street, South Pasadena, California.

ROLL CALL:

PRESENT	Vice Chair	Kimberley Hughes
	Commissioner	Lawrence Abelson
	Commissioner	John Fisher
	Commissioner	Diego Zavala
COUNCIL LIAISON	Councilmember	Jack Donovan
ABSENT	Councilmember	Jack Donovan

Leaonna DeWitt, Public Works Assistant, announced a quorum.

CITY STAFF PRESENT:

H. Ted Gerber, Public Works Director ("PWD"), Michael Vartanians, Principal Engineer ("PE"), David Pena, Transportation Program Manager ("TPM") via zoom, and Leaonna DeWitt, Public Works Assistant ("PWA") were present at Roll Call. Other staff members presented reports or responded to questions as indicated in the minutes.

PLEDGE OF ALLEGIANCE

The Flag Salute was led by Commissioner Fisher.

PUBLIC COMMENT

1. PUBLIC COMMENT – GENERAL (NON-AGENDA ITEMS)

No comments.

ACTION/DISCUSSION

2. STREET IMPROVEMENT PROGRAM

Recommendation
It is recommended that the Mobility and Transportation Infrastructure Commission (MTIC) receive a presentation on the City's Streets Improvement Program implementation and provide general recommendations and advisement related to staff's efforts.

Public Works Director Gerber gave a brief presented on this item. Staff responded to questions raised by the Commission.

Current Projects

- Project 1 in Construction: Monterey Road (West side), Alta Vista Street, Sterling Place (ease of Grand Avenue), Forest Avenue (north of Mission Street)

- Project 2 in Design: Arroyo Verde, Glendon Way (Lyndon to Monterey), Mill Road, Milan Avenue (Oak Street to Edgewood Drive), Edgewood Drive, Pine Street (Meridian to Ramona/Huntington), Oneonta Knoll, Maple Street (Meridian Avenue to Huntington Drive), Maple Street (Fremont Avenue to Primrose Avenue)

- Project 3 in Development: Surface Treatments in Proposed Area(s)

- Project 4 in Design: Intersection at Mission/Pasadena Avenue/Arroyo Drive

Vice Chair Hughes requested the item be brought back with the associated costs.

Discussion ensued and staff responded to questions raised by the Commission.

COMMISSION ACTION AND MOTION
A motion was made by Chair Hughes, seconded by Commissioner Fisher and approved with the caveat that the boundaries do not coincide with specific council districts. The motion carried 4-0, by the following vote:

AYES: **Hughes, Abelson, Fisher, Zavala**
NOES: **None.**
ABSENT: **None.**
ABSTAINED: **None.**

3. APPROVAL OF MINUTES OF DECEMBER 19, 2023 MEETING

Recommendation
It is recommended that the Commission review and consider approval of the December 19, 2023.

COMMISSION ACTION AND MOTION

A motion was made by Commissioner Abelson, seconded by Commissioner Zavala and approved as amended. The motion carried 4-0.

INFORMATION REPORTS

4. PROJECT STATUS UPDATE

Recommendation

It is recommended that the Commission receive and file an update on the status of projects related to the City's mobility and transportation Infrastructure.

TPM Pena gave a brief project update.

Staff responded to questions raised by the Commission.

COMMUNICATIONS

5. CITY COUNCIL LIAISON COMMUNICATIONS

No Comments

6. COMMISSIONER COMMUNICATIONS

Vice-Chair Hughes thanked staff for their great work. She reported that she participated in the Arroyo Fest and that everyone who worked on the Arroyo Fest should be commended.

Commissioner Zavala reported that the Arroyo Fest event was very impressive and that he worked on the Arroyo Fest, which had around 3000 participants.

Commissioner Abelson thanked staff and Councilmember Donovan for all of the good work during the year. He commented that he participated in the Arroyo Fest and walked on the freeway and it was amazing.

Chair Dunlap wished everyone Happy Holidays and he enjoyed being Chair for the year.

7. STAFF LIAISON COMMUNICATIONS

PWD Gerber introduced Michael Vartanians, Principal Engineer.

ADJOURNMENT

Chair Dunlap adjourned the meeting of the Mobility and Transportation Infrastructure Commission at 9:22 P.M.

Respectfully submitted:

_____
Leaonna DeWitt
Public Works Assistant

APPROVED:

_____
Kimberley Hughes
Vice Chair

Approved at Commission Meeting: February 20, 2024

ITEM 4

Project Status Update

Mobility and Transportation Infrastructure Commission Agenda Report

ITEM NO. 4

DATE: February 20, 2024

FROM: H. Ted Gerber, Director of Public Works
David Peña, Transportation Program Manager

SUBJECT: **Project Status Update**

Recommendation
It is recommended that the Commission receive and file an update on the status of projects related to the City's mobility and transportation infrastructure.

Information
Public Works projects are generally divided into two areas: (1) Capital Improvement Program (CIP) projects and (2) routine or special Operations & Maintenance (O&M) projects. Ongoing or planned projects related to mobility and transportation infrastructure in both of these areas, along with their recent status, are listed in the tables below.

Capital Improvement Program (CIP) Projects	Project Status
Mission and Fremont Rectangular Rapid Flashing Beacons *Budget: Highway Safety Improvement Program (HSIP) $238,465, Measure M Local Return $26,497*	<u>Updated Status</u> *Staff working to release bid with an update from the design consultant.* This project installs Rectangular Rapid Flashing Beacons (RRFBs) at Fremont Avenue and Lyndon Street, Mission Street and Diamond Avenue, and Mission Street and Fairview Avenue. The design consultant has provided a first draft of the bid package construction documents – staff are reviewing the package and providing revision comments to the consultant. In order to accommodate the bid package advertisement, which requires compliance with federal requirements, staff worked with Metro and Caltrans to submit requests to extend the construction financing into 2024.

Capital Improvement Program (CIP) Projects	Project Status
Street Improvements *Budget: General Fund $2,298,445, Proposition C $300,000, Gas Tax $200,000, Measure R Local Return $300,000, Measure M Local Return $177,565, SB1 $585,093, Bike & Pedestrian $25,000* *Total $3,886,103*	<u>Updated Status</u> *Striping was completed, but the replacement of streetlight LEDs is pending delivery.* This work includes reconstruction projects along Monterey Road from Pasadena Avenue to the West City Limit, Alta Vista Avenue from Indiana Avenue to Oak Crest Avenue, Forest Avenue from Mission Street to the End of the Street, and Sterling Place from Floral Park Terrace of the End of the Street. Concrete work commenced in early January, and grinding/paving commenced on January 10. All paving is expected to be complete by late January. Some components, such as replacement of streetlight LED heads may be delayed due to long lead times from equipment manufacturers.
Measure M Project Funding Requests	<u>No Significant Update</u> *New projects to be considered in FY 23-24.* The Commission will review new proposed projects in FY 23-24 to submit for the 2024 project request cycle.
Grevelia Street and Fair Oaks Avenue--Measure M Project *Budget: Measure M MSP $200,000*	<u>Updated Status</u> *Staff is currently reviewing the scope of work proposal for off-ramp queuing analysis and preparing a Master Service Agreement for the on-call consultant.* Staff submitted the Scope of Work and Funding Expenditure to Metro for review. to execute a funding agreement (MM5506.06). The on-call consultant's scope of work for the analysis of Fair Oaks/Grevelia will include data collection and review, conceptual alternatives, operational evaluation, technical memo, and staff meetings tasks.
Orange Grove Avenue Widening from Oliver Street to Arroyo Seco Park *Budget: Measure M MSP $500,000*	<u>Updated Status</u> *Staff received a scope of work from an on-call consultant. A Master Service Agreement needs to be executed with the consultant.* Staff are working with a Metro representative to file the documents necessary to execute a funding agreement (MM5506.08). Upon approving the funding submittal, City Council directed staff to explore the feasibility of alternatives to the widening. Staff will also look at a traffic safety assessment for Orange Grove as part of the consultant's scope to then develop a task order. Staff received draft scope of work which will include 1) Data collection and review 2) Neighborhood Stakeholder Meetings/Work Sessions 3) Conceptual alternatives and recommendations 4) Meetings/Work Sessions and Administrative Support.

Capital Improvement Program (CIP) Projects	Project Status
Pedestrian Crossing Devices *Budget: Measure M MSP $322,624*	<u>Updated Status</u> *Funding Agreement is being reviewed by the City Attorney.* Staff is working with a Metro representative to file the documents necessary in order to execute a funding agreement (MM4101.11). Staff made edits to Metro's feedback and submitted a final scope of work to Metro to initiate Funding Agreement terms. MTIC recommended crossing locations and will prioritize three intersections Meridian and Bank, Grevelia and Park, and Fair Oaks/Spruce.
Columbia Street Striping & Signal Improvements *Budget: Measure M MSP $300,000*	<u>Updated Status</u> *$9.9M in Measure R Mobility Improvement Project (MIP) Funds were approved by Metro and Pasadena City Council included the project in the City CIP.* On May 8, 2023 the City of Pasadena's Council determined Pasadena's funded project to be in conformance with the City's General Plan. City staff will work with Pasadena DOT to determine the next steps to move this project forward. Staff are working with a Metro representative to file the documents necessary in order to execute South Pasadena's Measure M MSP funding agreement (MM5506.07). City staff discussed this project with the City of Pasadena and discussed potential short-term changes to Columbia Street like edge striping or other minor modifications before more comprehensive striping and signal improvements begin. Pasadena staff will look at the corridor and check to see what is feasible.
Garfield Avenue and Monterey Road Traffic Signal	<u>Updated Status</u> *Staff met with an on-call consultant to discuss the traffic warrant analysis for Garfield Avenue and Monterey Road.* Staff is currently reviewing a draft scope of work for a traffic signal warrant analysis. Staff reached out to the City of San Marino to discuss the project. This will be the first step to conduct the necessary warrant analysis of the signal in order to fulfill the feasibility requirements of the funding source, before resubmitting the project to Metro.
Fremont/Huntington Mobility Active Transportation & Mobility Improvement Projects *Budget: Measure M MAT $6M, Measure M MIP $10M*	<u>Updated Status</u> *Staff received the first draft of design charette memos and is currently reviewing them.* Staff received the three corridor memos for the design charette and is working with the consultant to modify the necessary changes to the reports. Staff plans to present the reports to MTIC at a future meeting.

Capital Improvement Program (CIP) Projects	Project Status
City of Pasadena 'Stub' Relinquishment / Transitional Project Development & City of Alhambra I-10 Modifications	<u>No Significant Update</u> *Discussion with Alhambra and Pasadena.* South Pasadena, Pasadena, and Alhambra staff held an initial discussion, and are scheduling follow up meetings. The City of Alhambra approved a Measure R funding agreement with Metro for the Fremont Ramp and Interchange Improvements. Staff provided an update to Council on the status of the Pasadena re-visioning process and the 'Advancing Alhambra' projects. On Monday, 9/11, Pasadena Council considered a contract for strategic planning and project management services for the relinquished 710 stub area. City Manager team also made a presentation to Council regarding the status of the project. City staff discussed this project with the City of Pasadena, the City of Alhambra, and the Fremont/Huntington/Fair Oaks planning consultant as it related to neighboring City projects and their impact on South Pasadena planning effort.
Sidewalks Replacement & ADA Ramps Upgrades *Budget: $564,663*	<u>Updated Status</u> *Project is being expanded to include more locations.* Staff met with the Los Angeles County Development Authority (LACDA) Community Development Division to ensure the funding requirements are met and to program funding for the next fiscal years. The outcome of the meeting was direction to expand the scope of the project to expend more funding in Fiscal Year 2023-2024. Staff are proposing to include improvements at these locations, in addition to the existing twelve intersections along Meridian Avenue: • Amberwood at Raymondale (North & South) • Amberwood at Mockingbird • Oxley at Fairview Staff are working to provide an updated implementation schedule to be reviewed and approved by LACDA for the newly established budget of $564,663. Staff met with the LACDA at the end of December to review the project advertisement requirements.
North-South Corridor Intelligent Transportation Systems (ITS) Deployment Project *Budget: $9M Rogan Funds, $1.4 General Fund*	<u>Updated Status</u> *Consultant KOA provided the 30% Design Plans for staff to review.* Staff reviewed and submitted comments on 30% plans and is waiting to receive the Cultural Resource Research Records for the environmental phase. Staff met with LA Metro to discuss the fiber connection and strands. The city will permit the use of virtual local-area network (VLAN) on switches in lieu of splicing fiber cable which would reduce costs for the signal prioritization for Line 260. This would have minimal impact and would limit the use of the city's infrastructure. This process also helps with performance and security. Staff and KOA are working with Metro's consultant Iteris on the implementation.

Capital Improvement Program (CIP) Projects	Project Status
Farmer's Market Bollard System	<u>No Significant Update</u> *Potential grant funding opportunity identified.* This future proposed project is listed in the 5-Year Capital Improvement Program (CIP). Staff is currently exploring an available funding opportunity for this project. The project is scheduled for implementation in Fiscal Year 2024-2025.
Fair Oaks SR-110 Interchange Loop/Hook On-Ramp *Budget: Measure M MIP $70 Million*	<u>Updated Status</u> *Staff received an updated amendment to the scope of work that includes the Median U-Turn Intersection scope and cost estimates to include this in the scope of work.* Staff is currently working with HNTB to draft a Funding Agreement (FA) to submit to Metro that will cover the Project Approval/Environmental Document Phase of the project. Once this is complete, the draft FA will be sent to Metro for further review. Work on the item can commence with Council approval.
Fair Oaks SR-110 Interchange Loop/Hook Grevelia Off-Ramp *Budget: See above*	<u>Updated Status</u> *Alternative study scope being developed.* See above “Fair Oaks SR-110 Interchange Loop/Hook On-Ramp” status.

Capital Improvement Program (CIP) Projects	Project Status
Federal Transportation Improvement Plan (FTIP)	<u>Updated Status</u> *Staff updated five (5) FTIP projects with Metro.* *FTIP is a federally mandated list of transportation projects that are funded with federal, state, or local funds. It also includes projects regionally significant for transit, highway, local roadway, bridge, freight, bicycle, and pedestrian.* *Over the last two months staff has been working with Metro staff, and discussed projects with Caltrans and FHWA to update all projects and remove projects that were deobligated. Staff also reconciled duplicate projects and projects that were deprioritized by the City several years ago. The system is updated every two years by staff and requires City staff to provide changes in the FTIP system. Future projects will be added to the FTIP pending formal review by Metro's FTIP team based on funding source and significance.*
Highway Safety Improvement Program (HSIP) Cycle 11 Projects *Budget: $540,760 HSIP with $88,840 City match*	<u>No Significant Update</u> *Recently awarded grant funding.* On March 9, 2023, South Pasadena was awarded over $500,000 in HSIP funding for four (4) projects submitted in Fall 2022 related to street lighting, bike lanes, and pedestrian crossing improvements at multiple locations: The intersection of Monterey Road and Fremont Avenue and the intersection of Fair Oaks Avenue and Grevelia Street south of the 110 Freeway on and off-ramps to improve traffic signal timing and hardware, add intersection lighting ($32,350). The intersection of Fremont Avenue and Huntington Drive for the addition of bike lanes, installation of pedestrian countdown signals, and addition of lighting ($50,040). Fremont Avenue from Columbia Street to Monterey Road to add street lighting, install flashing beacons at stop-controlled intersection, install curve advance warning signs ($277,110). Huntington Drive from Leman Street to Maple Street to install bike lanes, and add street lighting ($181,260). These HSIP projects will be coordinated with the Fremont/Huntington Mobility Active Transportation & Mobility Improvement Projects.

Operations & Maintenance (O&M) Projects	Project Status
2023-2024 Slow Streets & Open Streets Program *Budget: General Fund $150,000* *Measure M $105,570* *SGVCOG Grant: $45,000*	<u>Updated Status</u> *Staff is preparing to present the Slow Streets residential program to City Council in March.* An initial 'pilot' parklet will be installed ahead of the street design and equipment roll-out in front of Jones Coffee Roasters. The proposed design of this parklet was presented at the 9/19 MTIC Commission Meeting and at the 9/21 Cultural Heritage Commission Meeting. Staff received recommendations from MTIC on the residential slow streets program which will be presented to City Council in February 2024. The consultant is working with the subconsultant, Iteris to model the new configuration along Mission Street based on MTIC's recommendations.
Neighborhood Traffic Management Program (NTMP) Implementation	<u>No Significant Update</u> *Software workflow development underway. City Council approval of the amended software contract is required.* Staff are working with the contracted software system designer to implement the NTMP online processing forms. The implementation requires a contract amendment to the software development agreement, which is expected to be before City Council for approval in the next few months. While the implementation is underway, staff continue to receive and process requests from the community related to neighborhood traffic management.
Ramona Avenue, Oak Street, Rollin Street, & Fremont Avenue Traffic Management	<u>Updated Status</u> *Staff met with Ramona residents to discuss ongoing traffic impacts around the neighborhood.* Staff is still working with Holy Family on an amendment to their specific plan to address related traffic and circulation issues. Staff will consider a stop sign warrant analysis for three different locations at Ramona/Rollin, Ramona/Spruce, and Ramona/Pine.
Meridian Avenue Traffic Management & Safety Measures	<u>No Significant Update</u> *Pending task order issuance.* Staff have evaluated the site conditions and traffic data to discuss potential improvements to Meridian Avenue. This information was presented at the July 2022 MTIC meeting, and the Commission provided feedback. A study will be conducted, including a speed survey, which will be coordinated with local stakeholders. A task order is being issued to a professional services on-call consultant for this work. Recently, the pedestrian crossing at Meridian and Bank has been refreshed with new paint and a new sign. The nearby City trees have been trimmed and residents have been notified by mail to trim nearby privately-owned overgrown trees.

Operations & Maintenance (O&M) Projects	Project Status
Timing Improvements at the Metro Gold Line Mission & Meridian	<u>No Significant Update</u> *Task order being executed.* Staff previously met with MTIC's Chair to review recommendations regarding the timing of signal lights and railway crossing gates at Mission and Meridian. Metro has provided a contact for timing issues to work with the City, however, Metro requires more information on the matter to troubleshoot the solution. If necessary, a task order to update the timing sheets for this location will be issued to a professional services on-call consultant. The task order work would also reconcile the City's previously requested preemption changes with the known timing issues.
Fremont Avenue Southbound Left Turn Pocket South of Huntington Drive Intersection	<u>No Significant Update</u> *Work scope being developed.* A task order to develop a striping plan for this project is being issued to a professional services on-call consultant. The striping plan will remove the 'no left turn' marking a create left-turn pocket to access business at the Southeast corner of Fremont Avenue and Huntington Drive. This Commission recommended project will be incorporated into the planning process for the Fremont/Huntington Mobility Active Transportation & Mobility Improvement Projects. City staff discussed this project with the Fremont/Huntington/Fair Oaks planning consultant as it related to proposed Fremont/Huntington intersection improvements.
Traffic & Parking Impacts along Glendon Way between El Centro Street and Meridian Avenue	<u>No Significant Update</u> *Held site meeting with the Chamber.* City Council recently approved a new five-year agreement with the Chamber of Commerce that contains updated language to facilitate review of the Farmer's Market event Parking Management Plan. Public Works is working with the Chamber of Commerce with the goal of improving traffic and parking impacts along Glendon Way, and met with the Chamber of Commerce and several residents on location in September.
Replacement of Missing Orange Grove Street Lamps	<u>No Significant Update</u> *Pending staff cost estimate.* Staff is developing a cost estimate to replace the Orange Grove Street Lamps, and relocating the lamps away from the street where possible.

Operations & Maintenance (O&M) Projects	Project Status
Early Action Projects (EAP) List	No Significant Update Measure R Mobility Improvement Projects (MIP) were discussed at the November 2022 MTIC Meeting, where some elements of the "SR 710 Early Action Projects (EAP)" are planned to be addressed in the North-South Corridor Intelligent Transportation Systems Project, and the current Measure R programmed projects include the Fair Oaks SR-110 Interchange Loop/Hook On-Ramp and Off-Ramp projects and the Fremont/Huntington Mobility Active Transportation Project (see above items). "Early Action Projects (EAP) List". EAPs do not have committed funding and will be kept on this list for future tracking.
Installation of City Limit Signs at Various Locations	No Significant Update *Pending task order issuance.* A task order to develop a conceptual plan for this project is being issued to a professional services on-call consultant.
Preferential Parking Policy	No Significant Update *Pending General Plan Update.* As a City Council Strategic Plan goal, Staff will work with Community Development in this area, considering recommendations provided by MTIC. The scope and priority of parking evaluation efforts are being considered in the Council's revised Strategic Plan.
Traffic Impact Analyses	No Significant Update *Proposed development traffic study complete.* The developer team completed a traffic evaluation for a proposed project southwest of Fair Oaks and Grevelia. No other development projects have submitted traffic impact analyses for review recently.
Marengo Avenue Traffic Safety Assessment *Budget: Measure M Local Return $39,030*	Significant Update *Consultant provided a draft of the site analysis report, stop compliance report, and speed study analysis for Marengo Avenue.* Staff is currently reviewing the reports and is waiting for the crash analysis, and consultant recommendations. Staff will present the complete report at a future MTIC meeting.

Operations & Maintenance (O&M) Projects	Project Status
Huntington Drive 2000 Block Review	<u>Updated Status</u> *Staff is working to implement MTIC recommended raised reflectors and Bott's dots along Huntington Drive.* Staff is finalizing the purchase order (PO) to have LA County Public Works replace the damaged and missing raised reflectors and bott's dots on Huntington Drive between Garfield and Fletcher. Staff is preparing a council report to make an adjustment to the budget to permit discretionary spending on traffic control devices and traffic material and improvements. Staff requested a budget adjustment from City Council, which was approved, to allow access to additional funds to complete this work and Edge Line striping along the south side of Huntington Drive from Dos Robles to Olive Street.
Diamond Avenue Improvements	<u>No Significant Update</u> *Review of community suggestions and enforcement.* Staff are reviewing improvements suggested by community members along Diamond Avenue between Mission Street and El Centro. The Police Department has been enforcing parking restrictions and Public Works refreshed the existing red curb paint along the roadway.