



# HEXAGON TRANSPORTATION CONSULTANTS, INC.



## Silicon Sage Mixed-Use Development

Transportation Impact Analysis



Prepared for:

**City of Fremont**

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## Executive Summary

This report presents the results of the transportation impact analysis conducted for the proposed Silicon Sage mixed-use project at 37358-37494 Fremont Boulevard, in Fremont, California. The purpose of the analysis is to compare the traffic conditions for the proposed land use entitlement to the existing land use entitlement.

The project, as proposed, would include 72 townhomes, 64 apartments, a 23,450 square-foot shopping center, a 1,550 square-foot café, and a 2,610 square-foot daycare center at the southeast corner of the intersection at Fremont Boulevard and Peralta Boulevard. Existing land uses include a 43,468 square-foot shopping center, 7,843 square feet of restaurant uses, a 970 square-foot mini-warehouse, a single-family dwelling, and a vacant City fire station. The analysis also includes a separate evaluation of a project variant consisting of 72 townhomes, 90 apartments, and 24,450 square feet of retail space (including a 1,550 square foot café).

The potential impacts of the project were evaluated relative to the level of service policies and methodologies applicable in the City of Fremont. The analysis also was conducted in accordance with the requirements of the Alameda County Congestion Management Agency (CMA), the administering agency for the Congestion Management Program (CMP) of Alameda County. Because the project is projected to generate fewer than 100 net PM peak-hour trips, the project is not required to conduct a CMA roadway segment analysis.

The traffic analysis evaluated AM peak-hour traffic conditions at several intersections in the vicinity of the project site. The study intersections were selected in consultation with City staff. The study also includes an analysis of site access, on-site circulation and neighborhood issues.

### Project Trip Generation

Trip generation for the project was estimated by applying to the project use and size the rates applicable to the proposed residential, retail and daycare uses. The site was given credit for the trip generating capacity of the existing approved uses (entitlement) on site. The trip generation for both the proposed and existing uses on site was estimated by applying the applicable Institute of Transportation Engineers' (ITE) trip generation rates to the uses. The trip generation estimates for both the proposed project and the existing site uses were adjusted using trip reductions for internal trips, retail pass-by trips, and transit trips.

After subtracting from the project trips the trips generated by the existing uses on site, and applying the aforementioned trip reductions for internal trips, pass-by trips and transit trips, the project is estimated to generate 125 net new trips in the AM peak hour and 12 net new trips in the PM peak hour. The project

trip distribution was determined based on a select zone analysis using the City of Fremont Travel Demand Forecast Model. This was the model used to produce the city's forecasts for its most recent General Plan Update.

Because the project would cause a negligible increase in PM peak-hour traffic, PM peak-hour conditions were not evaluated off-site. Analysis of PM peak-hour conditions immediately around the project site were included in a focused site operations analysis.

## Signalized Intersection Level of Service Analysis

Table ES-1 summarizes the results of the intersection level of service (LOS) analysis under existing, background, and cumulative conditions with and without the proposed project. The proposed project would not result in any significant impacts to the signalized study intersections. Under existing and background conditions with the proposed project, all signalized study intersections would operate at LOS D or better. Under cumulative conditions with and without the project, the signalized intersection of Paseo Padre Parkway and Peralta Boulevard would operate at LOS F in the AM peak hour. However, there would be no impact at this intersection because the addition of project traffic does not cause the intersection average delay to increase by more than 4 seconds.

At the intersection of Fremont Boulevard & Thornton Avenue level of service improves under cumulative conditions. This is attributed to the fact that the intersection has planned improvements whose positive effects more than offset the negative effects of the increases in future traffic.

## Unsignalized Intersection Level of Service Analysis

The City of Fremont does not have formal impact criteria to apply to unsignalized intersections. This is common for many jurisdictions because it is generally not the unsignalized intersections that limit the overall capacity of a roadway. The analysis of unsignalized intersections is typically evaluated by considering overall level of service, approach delay and movement delay, availability of alternate routes, intersection spacing, and an analysis of traffic signal warrants. The results of the unsignalized intersection level of service analysis under all study scenarios are summarized in Table ES-2.

The results show that, at the intersection of Fremont Boulevard and Parish Avenue, the westbound approach on Parish Avenue currently operates at LOS F under existing conditions and would continue to under all study scenarios. A peak-hour volume signal warrant analysis was conducted for the intersection of Fremont Boulevard & Parish Avenue and it was shown to meet the warrant under existing plus project, background plus project, and cumulative plus project conditions during the AM peak hour.

## Pedestrian, Bicycle, & Transit Facilities

The proposed consolidation of site driveways along Fremont Boulevard from five driveways to one driveway would reduce the number of potential vehicle-pedestrian and vehicle-bicycle conflict points and would be beneficial for pedestrian safety. The project would provide a new sidewalk on the west side of Jason Way, extending from Peralta Boulevard 350 feet south to just south of the bend in the street, thereby providing a continuous sidewalk from Peralta Boulevard to Parish Avenue. The project will also dedicate right-of-way along the north side of Parish Avenue, between Fremont Boulevard and Jason Way, to allow widening of the existing sidewalk.

While the project would not create a significant impact to transit operations, there is an existing bus stop along the project frontage on Fremont Boulevard just north of Parish Avenue that does not currently provide a bench or shelter. AC Transit staff requested that the project install a bench and bike rack at the bus stop and ensure that there is an unimpeded ADA accessible path to the bus stop. These upgrades to the bus stop would encourage transit ridership.

**Recommendation 1:** Prior to final design, the project applicant shall work with City of Fremont and AC transit staff to consider the desirability of upgrades to the existing bus stop along the project frontage.

The project would not generate pedestrian, bicycle or transit trips that exceed the capacity of the transportation system elements to which they apply, nor would the project cause an increase in any mode of non-motorized vehicular trips that would require new off-site transportation facilities or services. The project would not conflict with the Alameda County CMP Transportation Impact Analysis Technical Guidelines as they pertain to potential pedestrian, bicycle and transit impacts to the transportation system. Accordingly, the project would have no significant impact on pedestrian or bicycle facilities, or on transit service.

## Site Access, Circulation and Parking Layout

The site plan was reviewed in accordance with traffic engineering principals and guidelines. The following recommendations derive from the review:

**Recommendation 2:** The project applicant shall install a traffic signal at the intersection of Fremont Boulevard and Parish Avenue. Because of the close proximity of this traffic signal to the existing traffic signals on Fremont Boulevard at Peralta Boulevard and Central Avenue, the recommended traffic signal at this location should be interconnected and coordinated with the existing signal equipment at these locations. These improvements should include installation of high-visibility crosswalks and other treatments, as needed, to maximize pedestrian accessibility.

**Recommendation 3:** Parking should be prohibited on the south side of Peralta Boulevard over a distance of 240 feet west, and 60 feet east, of the Jason Way driveway. In addition, landscaping near the driveway would need to be maintained such that adequate sight distance is provided.

**Recommendation 4:** Restrict access to right-turn in and out only at the proposed intersection of Fremont Boulevard and the Main Site Driveway. This may require installation of a channelization island at the driveway, signage, and/or a median treatment. In addition, to enhance pedestrian safety in the proposed crosswalk, design features to improve crosswalk visibility and shorten the pedestrian crossing distance should be considered. These could include installation of: an additional bulb-out on the opposite side of Fremont Boulevard, high visibility striping, a raised median pedestrian refuge, and/or a rapid flash beacon. The final configuration of the driveway and crosswalk will be determined by City of Fremont staff.

**Recommendation 5:** A 50-foot clear throat is recommended for the South Site Driveway. This will require relocating the parking garage entrance/exit as well as some 90 degree parking. It is also recommended that a "KEEP CLEAR" marking be placed in the westbound lane of Parish Avenue at the South Site Driveway.

**Recommendation 6:** A turnaround is recommended at the dead-end at the north end of the main street. This could be accomplished by marking as a no-parking area the end stall on the west side of the aisle.

**Recommendation 7:** The garage ramp design and entrance will likely require modification. Prior to final design, the garage ramp should be reviewed by City staff to ensure that it meets basic requirements for safety and functionality, including sight distance, location, and the ability of two vehicles to pass each other simultaneously.

## Neighborhood Traffic Issues

The existing traffic volumes on Parish Avenue, east of Jason Way, are on the order of 400 vehicles in the AM peak hour and 260 in the PM peak hour in both directions combined. The project would add to Parish Avenue east of Jason Way approximately 13 net new trips in the AM peak hour and add about 5 net new trips in the PM peak hour. This corresponds to the project adding to Parish Avenue one vehicle approximately every 5 minutes in the AM peak hour and one vehicle every 12 minutes in the PM peak hour.

Because Parish Avenue is used as a cut-through street, installation of a traffic signal at Fremont Boulevard and Parish Avenue may potentially attract more ambient traffic to Parish Avenue. It was estimated that the traffic volumes on westbound Parish Avenue, as a result of the traffic signal, could increase between zero and 50 vehicles in each of the AM and PM peak hours.

The City of Fremont does not have significance criteria to determine when a project would materially contribute to an existing speeding or cut-through traffic problem. The city's traffic calming policy considers a wide range of applicable criteria, from speed limit and basic street design, to support by residents. The project site plan shows a potential speed table and crosswalks on all three approaches to the intersection of Jason Way and Parish Avenue. As an alternative to a potential speed table, the applicant could consider a speed lump west of Jason Way on Parish Avenue. There are also proposed plans (through a different development project) to install one or more other traffic calming devices on Parish Avenue east of Jason Way. The combination of these devices would likely reduce speeds on Parish Avenue and potentially discourage cut-through traffic.

## Project Variant

The project variant, located on the project site, would include 72 townhomes, 90 apartments, and 24,450 square feet of retail space (including 1,550 square feet of café space).

### *Project Trip Generation*

The project variant is estimated to generate 109 net new trips in the AM peak hour and 0 net new trips in the PM peak hour. Relative to the project, the project variant would generate 16 fewer AM peak hour trips and 12 fewer PM peak-hour trips. This is attributed to the fact that, although the project variant includes more residential, the project variant does not have a daycare center.

### *Signalized Intersection Level of Service Analysis*

The results of the signalized intersection level of service (LOS) analysis under existing plus project, background plus project, and cumulative plus project conditions with the project variant are summarized in Table ES-3. The results show that the project variant would cause no material changes to delays or level of service at the signalized intersections. All intersections previously reported as operating at acceptable conditions, or conversely, under unacceptable conditions, and the scenarios and time periods during which they occurred, would continue to operate the same. The project variant would not result in any significant intersection level of service impacts.

### *Unsignalized Intersection Level of Service Analysis*

Table ES-4 summarizes the results of the unsignalized intersection level of service (LOS) analysis under existing plus project, background plus project, and cumulative plus project conditions with the project variant. The results show that the project variant would cause no material changes to delays or level of service at the signalized intersections. All intersections previously reported as operating at acceptable conditions, or conversely, under unacceptable conditions, and the scenarios and time periods during which they occurred, would continue to operate the same.



## ***Pedestrian, Bicycle, & Transit Facilities***

The project variant is expected to cause neither an increase nor decrease in pedestrian or bicycle demand, and would not change the off-site pedestrian or bicycle circulation or infrastructure relative to those changes already described previously for the project. Relative to the project, the project variant is estimated to create up to two additional transit trips in each of the AM and PM peak hours. The project variant does not propose any system or service changes to the existing transit system relative to those changes already described previously for the project. Based on applicable criteria, the project variant would not cause a significant impact to transit operations. The recommendation for possible improvements to the existing bus stop along the site frontage, per Recommendation 1, are applicable to the project variant.

## ***Site Access, Circulation and Parking Layout***

The project variant site plan was reviewed in accordance with traffic engineering principals and guidelines. Relative to the recommendations already identified previously for the project, the following additional recommendations follow from the review of the project variant site plan:

**Recommendation 8:** The gate control at the south garage entrance should be designed using a control system that will provide access to both residents and non-residents, at a service rate of at least 300 vehicles per hour, and should provide a vehicle storage reservoir for at least one vehicle inbound between the main street on site and the gate. Prior to final design, the gate access and control system should be reviewed by City staff to ensure that it meets basic requirements for safety and functionality.

**Recommendation 9:** It is recommended that one or more speed humps be installed in the drive aisle of the parking garage in order to reduce speeds in the parking aisle. Prior to final design, the speed hump design should be reviewed by City staff to ensure that it meets basic requirements for safety and functionality.

**Recommendation 10:** Prior to final design, sight distance at the south garage entrance/exit should be reviewed by City staff to ensure that it meets basic requirements for safety.

The project variant site plan satisfactorily addresses two problematic issues identified with the project site plan: (a) the south garage entrance/exit proximity to Parish Avenue, and (b) the main street dead-end at the north end. Accordingly, for the Project Variant, the previously identified Recommendation 5 and Recommendation 6 are not applicable.

## ***Neighborhood Traffic Issues***

The project variant, when evaluated in relation to the project, would result in no material changes to traffic volumes or traffic patterns on Parish Avenue. Relative to the project, the project variant will, in some directions and time periods add one or two peak-hour trips, and in other cases subtract one or two peak-hour trips, the net effect being negligible. The findings for the project, as reported previously, remain applicable to the project variant.

**Table ES 1**  
**Signalized Intersection Level of Service Summary Under Project Conditions**

No. Intersection	LOS	Existing						Background						Cumulative					
		No Project			With Project			No Project			With Project			No Project			With Project		
		Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Incr. In Avg Delay	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Incr. In Avg Delay	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Incr. In Avg Delay	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Incr. In Avg Delay	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Incr. In Avg Delay	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Incr. In Avg Delay
1 Fremont Blvd & Thornton Ave	E	37.9	D	0.1	38.0	D	0.1	38.1	D	38.2	D	0.1	28.6	C	29.4	C	0.8		
2 Fremont Blvd & Peralta Blvd	E	27.0	C	0.2	27.2	C	0.2	27.3	C	27.5	C	0.2	32.7	C	32.9	C	0.2		
3 Fremont Blvd & Central Ave	E	34.8	C	0.0	34.8	C	0.0	35.1	D	35.5	D	0.4	71.3	E	75.5	E	4.2		
4 Paseo Padre Pkwy & Peralta Bl	E	46.4	D	0.3	46.7	D	0.3	46.8	D	47.5	D	0.7	81.9	F	83.3	F	1.4		

<sup>1</sup> Signalized intersection level of service is based on the Highway Capacity Manual (HCM) methodology, using average control delay for the entire intersection.



**Table ES 2**  
**Unsignalized Intersection Level of Service Summary Under Project Conditions**

No. Intersection	Existing				Background				Buildout			
	No Project		With Project		No Project		With Project		No Project		With Project	
	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>
5 Fremont Blvd & Parish Ave	4.2/54.9	A/F	14.8/152.2	B/F	6.1/77.7	A/F	21.0/sat <sup>2</sup>	C/F	15.7/sat <sup>2</sup>	C/F	44.2/sat <sup>2</sup>	E/F
6 Jason Way & Peralta Blvd	0.1/13.8	A/B	0.4/16.1	A/C	0.1/14.0	A/B	0.4/16.3	A/C	0.1/14.1	A/B	0.3/17.0	A/C
7 Parish Avenue & Peralta Bl	4.5/33.0	A/D	4.8/35.2	A/E	4.7/35.4	A/E	5.0/38.0	A/E	2.7/32.2	A/D	2.8/33.4	A/D
8 Jason Way & Parish Ave	0.3/10.3	A/B	0.7/10.3	A/B	0.3/10.4	A/B	0.7/10.4	A/B	0.3/10.5	A/B	0.7/10.5	A/B

Note: all intersections were counted in May 2017.

<sup>1</sup> unsignalized intersections were analyzed based on Highway Capacity Manual (HCM) methodology using TRAFFIX analysis software. All unsignalized study intersections are Side Street Stop Control (SSSC). SSSC intersection levels of service and delays are reported for both the overall average delay / the approach with highest delay.

<sup>2</sup> "sat" designates *oversaturated* conditions. Delay value is not meaningful or reflective of actual conditions.

**Table ES 3**  
**Signalized Intersection Level of Service Summary Project Variant Conditions**

No. Intersection	LOS Std	Existing						Background						Cumulative					
		No Project			With Project			No Project			With Project			No Project			With Project		
		Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Incr. In Avg Delay	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Incr. In Avg Delay	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Incr. In Avg Delay	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Incr. In Avg Delay	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Incr. In Avg Delay	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Incr. In Avg Delay
1 Fremont Blvd & Thornton Ave	E	37.9	D	0.1	38.0	D	0.1	38.1	D	38.2	D	0.1	28.6	C	29.2	C	0.6		
2 Fremont Blvd & Peralta Blvd	E	27.0	C	0.3	27.3	C	0.3	27.3	C	27.5	C	0.2	32.7	C	32.9	C	0.2		
3 Fremont Blvd & Central Ave	E	34.8	C	0.0	34.8	C	0.0	35.1	D	35.5	D	0.4	71.3	E	75.3	E	4.0		
4 Paseo Padre Pkwy & Peralta Bl	E	46.4	D	0.2	46.6	D	0.2	46.8	D	47.3	D	0.5	81.9	F	83.0	F	1.1		

<sup>1</sup> Signalized intersection level of service is based on the Highway Capacity Manual (HCM) methodology, using average control delay for the entire intersection.

**Table ES 4  
Unsignalized Intersection Level of Service Summary Project Variant Conditions**

No. Intersection	Existing				Background				Buildout			
	No Project		With Project		No Project		With Project		No Project		With Project	
	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>
5 Fremont Blvd & Parish Ave	4.2/54.9	A/F	15.5/156.6	C/F	6.1/77.7	A/F	21.7/sat <sup>2</sup>	C/F	15.7/sat <sup>2</sup>	C/F	45.6/sat <sup>2</sup>	E/F
6 Jason Way & Peralta Blvd	0.1/13.8	A/B	0.5/16.4	A/C	0.1/14.0	A/B	0.5/16.6	A/C	0.1/14.1	A/B	0.3/17.4	A/C
7 Parish Avenue & Peralta Bl	4.5/33.0	A/D	4.7/34.6	A/D	4.7/35.4	A/E	5.0/37.3	A/E	2.7/32.2	A/D	2.8/33.1	A/D
8 Jason Way & Parish Ave	0.3/10.3	A/B	0.8/10.2	A/B	0.3/10.4	A/B	0.8/10.2	A/B	0.3/10.5	A/B	0.8/10.3	A/B

Note: all intersections were counted in May 2017.

<sup>1</sup> unsignalized intersections were analyzed based on Highway Capacity Manual (HCM) methodology using TRAFFIX analysis software. All unsignalized study intersections are Side Street Stop Control (SSSC). SSSC intersection levels of service and delays are reported for both the overall average delay / the approach with highest delay.

<sup>2</sup> "sat" designates *oversaturated* conditions. Delay value is not meaningful or reflective of actual conditions.



# 1. Introduction

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This report presents the results of the transportation impact analysis conducted for the proposed Silicon Sage mixed-use project at 37358-37494 Fremont Boulevard, in Fremont, California. The purpose of the analysis is to compare the traffic conditions for the proposed land use entitlement to the existing land use entitlement.

The project, as proposed, would include 72 townhomes, 64 apartments, a 23,450 square-foot shopping center, a 1,550 square-foot café, and a 2,610 square-foot daycare center at the southeast corner of the intersection at Fremont Boulevard and Peralta Boulevard. Existing land uses include a 43,468 square-foot shopping center, 7,843 square feet of restaurant uses, a 970 square-foot mini-warehouse, a single-family dwelling, and a vacant City fire station. The site location is shown on Figure 1. The analysis also includes a separate evaluation of a project variant consisting of 72 townhomes, 90 apartments, and 24,450 square feet of retail space (including a 1,550 square foot café).

Access to the project site would be provided via dedicated driveways on Fremont Boulevard and Parish Avenue, and a gated trash and recycling truck access driveway on Peralta Boulevard. In addition, the project proposes to extend Jason Way from Parish Avenue to Peralta Boulevard. The project would thereby also provide access to each of Parish Avenue and Peralta Boulevard via intersections at Jason Way. The project would provide access to Jason Way via several driveways. These are shown on the site plan on Figure 2.

## Scope of Study

The potential impacts of the project were evaluated relative to the level of service policies and methodologies applicable in the City of Fremont. The analysis also was conducted in accordance with the requirements of the Alameda County Congestion Management Agency (CMA), the administering agency for the Congestion Management Program (CMP) of Alameda County. Because the project is projected to generate fewer than 100 net PM peak-hour trips, the project is not required to conduct a CMA roadway segment analysis.

The traffic analysis evaluated peak-hour traffic conditions at several intersections in the vicinity of the project site. The study intersections were selected in consultation with City staff.

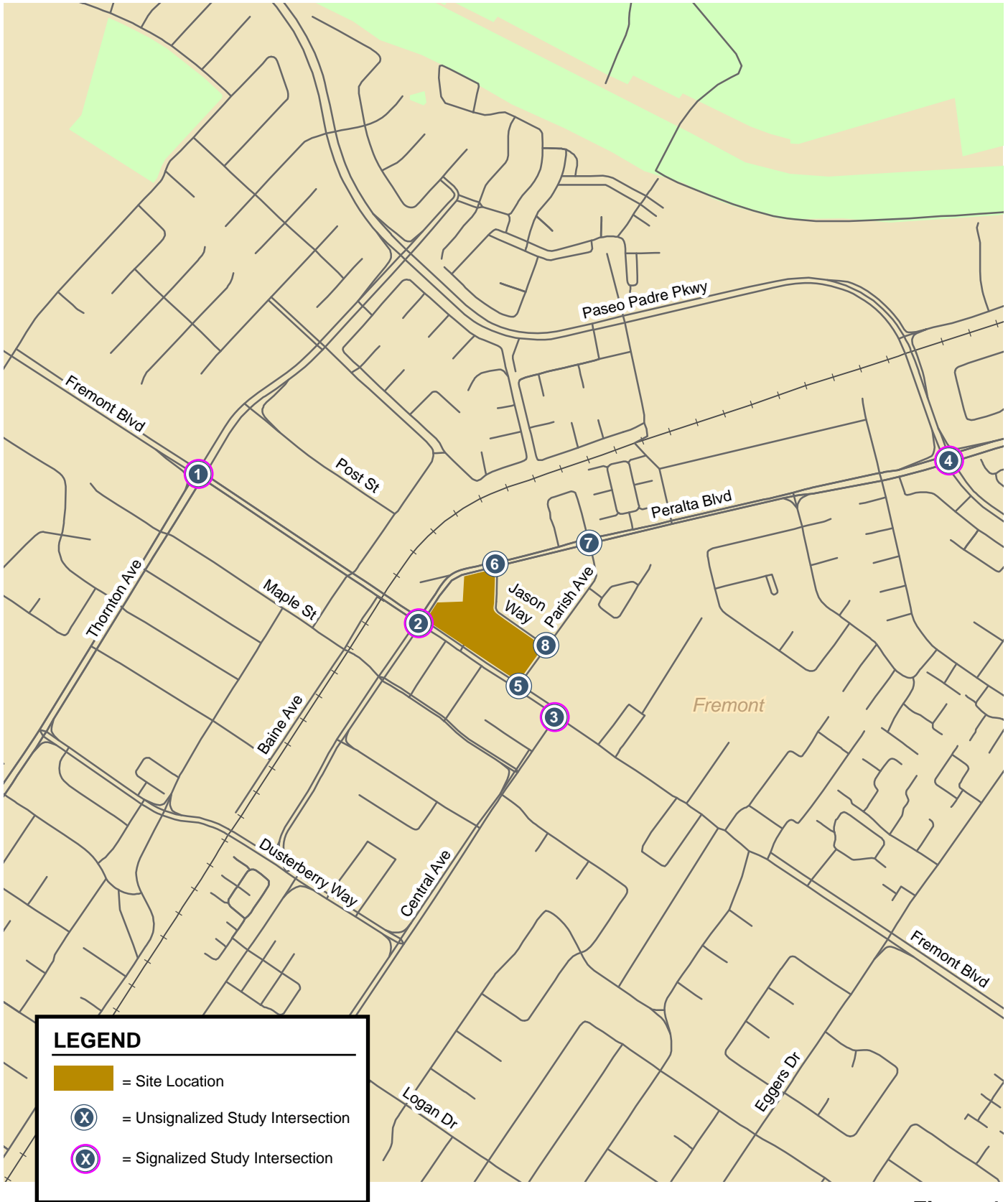


Figure 1  
Site Location and Study Intersections



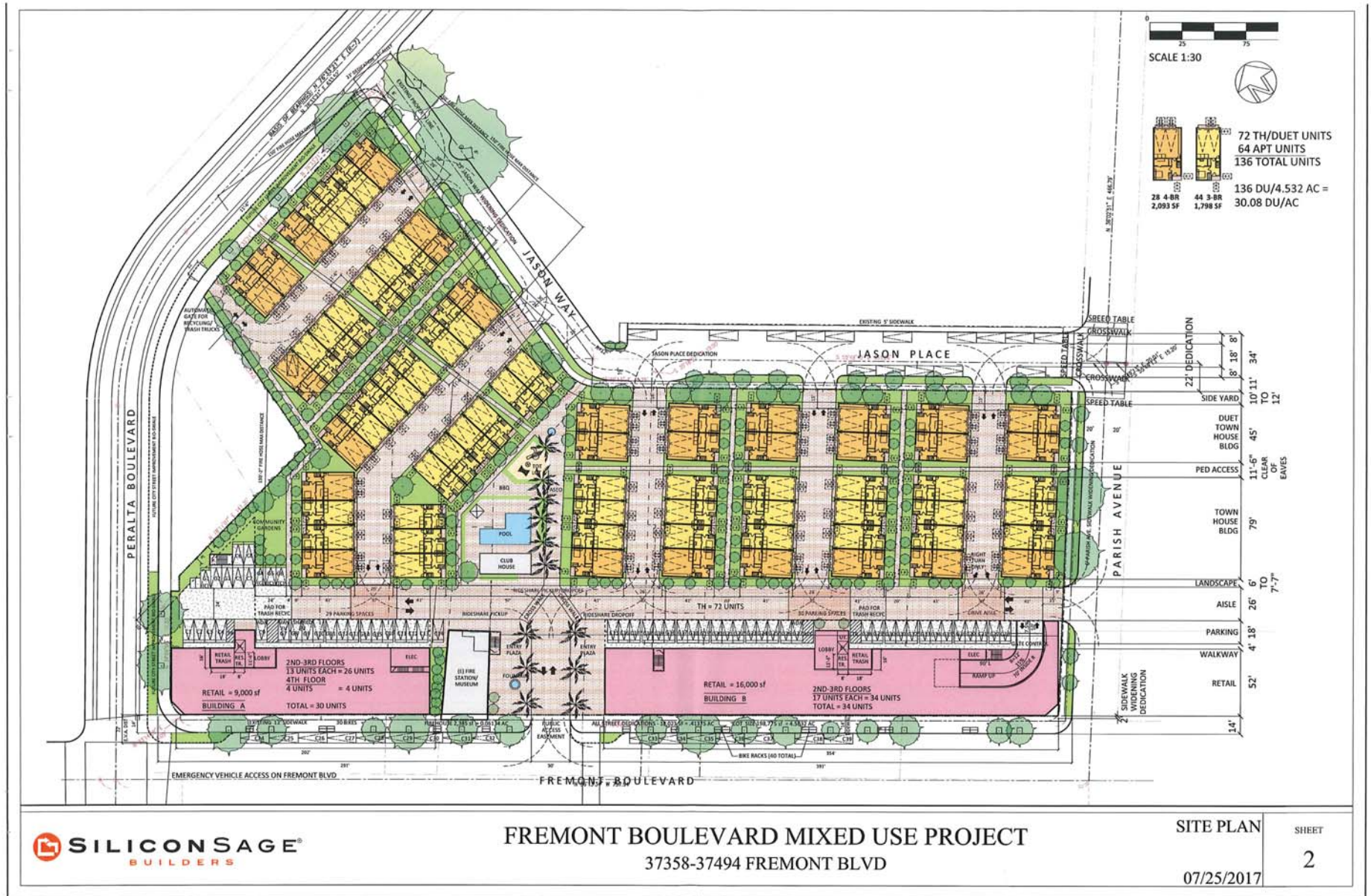


Figure 2  
Site Plan



The study intersections are:

1. Fremont Boulevard and Thornton Avenue (signalized)\*
2. Fremont Boulevard and Peralta Boulevard (signalized)\*
3. Fremont Boulevard and Central Avenue (signalized)\*
4. Paseo Padre Parkway and Peralta Boulevard (signalized)\*
5. Fremont Boulevard and Parish Avenue (unsignalized)
6. Jason Way and Peralta Boulevard (unsignalized)
7. Peralta Boulevard and Parish Avenue (unsignalized)
8. Jason Way and Parish Avenue (unsignalized)

\*denotes signalized intersections on the CMP/MTS roadway network

Because the project would cause a negligible increase in PM peak-hour traffic, the traffic analysis did not include an evaluation of PM peak-hour conditions. This is described further in Chapter 4. Traffic conditions at the study locations were analyzed for the weekday AM peak hour. The AM peak hour of traffic is typically between 7:00 AM and 9:00 AM. This period represents the most congested traffic conditions on the surrounding street network during a typical weekday morning.

Traffic conditions were evaluated for the following scenarios:

**Scenario 1: *Existing Conditions.*** Existing conditions are represented by existing peak-hour traffic volumes on the existing roadway network. Existing traffic volumes were obtained from recent traffic counts.

**Scenario 2: *Existing Plus Project Conditions.*** Existing plus Project conditions are represented by existing peak-hour traffic volumes, with the addition of project traffic associated with the proposed residential, retail and daycare uses, less the traffic that is generated by existing uses. Existing plus project conditions were evaluated relative to Existing conditions in order to identify potential impacts associated with the proposed project.

**Scenario 3: *Background Conditions.*** Background conditions are represented by existing peak-hour traffic volumes plus the addition of traffic associated with approved developments in the vicinity of the project site on the existing transportation network.

**Scenario 4: *Background Plus Project Conditions.*** Background plus Project conditions are represented by background peak-hour traffic volumes, with the addition of project traffic associated with the proposed residential, retail and daycare uses, less the traffic generated by existing site uses. Background plus project conditions were evaluated relative to Background conditions in order to identify potential impacts associated with the proposed project.

**Scenario 5: *Cumulative No Project Conditions.*** Cumulative (No Project) traffic volumes were obtained from the City of Fremont General Plan EIR Year 2035 traffic forecasts. Cumulative No Project conditions were evaluated based on the Cumulative (No Project) traffic volumes on the planned roadway network under the 2035 General Plan.

**Scenario 6: *Cumulative with Project Conditions.*** Cumulative with project traffic volumes were estimated by adding to the Cumulative (No Project) traffic volumes the project traffic associated with the proposed residential, retail and daycare uses, less the traffic generated by existing site uses. Cumulative with Project conditions were evaluated relative to Cumulative (No Project) conditions in order to determine potential cumulative project impacts.

## Methodology

This section presents the methods used to determine the traffic conditions for each scenario described above. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards.

### Data Requirements

The data required for the analysis were obtained from traffic counts, previous traffic studies, field observations, and public agency websites. The following data were collected from these sources:

- existing traffic volumes
- existing railroad operations
- lane configurations
- signal timing and phasing
- existing bicycle facilities
- existing transit service
- approved land use development projects
- cumulative traffic volumes

### Level of Service Standards and Analysis Methodologies

Traffic conditions at the study intersections were evaluated using level of service (LOS). *Level of Service* is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The various analysis methods are described below.

#### Signalized Intersections

The City of Fremont utilizes TRAFFIX software and the *Highway Capacity Manual* (HCM) methodology to evaluate intersection operations. The HCM method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. Control delay is the amount of delay that is attributed to the particular traffic control device at the intersection, and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The correlation between average delay and level of service is shown in Table 1.

The City of Fremont's level of service standard for signalized intersections is generally LOS D. However, for signalized intersections on CMA routes of regional significance and those located within the City Center, Town Centers, and Warm Springs/South Fremont BART Station, the level of service standard for signalized intersections is LOS E. All four of the signalized intersections evaluated in this study are CMA intersections. The intersections of Fremont Boulevard and Thornton Avenue, and Fremont Boulevard and Peralta Boulevard are also located within a Town Center.

Significance criteria are used to establish what constitutes an impact. According to City of Fremont standards, a project is said to create a significant adverse impact on traffic conditions at a signalized intersection if for either peak hour:

1. The level of service at the intersection degrades from its LOS standard or better under no project conditions to an unacceptable LOS under project conditions, or
2. If the intersection is already operating below its LOS standard under no project conditions, the addition of the project causes the intersection average control delay to increase by more than 4 seconds per vehicle.

A significant impact at a signalized intersection is said to be satisfactorily mitigated when measures are implemented that would restore intersection levels of service to an acceptable LOS or restore the intersection to operating levels that are better than no project conditions.

**Table 1  
Signalized Intersection Level of Service Definitions Based on Control Delay**

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Signal progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less
B	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 20.0
C	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though some vehicles may still pass through the intersection without stopping.	20.1 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	This is considered to be the limit of acceptable delay. These high delay values generally indicate poor signal progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur frequently.	55.1 to 80.0
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes of such delay levels.	greater than 80.0

Source: Transportation Research Board, *Highway Capacity Manual*.

**Unsignalized Intersections**

Unlike signalized intersections, which typically represent constraint points for the roadway network, unsignalized intersections rarely limit the potential capacity of a roadway. The determination of appropriate improvements to unsignalized intersections typically includes a qualitative and quantitative analysis of movement delay and approach delay, traffic signal warrants, movement traffic volumes, availability of alternate routes, and intersection safety. For this reason, improvements to unsignalized intersections are frequently determined on the basis of professional engineering judgment. The City of Fremont does not have a significance threshold for acceptable or unacceptable operations for unsignalized intersections.

Level of service at unsignalized intersections also is based on the Highway Capacity Manual (HCM) method. TRAFFIX software is used to apply the HCM operations method for evaluation of conditions at unsignalized intersections. This method is applicable for one-way, two-way, and all-way stop-controlled intersections. The delay and corresponding level of service at unsignalized, stop-controlled intersections is presented in Table 2. For side-street stop-controlled intersections, the LOS is reported for the overall intersection average delay and the average delay at the worst approach.

**Table 2**  
**Unsignalized Intersection Level of Service Definitions Based on Control Delay**

Level of Service	Description	Average Delay Per Vehicle (Sec.)
A	Little or no traffic delay	10.0 or less
B	Short traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 to 50.0
F	Extreme traffic delays	greater than 50.0

Source: Transportation Research Board, *Highway Capacity Manual* (HCM).

**Signal Warrant Methodology**

For any unsignalized intersections operating or projected to operate at unacceptable levels of service, the analysis of traffic conditions is supplemented with an assessment of the need for signalization of the intersection. For this study, the need for signalization is assessed on the basis of the peak-hour volume signal warrant – warrant #3 – described in the *California Manual on Uniform Traffic Control Devices* (MUTCD). This method provides an indication of whether traffic conditions and peak-hour traffic levels are, or would be, sufficient to justify installation of a traffic signal.

**Report Organization**

The remainder of this report is divided into six chapters. Chapter 2 describes the existing roadway network, transit service, existing bicycle and pedestrian facilities, and existing traffic conditions. Chapter 3 identifies approved developments in the vicinity of the project and reports background traffic conditions. Chapter 4 explains the method used to estimate project traffic. Chapter 5 describes the potential near-term project impacts on the transportation system under Existing plus Project and Background plus Project conditions. Chapter 6 reports Cumulative conditions without and with project traffic. Chapter 7 describes the analysis of other transportation related issues, including site access and circulation. Chapter 8 describes the project variant and its potential effects on traffic conditions in the study area relative to the project.



## 2. Existing Conditions

This chapter describes the existing conditions for all of the major transportation facilities in the vicinity of the site, including the roadway network, bicycle and pedestrian facilities, and transit service, as well as existing levels of service at the intersections.

### Existing Roadway Network

Regional access to the project site is provided via Interstate 880 (I-880) and Mission Boulevard (State Route 238). Local access to the site is provided via Fremont Boulevard, Thornton Avenue, Peralta Boulevard, Paseo Parkway, Central Avenue, Parish Avenue and Jason Way.

**I-880** is a north-south freeway providing regional access from East Bay cities to San Jose, where it becomes SR 17 and extends into Santa Cruz. I-880 is primarily a six-lane freeway, with additional HOV lanes along much of its length, as is the case through Fremont. The closest access to the project site is provided by the interchange at Thornton Avenue.

**Mission Boulevard** is a four- to six-lane, north-south, major arterial that extends from I-238 in Hayward to I-880 in south Fremont. It provides access to the site via Mowry Avenue and Peralta Boulevard.

**Fremont Boulevard** is a four- to six-lane, north-south, major arterial street that extends from I-880 in the north to Dixon Landing Road in the south. It is four-lanes wide fronting the site and within the study area. North of I-880, Fremont Boulevard becomes Alvarado Boulevard in Union City. South of Dixon Landing Road, Fremont Boulevard becomes McCarthy Road and continues south of Milpitas. Fremont Boulevard has parking on both sides fronting the site and in the project vicinity. It provides direct access to the project site. It is also designated as State Route 84 between Peralta Boulevard and Thorndon Avenue.

**Thornton Avenue** is a four lane, east-west major arterial street west of Fremont Boulevard and a minor arterial east of Fremont Boulevard. It extends from Paseo Padre Parkway in the east to Union City in the west. Between I-880 and Fremont Boulevard, Thornton Avenue is designated as State Route 84. Thornton Avenue provides access I-880.

**Peralta Boulevard** is a three- to four-lane, east-west arterial street that extends from Mowry Avenue in the east to Glenmoor Drive in the west. It has parking on both sides in the project vicinity. It

provides access to the project site via Jason Way and Fremont Boulevard. It is also designated as State Route 84 between Fremont Boulevard and Mowry Avenue.

**Paseo Parkway Boulevard** is a four- to six-lane, major arterial street that extends from west Fremont near the Dumbarton Bridge to Mission Boulevard near I-680 in the south. The section south of Driscoll Road is designated as a minor arterial.

**Central Avenue** is generally a four-lane, east-west minor arterial street that extends from Fremont Boulevard in the east to Willow Street in Newark in the west. In the vicinity of the project site, Central Avenue is four lanes wide with a two-way center left-turn lane.

**Parish Avenue** is a two-lane local street extending from Peralta Boulevard in the north to Fremont Boulevard in the south. It provides direct access to the project site.

**Jason Way** is a two-lane, north-south, local street with parking on both sides. It provides direct access to the project site.

## Existing Bicycle and Pedestrian Facilities

Existing bicycle access to the project site is provided primarily via a network of nearby Class II bike lanes and Class III bike routes which are shared with vehicular traffic. According to the *City of Fremont Draft Bicycle Master Plan (2017)*, in the project vicinity there are existing Class II bike lanes on Fremont Boulevard south of Peralta Boulevard, and on Central Avenue in the vicinity of the project site. Peralta Boulevard is designated as an existing Class III bike route. There are future upgraded Class II buffered bike lanes proposed on Peralta Boulevard south of Fremont Boulevard and on Central Avenue. The plan also shows Class IV separated bikeways on Peralta Boulevard east of Fremont Boulevard, including along the site frontage, and along the entire length of Fremont Boulevard, including the site frontage. The existing and planned bicycle facilities are shown on Figure 3.

Pedestrian access to the site is provided by sidewalks along the site frontage on Fremont Boulevard, Parish Avenue, Peralta Boulevard and Jason Way. Sidewalks are generally found along all previously-described roadways in the study area and in the immediate vicinity of the site. All signalized study intersections have pedestrian crosswalks, curb ramps, and pedestrian-actuated pedestrian-crossing phases.

## Existing Transit Service

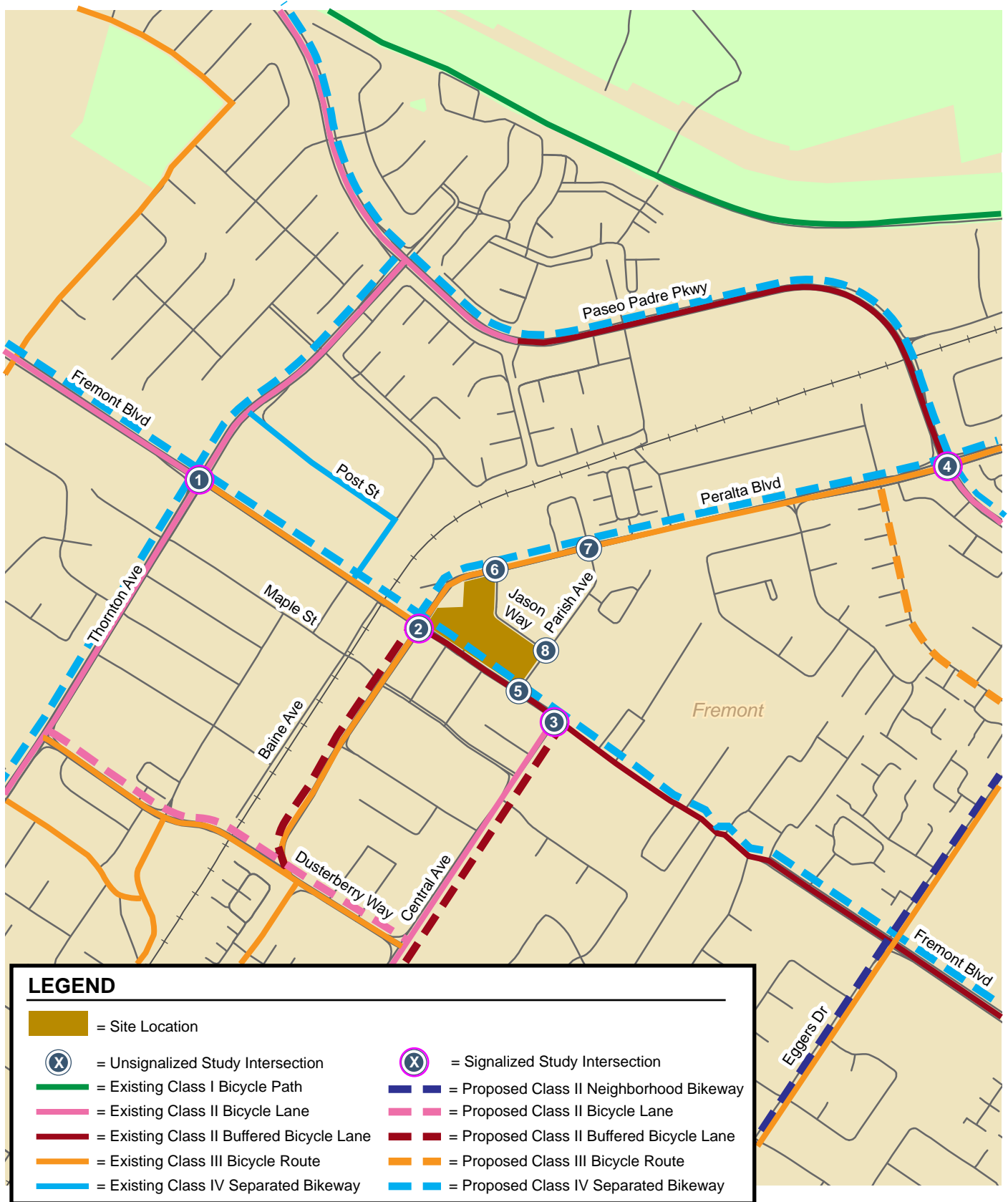
Existing transit service in the project vicinity is provided by the Alameda Contra Costa Transit District (AC Transit), Altamont Corridor Express (ACE) and the Amtrak Capitol Corridor. The nearest bus routes are Lines 99, 210, 801, and Line U. They are described in detail below.

### **AC Transit**

Line 99 connects the Fremont BART station with the Hayward BART station via Walnut Avenue, Fremont Boulevard, Decoto Road, Union City BART, South Hayward BART and Mission Boulevard. The bus operates between 5:00 AM and 1:00 AM on weekdays, with 20-minute headways throughout the day. On weekends, the bus provides service between 6:00 AM and 1:00 AM, with 20-minute headways. Line 99 has a bus stop located on Fremont Boulevard on the project frontage 100 feet north of Parish Avenue.

Line 210 connects Ohlone College with the Union Landing Shopping Center in Union City, via Washington Boulevard, Fremont Boulevard, Alvarado Boulevard and Dyer Street. The bus operates between 5:00 AM and 11:25 PM on weekdays, with 30-minute headways throughout the day. The 210 line provides service between 7:00 AM and 8:45 PM, with 30-minute headways, on weekends. The closest bus stop is located on Fremont Boulevard on the project frontage.





**Figure 3**  
Existing and Planned Bicycle Facilities

Line 801 is a night service bus which connects the Fremont BART station with Downtown Oakland via Fremont Boulevard, Decoto Road, Union City BART, Mission Boulevard, E. 14<sup>th</sup> Street and International Boulevard. The bus operates between 11:40 PM and 6:20 AM on weekdays with 60-minute headways. On weekends, the bus provides service between 11:45 PM and 9:20 AM, with 60-minute headways, between the Fremont BART and Downtown Oakland, and between 12:45 AM and 8:25 AM, with 20-minute headways, between the Bayfair BART and Fremont BART. The closest bus stop is located on Fremont Boulevard on the project frontage.

Line U is a weekday Transbay line which connects the Fremont BART station with Stanford University via Centerville Depot, Ardenwood Park & Ride, and the Dumbarton Bridge. The bus operates on weekdays westbound in the morning from Fremont BART to Stanford University from 5:55 AM to 9:25 AM with 30- to 40-minute headways and eastbound in the afternoon from Stanford University to Fremont BART from 2:45 PM to 7:05 PM with 30- to 60-minute headways. The closest bus stop is on Fremont Boulevard at the Centerville Amtrak station, located just north of Peralta Boulevard approximately 275 feet north of the project site.

### ***Altamont Corridor Express (ACE)***

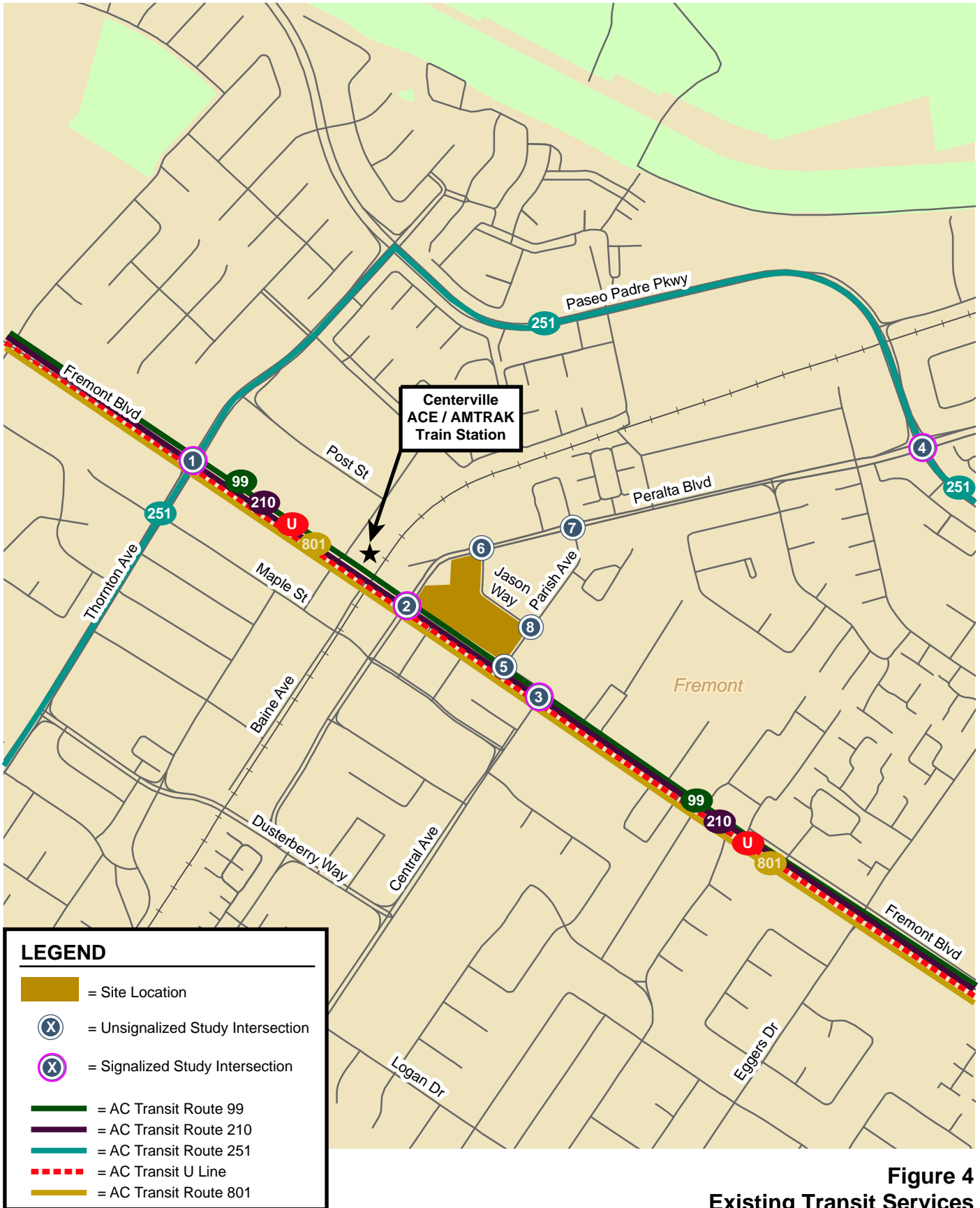
The Altamont Corridor Express (ACE) is a commuter rail that provides service between Stockton and San Jose. The train operates on weekdays between Stockton and San Jose during morning commute hours from 4:20 AM to 9:25 AM with 25- to 75-minute headways, and between San Jose and Stockton during evening commute hours from 3:35 PM to 8:50 PM with 60-min headways. There are four trains westbound in the morning and four trains eastbound in the evening.

The Fremont ACE station, also known as the Centerville Depot, is located approximately 400 feet north of the project site. The station is staffed during train operating hours. Bicycles are permitted on ACE. There are bicycle racks and lockers available at the station. ACE forward is a phased improvement plan proposed to increase service reliability and frequency, enhance passenger facilities, reduce travel times along the existing ACE service corridor from San Jose to Stockton and extend ACE service to Manteca, Modesto, Ceres, Turlock and Merced.

### ***Amtrak Capitol Corridor***

The Amtrak Capitol Corridor train is a commuter rail that provides service between Auburn and San Jose. The train operates on weekdays and weekends. The station is co-located with the ACE station, but on the south side of the railroad tracks. During the morning peak period, between 7:00 and 9:30 AM, there are four westbound Capitol Corridor trains with one-hour headways, and one eastbound train. During the evening peak period, between approximately 3:30 and 8:00 PM, there is one westbound train and four eastbound trains. On weekends, the Amtrak Capitol Corridor train provides 7 trains daily in each of the westbound and eastbound directions between 8:35 AM and 9:40 PM, with headways varying from one to three hours.

The existing transit service is shown on Figure 4.



**Figure 4**  
Existing Transit Services

## Existing Intersection Lane Configurations and Traffic Volumes

The existing lane configurations at the study intersections were obtained from field observations. The existing intersection lane configurations are shown on Figure 5. The existing peak-hour traffic volumes were obtained from turning movement counts at the study intersections in May 2017. The existing peak-hour traffic volumes are shown on Figure 6. The intersection traffic count data are included in Appendix A.

## Existing Signalized Intersection Levels of Service

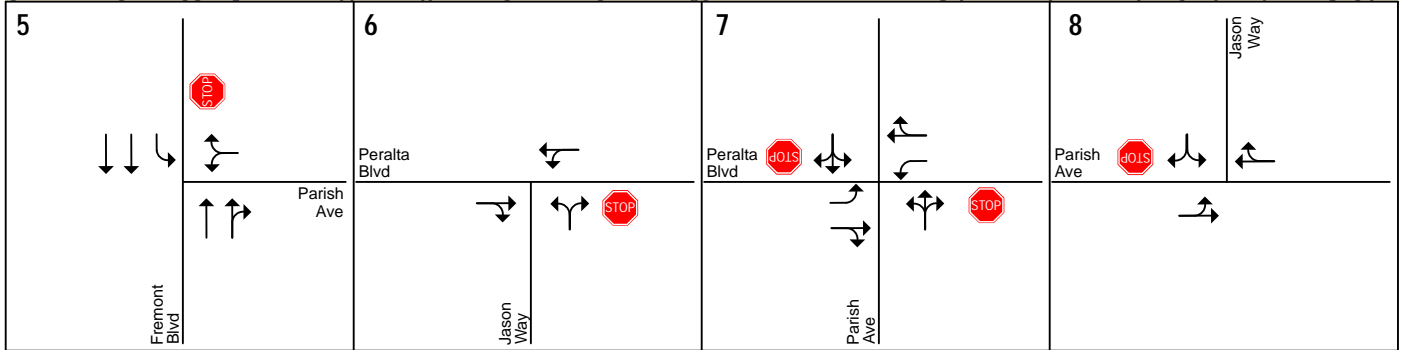
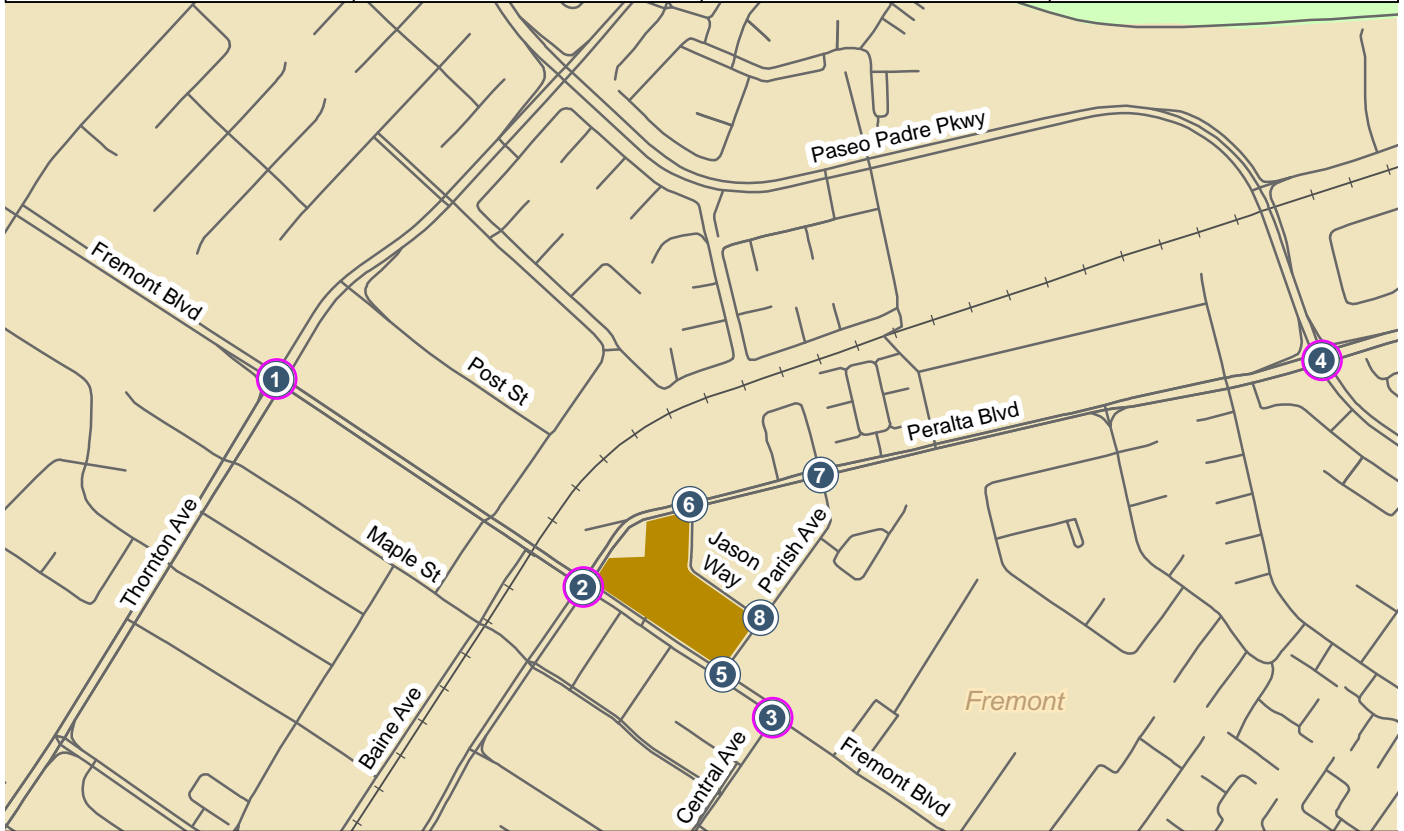
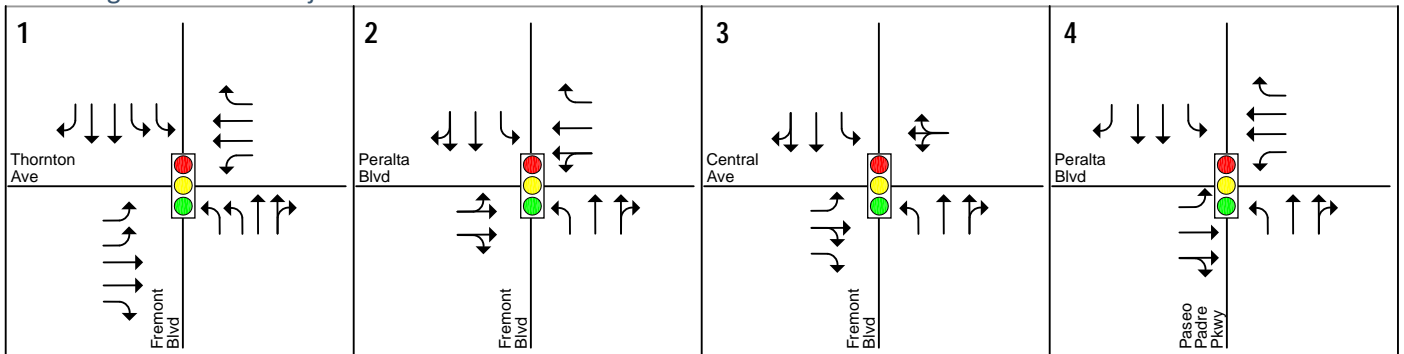
The results of the signalized intersection level of service analysis under existing conditions are summarized in Table 3. The results indicate that all signalized intersections currently operate at LOS D or better during the AM peak hour. The level of service calculation sheets are included in Appendix B.

**Table 3**  
**Existing Intersection Levels of Service**

No.	Intersection	LOS Standard	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>
1	Fremont Blvd & Thornton Ave	E	37.9	D
2	Fremont Blvd & Peralta Blvd	E	27.0	C
3	Fremont Blvd & Central Ave	E	34.8	C
4	Paseo Padre Pkwy & Peralta Bl	E	46.4	D

<sup>1</sup> Signalized intersection level of service is based on the Highway Capacity Manual (HCM) methodology, using average control delay for the entire intersection.

Silicon Sage Mixed-Use Project



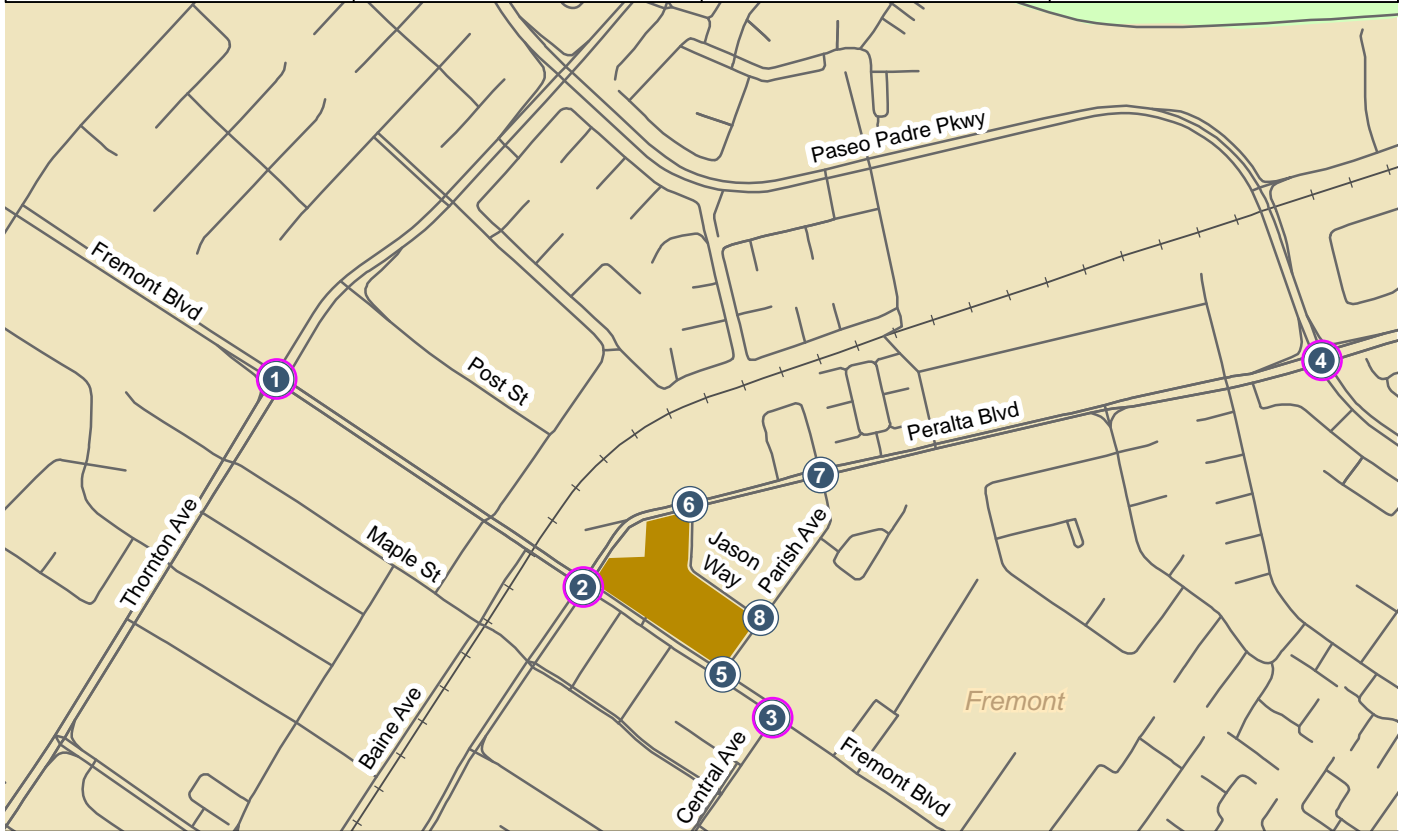
**LEGEND**

- = Site Location
- = Unsignalized Study Intersection
- = Signalized Study Intersection
- = Traffic Signal
- = Stop Sign

**Figure 5**  
Existing Lane Configurations

Silicon Sage Mixed-Use Project

<p><b>1</b></p> <p>Thornton Ave</p> <p>Fremont Blvd</p>	<p><b>2</b></p> <p>Peralta Blvd</p> <p>Fremont Blvd</p>	<p><b>3</b></p> <p>Central Ave</p> <p>Fremont Blvd</p>	<p><b>4</b></p> <p>Peralta Blvd</p> <p>Paseo Padre Pkwy</p>
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<p><b>5</b></p> <p>Fremont Blvd</p> <p>Parish Ave</p>	<p><b>6</b></p> <p>Peralta Blvd</p> <p>Jason Way</p>	<p><b>7</b></p> <p>Peralta Blvd</p> <p>Parish Ave</p>	<p><b>8</b></p> <p>Parish Ave</p> <p>Jason Way</p>
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**LEGEND**

- = Site Location
- = Unsignalized Study Intersection
- = Signalized Study Intersection
- XX = AM Peak-Hour Traffic Volumes

**Figure 6**  
Existing Traffic Volumes



## Observed Existing Traffic Conditions

Traffic conditions in the field were observed in order to identify existing operational deficiencies and to confirm the accuracy of calculated levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to intersection level of service, and (2) to identify any locations where the level of service calculation does not accurately reflect level of service in the field. Overall, the level of service analysis appears to accurately reflect actual existing traffic conditions. Field observations showed that operational problems currently occur at some of the study intersections. These are described below.

**Fremont Boulevard and Peralta Boulevard.** In the PM peak hour, the northbound vehicle queue on Fremont Boulevard frequently extends back to Parish Avenue- a distance of nearly 700 feet. Also in the PM peak hour, the southbound left-turn vehicles frequently extend out of the 150-foot striped left-turn pocket.

**Fremont Boulevard and Parish Avenue.** In the AM peak hour, the westbound left turns from Parish Avenue are frequently blocked by the queue of southbound vehicles extending from Central Avenue. In the PM peak hour, the westbound left turns from Parish Avenue are frequently blocked by the queue of northbound vehicles extending from Peralta Boulevard.

**Fremont Boulevard and Central Avenue.** In the AM peak hour, the southbound vehicle queues on Fremont Boulevard frequently extend back to and past Parish Avenue- a distance of 250 feet.

**Paseo Padre Parkway and Peralta Boulevard.** In the AM peak hour, the southbound vehicle queues regularly extend over 1,000 feet, with the observed maximum being about 1,500 feet. During the AM peak 15 minutes, in the southbound direction, it can take approximately five minutes to clear the intersection.

### Railroad Operations

The Union Pacific railroad tracks cross Fremont Boulevard approximately 300 feet north of the project site. It is on these tracks that the ACE and Capitol Corridor trains run. Between the two train services, there occurs about seven crossings in the AM peak period and four crossings in the PM peak period. Therefore, on average, trains arrive and block traffic on Fremont Boulevard about every 20 minutes in the two-hour AM peak period and approximately every 30 to 40 minutes in the two-hour PM peak period.

Because the station is located immediately adjacent to Fremont Boulevard, the effect of the trains on the crossing gate is determined not just by the time it takes for the trains to cross the tracks at speed, as with most train crossings. The length of time that the crossing gates are down consists of the approach time, the time it takes for trains to decelerate to stop at the station, the dwell time (time to load and unload passengers), and the time it takes for the trains to accelerate during departure from the station. This is because the trains, particularly the eastbound trains, actually extend across Fremont Boulevard when stopped at the station, and the fact that the trains are significantly longer than the loading platforms.

During train arrivals, the maximum vehicle queues on Fremont Boulevard, both northbound and southbound, are extremely long. Multiple observations showed that the average length of time the crossing gates are down is about two-and-a-half to three minutes. For the reasons described above, this is much longer than the station dwell time, which is less than 45 seconds, except when handicap loading or unloading is required, which can add a minute. One observation showed a total time of 12 minutes that the gates were down. The station agent was consulted about this and the explanation was that it happens infrequently, and that it most likely was a result of the train's conductor being instructed by Union Pacific to delay departure. The involvement of Union Pacific, which owns the tracks, can be for any one of a number of reasons, but often is related to switching issues or track obstructions downstream of the station.



The vehicle queues during a typical train crossing, lasting two and a half to three minutes, are considerable. The queues are worse in the PM than in the AM, but they are significant during both periods. In the PM peak period, during typical train stops, vehicle queues on northbound Fremont Boulevard were observed to extend all the way back to Centerville Junior High School, which is more than 2,000 feet (0.4 miles). During extended train stops (multiple trains arriving at one time, during handicap loading, or during train switch periods) the queues extend as far as one-half mile. The vehicle queues on southbound Fremont Boulevard extend back to and beyond Thornton Avenue and, as an extension of this queue, queues develop on eastbound Thornton Avenue from Fremont Boulevard.



It is worth noting that when train delays become too long, some drivers divert to other streets. This is especially true during the longer delays such as the 12-minute delay described previously. With delays that long, drivers take alternate routes and many who are stuck in the queue eventually turn around, leaving the queue.



When the crossing gates are down, the signal control at the intersection of Fremont Boulevard and Peralta Boulevard changes from its normal operation to flashing red, with all-way stop control. Under all-way-stop control, the vehicle queues in the westbound shared through/left-turn lane on Peralta Boulevard are generally shorter than when the signal is operating under normal control. This is because, under normal signal operations, westbound (and eastbound) left-turn phasing is permissive, requiring vehicles to wait for gaps in on-coming traffic. For all other movements at the intersection, the all-way stop control neither worsens nor improves operations, since all other movements (except the eastbound right-turn) have to wait for the crossing gate either way. It is therefore concluded that the current use of all-way-stop control during train interruptions is the optimal signal control under these conditions.





### 3. Background Conditions

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This chapter describes background traffic conditions. Traffic volumes for background conditions comprise volumes from existing traffic counts plus traffic generated by approved developments in the vicinity of the site. Traffic volumes and roadway network assumptions are described below.

#### Background Roadway Network and Traffic Volumes



It was assumed for this analysis that roadway and intersection geometries would remain the same as under existing conditions. Background peak-hour traffic volumes were calculated by adding to existing volumes the traffic generated by approved but not yet constructed developments. The following approved developments were included:

3900 Thornton Avenue: 54 Multi-Family (MF) Units; 7,124 square feet (s.f.) of Commercial

Centerville Junction: -11 Single-Family (SF) Units; -7,672 s.f. hardware store; 52 MF Units

Central Commons: 30 MF Units

City Center Apartments: 60 MF Units

Littlesteps Childcare: 2,803 square feet

Montecito (Townhome Portion Only): 54 MF Units

Peralta Crossing Design Review: 43 MF Units

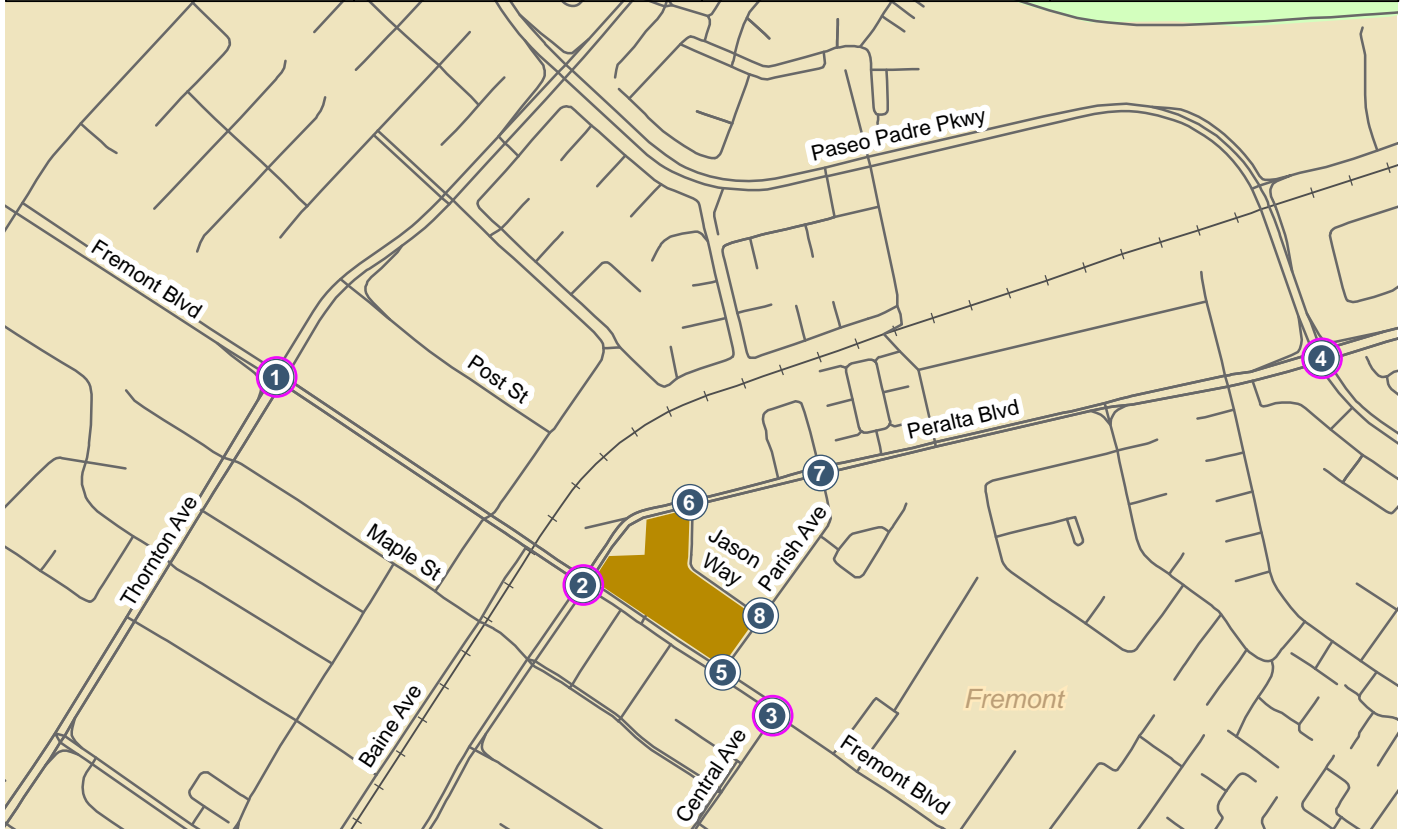


The traffic from each of these developments was estimated using standard trip generation rates and assigned to the roadway network using trip distribution patterns applicable to the land uses. Background traffic volumes are shown on Figure 7.



Silicon Sage Mixed-Use Project

<p><b>1</b></p>	<p><b>2</b></p>	<p><b>3</b></p>	<p><b>4</b></p>
-----------------	-----------------	-----------------	-----------------



<p><b>5</b></p>	<p><b>6</b></p>	<p><b>7</b></p>	<p><b>8</b></p>
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**LEGEND**

- = Site Location
- = Unsignalized Study Intersection
- = Signalized Study Intersection
- XX = AM Peak-Hour Traffic Volumes

**Figure 7**  
Background Traffic Volumes

## Background Intersection Levels of Service

Intersection level of service calculations were conducted to evaluate the operating levels of the key signalized intersections under background conditions. Table 4 presents the results of the signalized intersection level of service calculations under background conditions. All signalized study intersections are projected to operate at LOS D or better during the AM peak hour. The level of service calculation sheets are included in Appendix B.

**Table 4**  
**Background Signalized Intersection Levels of Service**

No.	Intersection	LOS Standard	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>
1	Fremont Blvd & Thornton Ave	E	38.1	D
2	Fremont Blvd & Peralta Blvd	E	27.3	C
3	Fremont Blvd & Central Ave	E	35.1	D
4	Paseo Padre Pkwy & Peralta Bl	E	46.8	D

<sup>1</sup> Signalized intersection level of service is based on the Highway Capacity Manual (HCM) methodology, using average control delay for the entire intersection.





## 4. Project Characteristics

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This chapter describes the method by which project traffic is estimated and assigned to the roadway network. The project, as proposed, would include 72 townhomes, 64 apartments, a 23,450 square-foot shopping center, a 1,550 square-foot café, and a 2,610 square-foot daycare center at the northeast corner of the intersection at Fremont Boulevard and Peralta Boulevard. Existing land uses include a 43,468 square-foot shopping center, a 7,843 square-foot restaurant, a 970 square-foot mini-warehouse, a single-family dwelling, and a vacant City fire station.



### Project Traffic Estimates

The amount of traffic associated with a development is estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In the first step, the amount of traffic entering and exiting the site is estimated for the peak hours. In the second step, the directions of approach and departure of project traffic are estimated. In the third step, the trips are assigned to specific streets and intersections. This process is described in the following sections.



#### ***Trip Generation***

The level of service analysis is based on the net trips generated by the project, where the site is given credit for the trip generating capacity of the existing approved uses (entitlement) on site. The trip generating capacity (entitlement) of the existing uses on site was estimated by applying Institute of Transportation Engineers' (ITE) trip generation rates to the currently approved uses on the site. The trip generation estimates for both the proposed project and the existing site uses were adjusted using the following adjustment factors:



- ***Internal Trips Reduction.*** Internal trips are trips that occur between complementary uses on-site, for example between apartments and the café or between the townhomes and the daycare center. These trips are assumed to either be pedestrian or bicycle trips, or vehicle trips that are confined within the site. The internal trip reduction factors used were based on the published values in the ITE *Trip Generation Handbook*, Second Edition.
- ***Retail Pass-By Trips Reduction.*** Retail pass-by trips are trips to and from a retail use that are already on the street system but turn into the site when passing by. These trips are therefore not new trips on the street system, but are assigned only at project access points. The







number of pass-by trips are determined using pass-by percentages published in the ITE *Trip Generation Handbook*, Second Edition.

- *Transit Trips Reduction.* Transit trips are project trips that use bus or rail. Because transit trips do not add vehicles to the street system, project trip generation is reduced by the transit mode share pertaining to the project uses. The transit trip reduction was determined using percentages published in the ITE *Trip Generation Handbook*, Second Edition.



After subtracting from the project trips the trips generated by the existing uses on site, and applying the aforementioned trip reductions for internal trips, pass-by trips and transit trips, the project is estimated to generate 125 net new trips in the AM peak hour and 12 net new trips in the PM peak hour. The project trip generation estimates and trips reductions are presented in Table 5.

### ***Trip Distribution and Assignment***



The project trip distribution was determined based on a select zone analysis using the City of Fremont Travel Demand Forecast Model. This was the model used to produce the City's forecasts for its most recent General Plan Update. Two different distributions were derived- one for residential and one for retail. The trip distributions thus determined are shown graphically on Figure 8. The trips generated by the proposed project were assigned to the roadway network and study intersections in accordance with this directional distribution. Pass-by trips were assigned only to and from the project's access points to Fremont Boulevard. Figure 9 shows the project trip assignment.



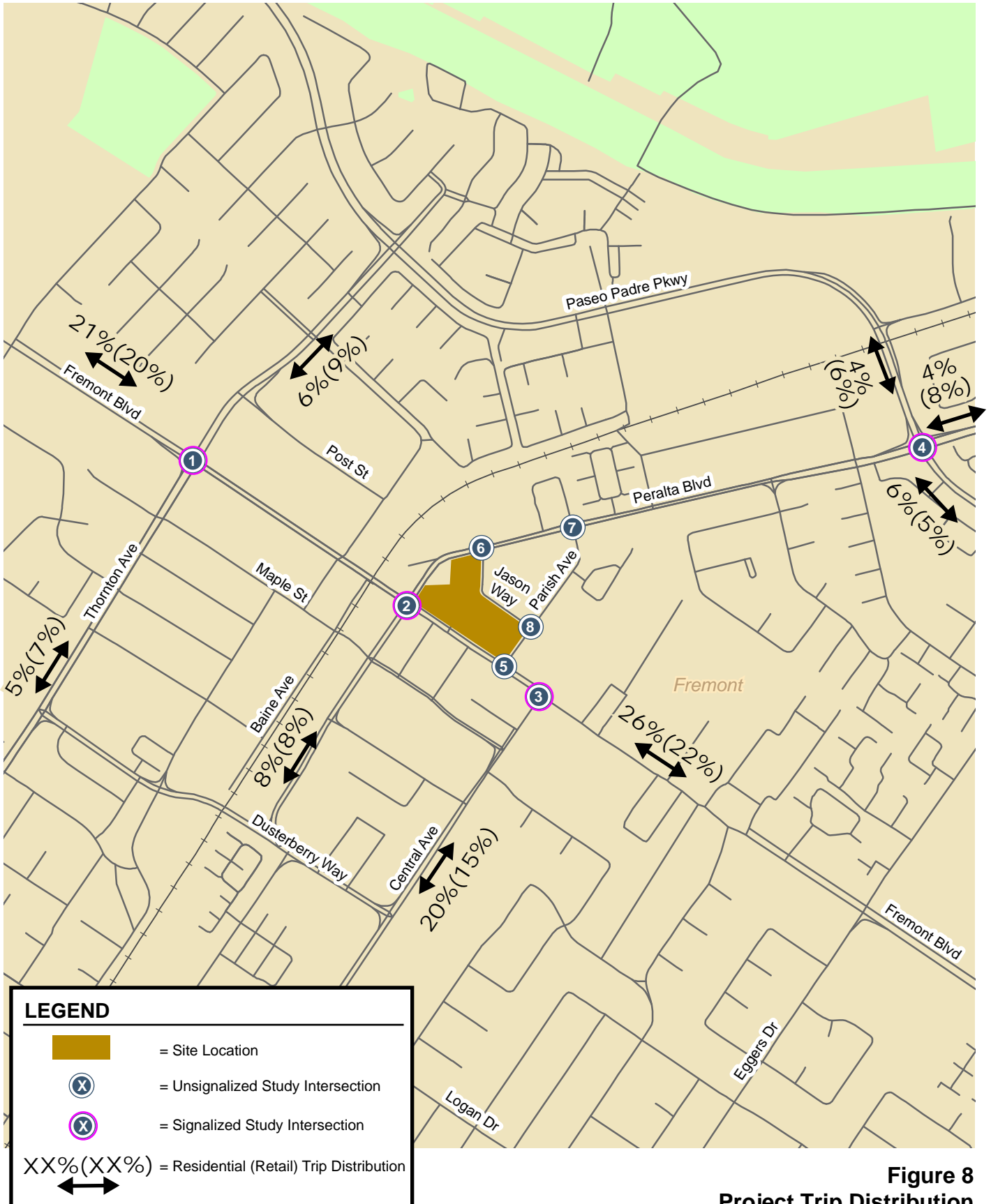
As shown on Figure 9, the proposed project would cause a negligible increase in PM peak-hour traffic. At signalized intersections, for a given movement, the proposed project is projected to contribute no more than one new PM peak hour trip every 15 minutes, which is insufficient to create an impact based on City of Fremont level of service impact thresholds. It is for this reason that the traffic analysis did not include an evaluation of offsite PM peak-hour conditions. Analysis of PM peak hour conditions immediately around the project is provided in Chapter 7.



**Table 5  
Project Trip Generation Estimates**

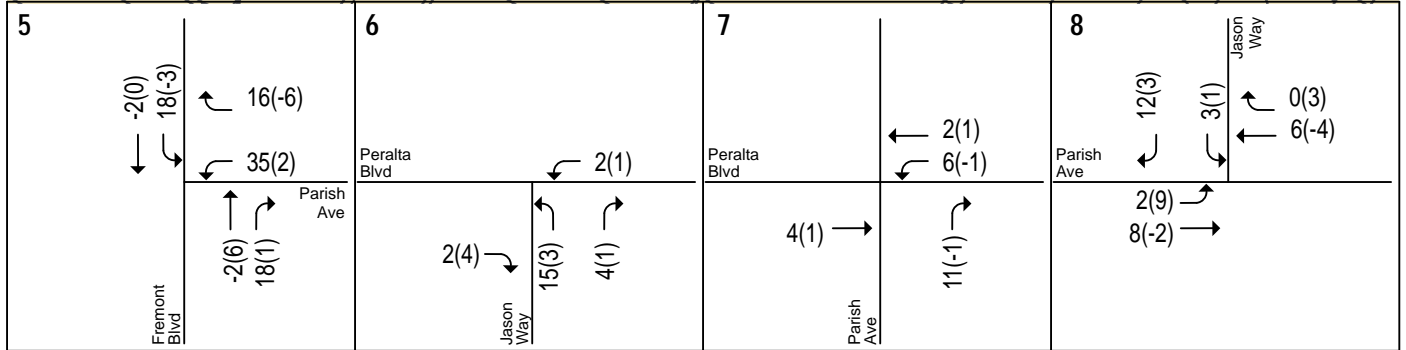
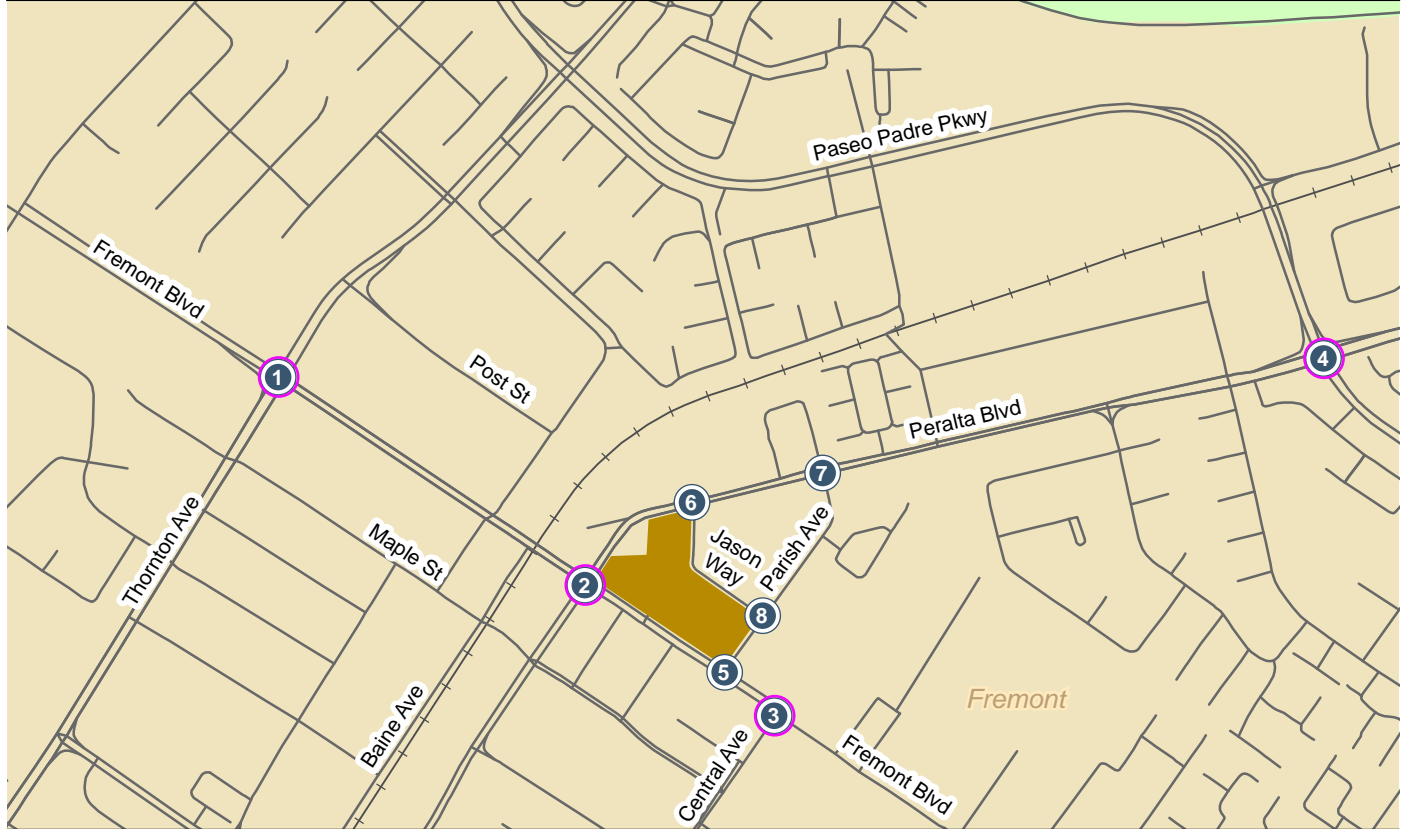
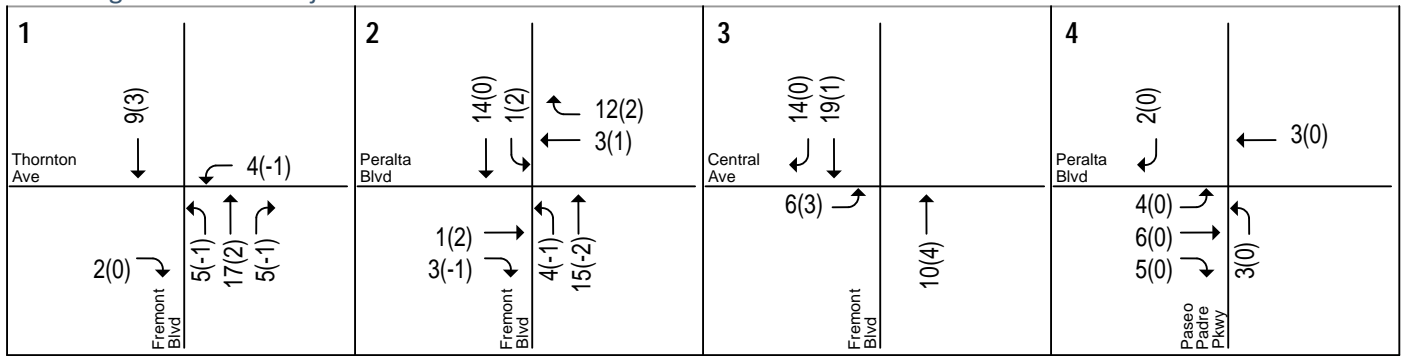
Land Use	Size	Daily Rate	Daily Trips	Daily Rate	AM Peak Hour			PM Peak Hour			
					Total Trips	In	Out	Total Trips	In	Out	
<b>Proposed Project</b>											
Townhomes <sup>1</sup>	72 units	5.81	418	0.44	32	5	27	0.52	37	25	12
Apartments <sup>2</sup>	64 units	6.65	426	0.51	33	7	26	0.62	40	26	14
<b>Total</b>	<b>136</b>		<b>844</b>		<b>65</b>	<b>12</b>	<b>53</b>		<b>77</b>	<b>51</b>	<b>26</b>
Housing and Retail/ Café Shop Internal Reduction <sup>3</sup>			(190)		(15)	(4)	(11)		(19)	(11)	(8)
<b>Subtotal</b>			<b>654</b>		<b>50</b>	<b>8</b>	<b>42</b>		<b>58</b>	<b>40</b>	<b>18</b>
Shopping Center <sup>4</sup>	23,450 sq.ft.	42.70	1,001	0.96	23	14	9	3.71	87	42	45
Retail Pass-By Reduction (Daily, AM, PM)(17%,0%,34%) <sup>5</sup>			(170)						(29)	(14)	(15)
Cafe <sup>6</sup>	1,550 sq.ft.	745.65	1,156	108.38	168	86	82	40.75	63	32	31
Retail Pass-By Reduction (Daily, AM, PM)(50%,49%,50%) <sup>7</sup>			(578)		(82)	(42)	(40)		(32)	(16)	(16)
Daycare Center <sup>13</sup>	2,610 sq.ft.	74.06	193	12.18	32	17	15	12.34	33	16	17
Housing and Retail/ Café Shop Internal Reduction <sup>3</sup>			(190)		(15)	(11)	(4)		(19)	(8)	(11)
<b>Subtotal</b>			<b>1,412</b>		<b>126</b>	<b>64</b>	<b>62</b>		<b>103</b>	<b>52</b>	<b>51</b>
Transit Trip Reduction <sup>9</sup>	10%		(49)		(6)	(1)	(5)		(7)	(5)	(2)
<b>Total Primary Project Trips</b>			<b>2,017</b>		<b>170</b>	<b>71</b>	<b>99</b>		<b>155</b>	<b>88</b>	<b>67</b>
<b>Trip generation for Existing Use based on ITE Rates</b>											
Shopping Center <sup>4</sup>	43,468 sq.ft.	42.70	1,856	0.96	42	26	16	3.71	161	77	84
Restaurant <sup>8</sup>	7,843 sq.ft.	89.95	705	0.81	6	4	2	7.49	59	39	20
<b>Total</b>			<b>2,561</b>		<b>48</b>	<b>30</b>	<b>18</b>		<b>220</b>	<b>116</b>	<b>104</b>
Retail Pass-By Reduction (Daily, AM, PM)(17%,0%,34%) <sup>5</sup>			(435)						(74)	(39)	(35)
<b>Subtotal</b>			<b>2,126</b>		<b>48</b>	<b>30</b>	<b>18</b>		<b>146</b>	<b>77</b>	<b>69</b>
Mini Warehouse <sup>10</sup>	970 sq.ft.	2.50	2	0.14	1	1	0	0.26	1	1	0
Single family house <sup>11</sup>	1 units	9.52	10	0.75	1	0	1	1.00	1	1	0
Transit Trip Reduction <sup>12</sup>	10%		(25)		(5)	(3)	(2)		(5)	(2)	(3)
<b>Total Primary Existing Trips</b>			<b>2,113</b>		<b>45</b>	<b>28</b>	<b>17</b>		<b>143</b>	<b>77</b>	<b>66</b>
<b>Net New Project Trips</b>			<b>(96)</b>		<b>125</b>	<b>43</b>	<b>82</b>		<b>12</b>	<b>11</b>	<b>1</b>

<sup>1</sup> Rates based on ITE Trip Generation, 9th Edition: average rates for Townhomes (ITE 230).  
<sup>2</sup> Rates based on ITE Trip Generation, 9th Edition: average rates for Apartments (ITE 220).  
<sup>3</sup> Per ITE Trip Generation Handbook (Second Edition). Daily trips were estimated by averaging AM & PM peak hour percentages.  
<sup>4</sup> Rates based on ITE Trip Generation, 9th Edition: average rates for Shopping Center (ITE 820).  
<sup>5</sup> PM peak hour passer-by trips are based on ITE Trip Generation Handbook (Second Edition).  
<sup>6</sup> Rates based on ITE Trip Generation, 9th Edition: average rates for Coffee / Donut Shop (ITE 936). Daily trips were estimated by assuming average of AM & PM peak hour trips rates to be 10% of daily trips.  
<sup>7</sup> AM & PM peak hour passer-by trips are based on ITE Trip Generation Handbook (Second Edition) for Fast-Food Restaurant (ITE 934).  
<sup>8</sup> Rates based on ITE Trip Generation, 9th Edition: average rates for Quality Restaurant (ITE 931).  
<sup>9</sup> Based on ITE Trip Generation Handbook Trip Reduction Table B.2 (Development around bus transit corridors). PM transit reduction trips for shopping center was applied to employees only.  
<sup>10</sup> Rates based on ITE Trip Generation, 9th Edition: average rates for Mini-warehouse (ITE 151).  
<sup>11</sup> Rates based on ITE Trip Generation, 9th Edition: average rates for Single family detached house (ITE 210).  
<sup>12</sup> Transit trip reduction to Shopping Center, Restaurants and Mini Warehouse were applied based on ITE Trip Generation Handbook Trip Reduction Table B.2 (Development around bus transit corridors). PM transit reduction trips were applied to employees only.  
<sup>13</sup> Rates based on ITE Trip Generation, 9th Edition: average rates for Daycare Center (ITE 565).






**Figure 8**  
Project Trip Distribution

Silicon Sage Mixed-Use Project



**LEGEND**

-  = Site Location
-  = Unsignalized Study Intersection
-  = Signalized Study Intersection
- XX(X) = AM(PM) Peak-Hour Trips

**Figure 9**  
Net Project Trip Assignment



## 5. **Near-Term Project Conditions**

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This chapter describes existing plus project and background plus project traffic conditions. These scenarios are used to determine project-specific impacts.

### **Existing Plus Project Traffic Volumes**

To estimate traffic for existing plus project conditions, the net project-generated traffic was added to existing traffic at each intersection movement. The existing plus project traffic volumes at the study intersections are shown graphically on Figure 10.

### **Existing Plus Project Signalized Intersection Levels of Service**

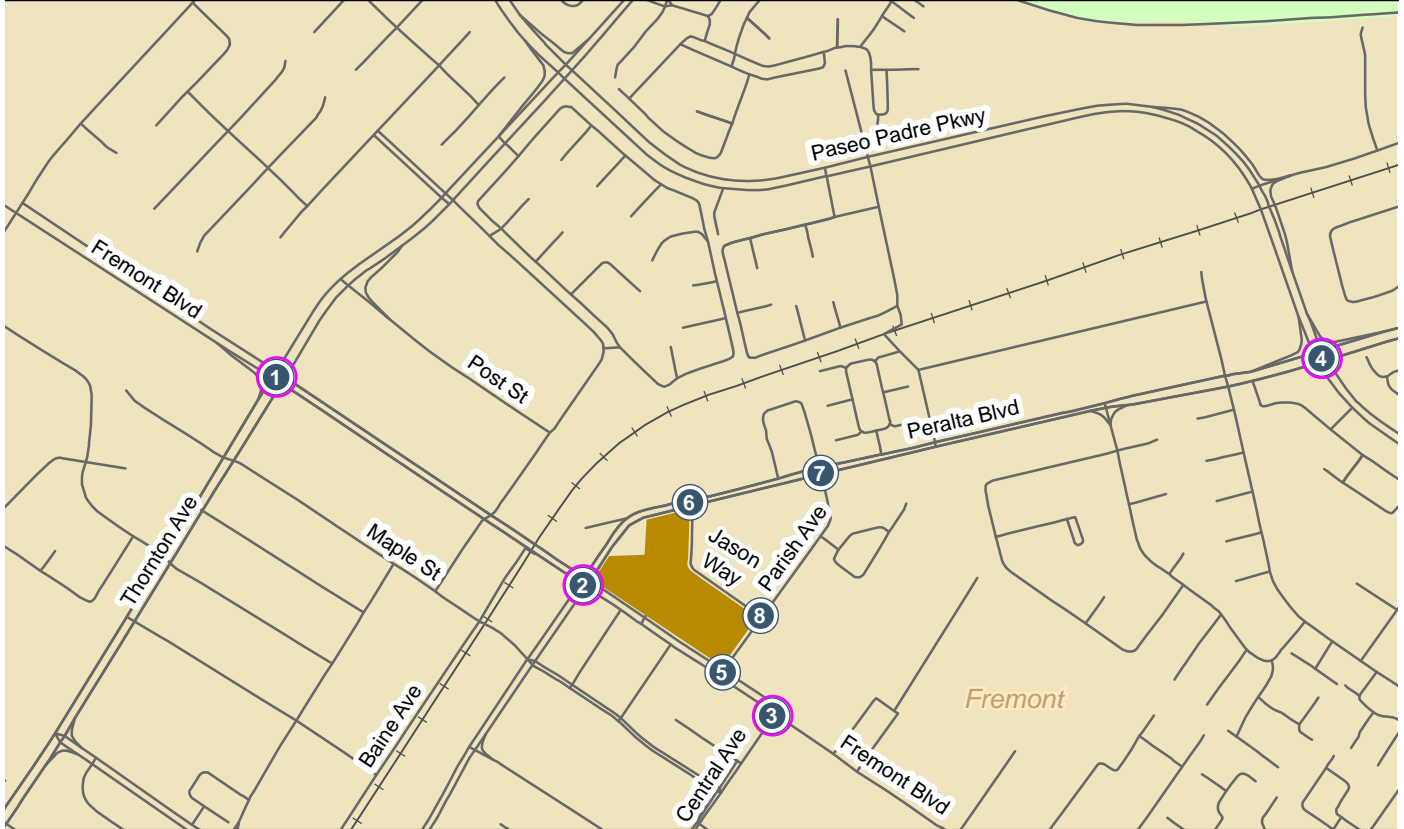
It was assumed in this analysis that the roadway network and the study intersection lane configurations under existing plus project conditions would be the same as those described under existing conditions. The results of the intersection level of service analysis under existing plus project conditions are summarized in Table 6. The results show that all of the signalized study intersections would continue to operate at LOS D or better during the AM peak hour under existing plus project conditions. The level of service calculation sheets are included in Appendix B.

### **Background Plus Project Traffic Volumes**

To estimate traffic for background plus project conditions, the net project-generated traffic was added to background traffic at each intersection movement. The background plus project traffic volumes at the study intersections are shown graphically on Figure 11.




Silicon Sage Mixed-Use Project

<p><b>1</b></p> <p>Thornton Ave</p> <p>372 858 156</p> <p>169 750 182</p> <p>Fremont Blvd</p> <p>277 437 170</p> <p>146 414 51</p>	<p><b>2</b></p> <p>Peralta Blvd</p> <p>61 950 156</p> <p>167 294 56</p> <p>Fremont Blvd</p> <p>17 218 60</p> <p>92 546 41</p>	<p><b>3</b></p> <p>Central Ave</p> <p>155 900 65</p> <p>2</p> <p>Fremont Blvd</p> <p>151 68 386</p> <p>313 608 20</p>	<p><b>4</b></p> <p>Peralta Blvd</p> <p>89 1459 252</p> <p>324 544 91</p> <p>Paseo Padre Pkwy</p> <p>75 446 272</p> <p>120 551 15</p>
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<p><b>5</b></p> <p>Fremont Blvd</p> <p>1013 56</p> <p>89 105</p> <p>Parish Ave</p> <p>570 194</p>	<p><b>6</b></p> <p>Peralta Blvd</p> <p>514 4</p> <p>Jason Way</p> <p>404 4</p> <p>17 6</p>	<p><b>7</b></p> <p>Peralta Blvd</p> <p>4 2 3</p> <p>9 515 77</p> <p>Parish Ave</p> <p>395 4</p> <p>8 3 249</p>	<p><b>8</b></p> <p>Parish Ave</p> <p>14 9</p> <p>Jason Way</p> <p>13 151</p> <p>8 216</p>
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**LEGEND**

-  = Site Location
-  = Unsignalized Study Intersection
-  = Signalized Study Intersection
- XX = AM Peak-Hour Traffic Volumes

**Figure 10**  
Existing Plus Project Traffic Volumes



**Table 6  
Existing Plus Project Signalized Intersection Levels of Service**

No.	Intersection	LOS Std	Existing				
			No Project		With Project		
			Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Incr. In Avg. Delay
1	Fremont Blvd & Thornton Ave	E	37.9	D	38.0	D	0.1
2	Fremont Blvd & Peralta Blvd	E	27.0	C	27.2	C	0.2
3	Fremont Blvd & Central Ave	E	34.8	C	34.8	C	0.0
4	Paseo Padre Pkwy & Peralta BI	E	46.4	D	46.7	D	0.3

<sup>1</sup> Signalized intersection level of service is based on the Highway Capacity Manual (HCM) methodology, using average control delay for the entire intersection.

### Background Plus Project Signalized Intersection Levels of Service

It was assumed in this analysis that the roadway network and the study intersection lane configurations under background plus project conditions would be the same as those described under existing conditions. The results of the intersection level of service analysis under background plus project conditions are summarized in Table 7. The results show that all of the signalized study intersections would continue to operate at LOS D or better during the AM peak hour under background plus project conditions. The level of service calculation sheets are included in Appendix B.

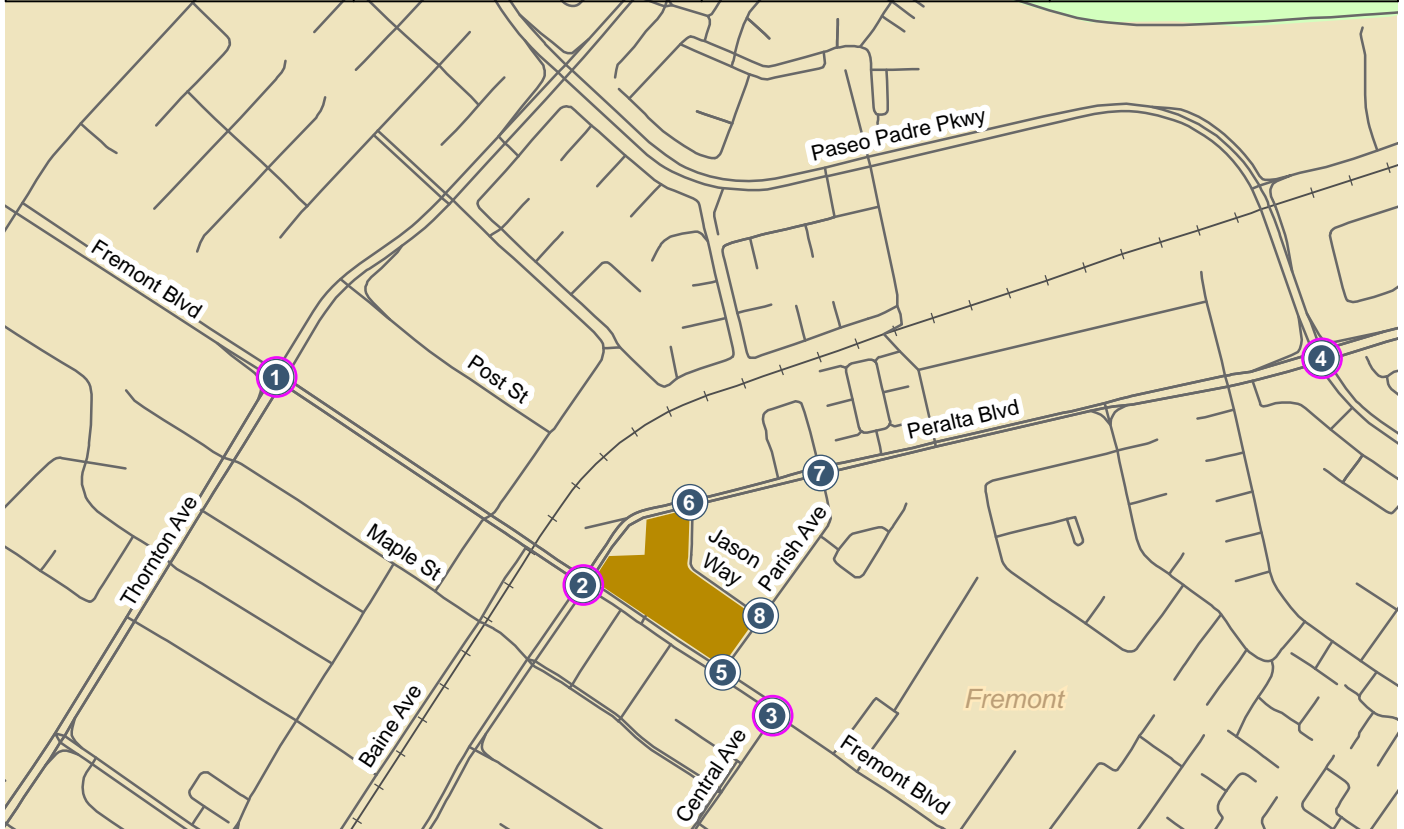
**Table 7  
Background Plus Project Signalized Intersection Levels of Service**

No.	Intersection	LOS Std	Background				
			No Project		With Project		
			Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Incr. In Avg. Delay
1	Fremont Blvd & Thornton Ave	E	38.1	D	38.2	D	0.1
2	Fremont Blvd & Peralta Blvd	E	27.3	C	27.5	C	0.2
3	Fremont Blvd & Central Ave	E	35.1	D	35.5	D	0.4
4	Paseo Padre Pkwy & Peralta BI	E	46.8	D	47.5	D	0.7

<sup>1</sup> Signalized intersection level of service is based on the Highway Capacity Manual (HCM) methodology, using average control delay for the entire intersection.

Silicon Sage Mixed-Use Project

<p><b>1</b></p>	<p><b>2</b></p>	<p><b>3</b></p>	<p><b>4</b></p>
-----------------	-----------------	-----------------	-----------------



<p><b>5</b></p>	<p><b>6</b></p>	<p><b>7</b></p>	<p><b>8</b></p>
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**LEGEND**

- = Site Location
- = Unsignalized Study Intersection
- = Signalized Study Intersection
- XX = AM Peak-Hour Traffic Volumes

**Figure 11**  
Background Plus Project Traffic Volumes



## 6. Cumulative Conditions



This chapter presents a summary of the traffic conditions that would occur under cumulative conditions. For this analysis, cumulative conditions represent year 2035 traffic conditions under buildout of the City of Fremont General Plan. Cumulative (No Project) traffic volumes were obtained from the City of Fremont General Plan EIR traffic forecasts. This chapter presents an analysis of intersection levels of service under cumulative conditions with and without the project in order to identify any potential cumulative project impacts.



### Cumulative Roadway Network and Traffic Volumes

It was assumed for this analysis that the transportation system, roadway network and all intersection geometries under cumulative conditions would remain the same as under existing conditions, with the exception of roadway and intersection improvements specified in the City's General Plan and noted as follows.



**Fremont Boulevard and Thornton Avenue intersection:** convert the existing southbound separate right-turn lane on Fremont Boulevard to a shared through-right-turn lane.

**Peralta Boulevard:** widen from two lanes to four lanes on the segment beginning just east of Fremont Boulevard and ending at Mowry Avenue.



**Fremont Boulevard and Central Avenue intersection:** add a second northbound left-turn lane on Fremont Boulevard.

**Paseo Padre Parkway and Peralta Boulevard intersection:** add a second southbound left-turn pocket and convert the existing southbound separate right-turn lane to a shared through-right-turn lane on Paseo Padre Parkway. Also, add a second northbound left-turn lane and add a third northbound through lane on Paseo Padre Parkway.



Cumulative conditions were evaluated for two scenarios: cumulative without the project and cumulative with the project. Traffic volumes under baseline (no project) cumulative conditions were obtained either directly or indirectly from the City of Fremont General Plan EIR Year 2035 traffic forecasts. All of the signalized study intersections were included in the General Plan EIR and therefore forecasts were available for use in this study. For the unsignalized study intersections, cumulative no project traffic volumes were estimated using interpolation or extrapolation. The net



project-generated traffic was added to cumulative no project traffic at each intersection movement to obtain cumulative with project traffic volumes. The cumulative traffic volumes without and with the proposed project are shown on Figures 12 and 13, respectively.

### Cumulative Signalized Intersection Levels of Service

The results of the signalized intersection level of service analysis for cumulative conditions without the project and cumulative conditions with the project are summarized in Table 8. According to the definitions provided in Chapter 1, the proposed project would not result in any significant impacts to the signalized study intersections. Although the intersection of Paseo Padre Parkway and Peralta Boulevard would operate at LOS F in the AM peak hour, there would be no impacts at the intersection because the addition of project traffic does not cause the intersection average delay to increase by more than 4 seconds. The level of service calculation sheets are included in Appendix B.

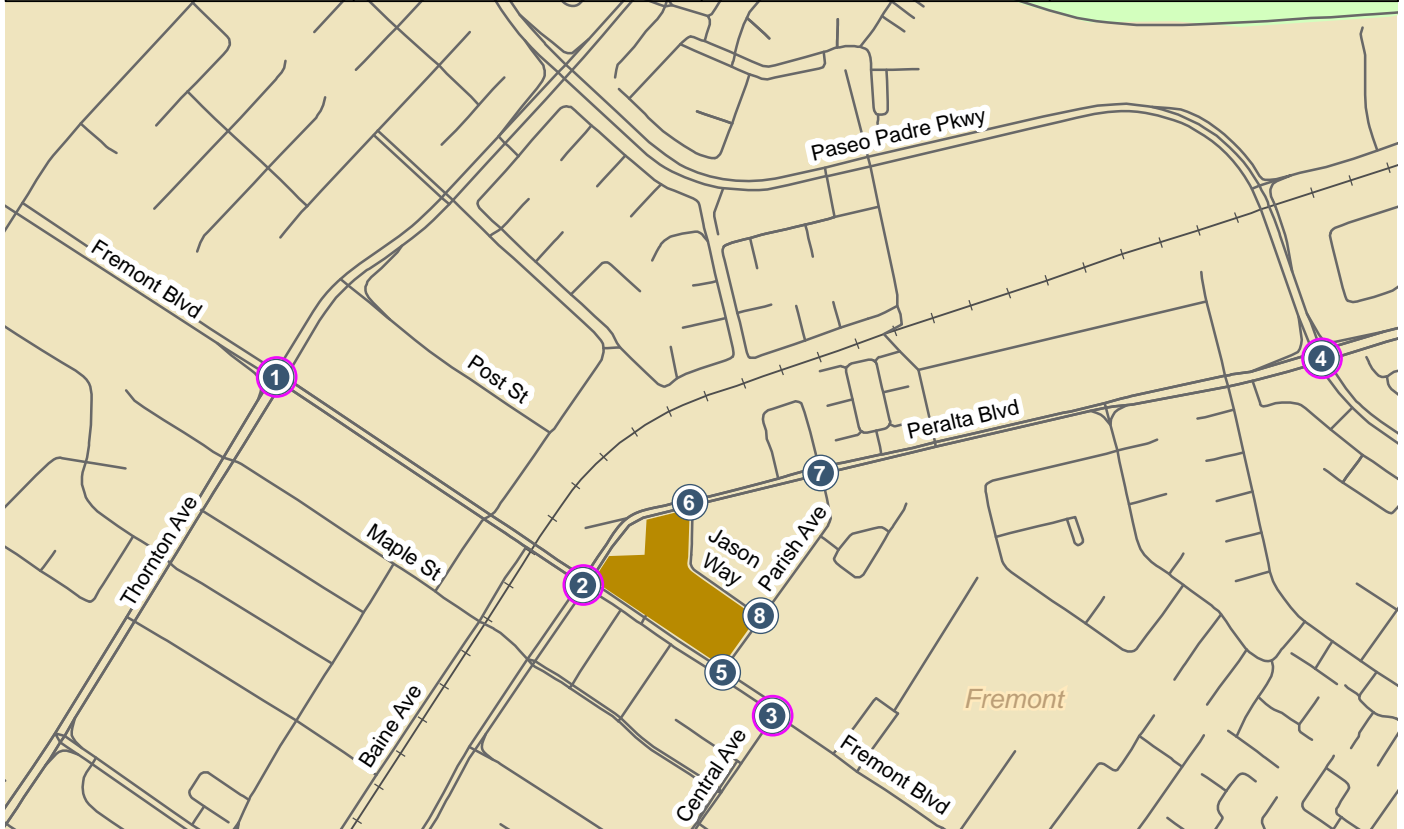
**Table 8  
Cumulative Signalized Intersection Levels of Service**

No.	Intersection	LOS Std	Cumulative				
			No Project		With Project		
			Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Incr. In Avg. Delay
1	Fremont Blvd & Thornton Ave	E	28.6	C	29.4	C	0.8
2	Fremont Blvd & Peralta Blvd	E	32.7	C	32.9	C	0.2
3	Fremont Blvd & Central Ave	E	71.3	E	75.5	E	4.2
4	Paseo Padre Pkwy & Peralta Bl	E	81.9	F	83.3	F	1.4

<sup>1</sup> Signalized intersection level of service is based on the Highway Capacity Manual (HCM) methodology, using average control delay for the entire intersection.




Silicon Sage Mixed-Use Project

<p><b>1</b></p> <p>Thornton Ave</p> <p>372 849 402</p> <p>294 750 214</p> <p>Fremont Blvd</p> <p>317 822 168</p> <p>164 677 173</p>	<p><b>2</b></p> <p>Peralta Blvd</p> <p>61 1049 155</p> <p>155 595 162</p> <p>Fremont Blvd</p> <p>35 217 144</p> <p>119 845 93</p>	<p><b>3</b></p> <p>Central Ave</p> <p>604 881 65</p> <p>361 68 386</p> <p>Fremont Blvd</p> <p>905 730 20</p>	<p><b>4</b></p> <p>Peralta Blvd</p> <p>166 2810 392</p> <p>324 541 91</p> <p>Paseo Padre Pkwy</p> <p>118 440 263</p> <p>462 1394 40</p>
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<p><b>5</b></p> <p>1476 40</p> <p>77 74</p> <p>Fremont Blvd</p> <p>909 185</p> <p>Parish Ave</p>	<p><b>6</b></p> <p>Peralta Blvd</p> <p>912 2</p> <p>465 2</p> <p>Jason Way</p>	<p><b>7</b></p> <p>Peralta Blvd</p> <p>4 2 3</p> <p>9 900 75</p> <p>461 4</p> <p>Parish Ave</p> <p>8 3 250</p>	<p><b>8</b></p> <p>Jason Way</p> <p>2 6</p> <p>14 152</p> <p>Parish Ave</p> <p>6 218</p>
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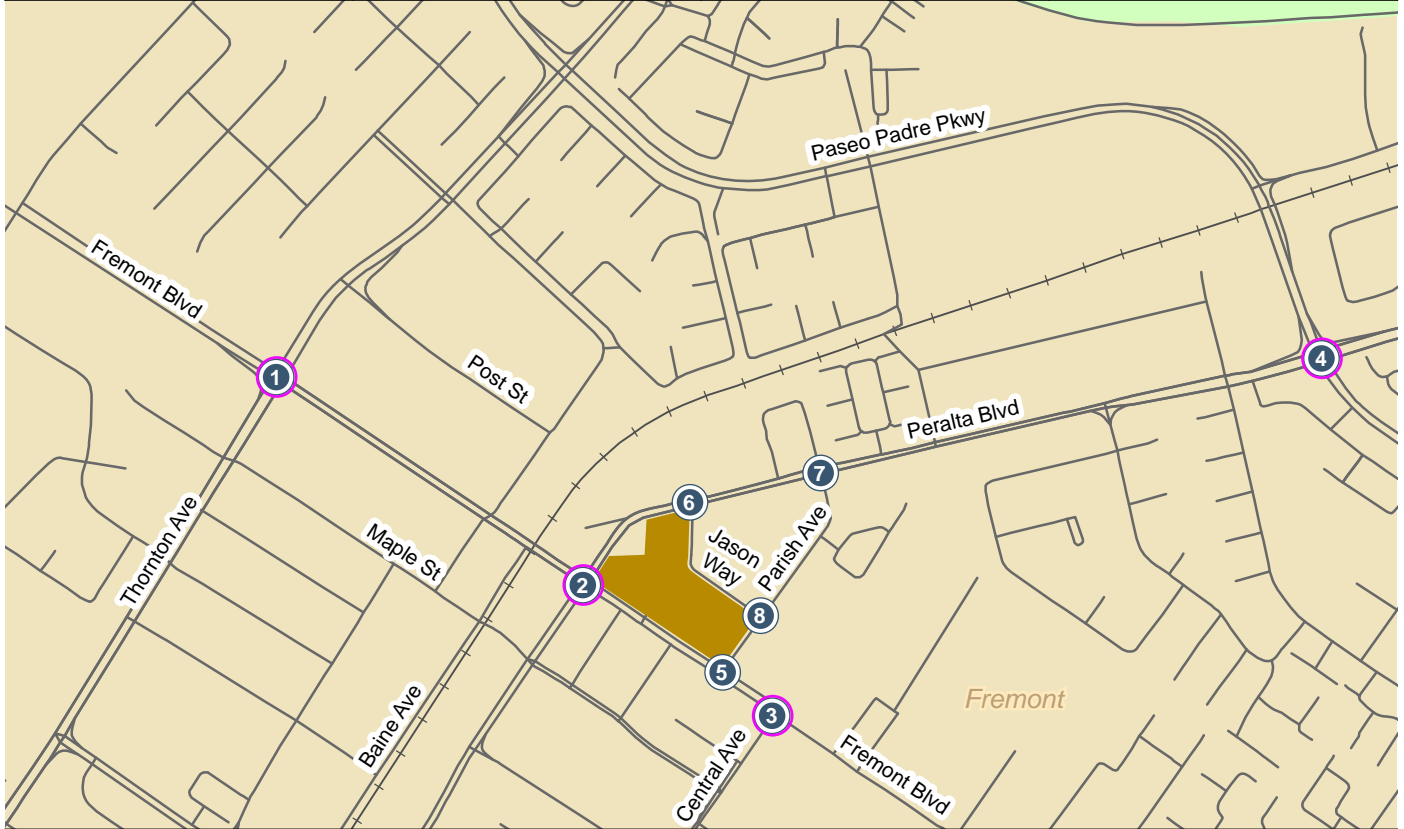
**LEGEND**

-  = Site Location
-  = Unsignalized Study Intersection
-  = Signalized Study Intersection
- XX = AM Peak-Hour Traffic Volumes

**Figure 12**  
Cumulative No Project Traffic Volumes

Silicon Sage Mixed-Use Project

<p><b>1</b></p>	<p><b>2</b></p>	<p><b>3</b></p>	<p><b>4</b></p>
-----------------	-----------------	-----------------	-----------------



<p><b>5</b></p>	<p><b>6</b></p>	<p><b>7</b></p>	<p><b>8</b></p>
-----------------	-----------------	-----------------	-----------------

**LEGEND**

- = Site Location
- = Unsignalized Study Intersection
- = Signalized Study Intersection
- XX = AM Peak-Hour Traffic Volumes

**Figure 13**  
Cumulative With Project Traffic Volumes





## 7. Other Transportation Issues

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This chapter presents an analysis of other transportation issues both on-site and in the vicinity of the project site, including:

- Unsignalized Intersections
- Railroad Impacts
- Pedestrian, Bicycles and Transit Analysis
- Site Access Operations
- On-Site Circulation
- Parking
- Neighborhood Traffic

Unlike the level of service impact methodology, which is adopted by the City Council, the analyses of non-LOS issues are based on professional judgment in accordance with the standards and methods employed by the traffic engineering community. Although operational issues are not considered CEQA impacts, they do describe traffic conditions that are relevant to describing the project

### Unsignalized Intersections

The City of Fremont does not have formal impact criteria to apply to unsignalized intersections. This is common for many jurisdictions because it is generally not the unsignalized intersections that limit the overall capacity of a roadway. The analysis of unsignalized intersections is typically evaluated by considering overall level of service, approach delay and movement delay, availability of alternate routes, intersection spacing, and an analysis of traffic signal warrants.

The results of the unsignalized intersection level of service analysis under all study scenarios are summarized in Table 9. The results show that, at the intersection of Fremont Boulevard and Parish Avenue, the westbound approach on Parish Avenue currently operates at LOS F under existing conditions and would continue to under all study scenarios. Overall, the intersection of Fremont Boulevard and Parish Avenue operates at LOS C or better under all scenarios except cumulative conditions with the project, where it would operate at LOS E.



**Table 9  
Unsignalized Intersection Level of Service Summary**

No.	Intersection	Existing				Background				Buildout			
		No Project		With Project		No Project		With Project		No Project		With Project	
		Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>
5	Fremont Blvd & Parish Ave	4.2/54.9	A/F	14.8/152.2	B/F	6.1/77.7	A/F	21.0/sat <sup>2</sup>	C/F	15.7/sat <sup>2</sup>	C/F	44.2/sat <sup>2</sup>	E/F
6	Jason Way & Peralta Blvd	0.1/13.8	A/B	0.4/16.1	A/C	0.1/14.0	A/B	0.4/16.3	A/C	0.1/14.1	A/B	0.3/17.0	A/C
7	Parish Avenue & Peralta BI	4.5/33.0	A/D	4.8/35.2	A/E	4.7/35.4	A/E	5.0/38.0	A/E	2.7/32.2	A/D	2.8/33.4	A/D
8	Jason Way & Parish Ave	0.3/10.3	A/B	0.7/10.3	A/B	0.3/10.4	A/B	0.7/10.4	A/B	0.3/10.5	A/B	0.7/10.5	A/B

Note: all intersections were counted in May 2017.

<sup>1</sup> unsignalized intersections were analyzed based on Highway Capacity Manual (HCM) methodology using TRAFFIX analysis software. All unsignalized study intersections are Side Street Stop Control (SSSC). SSSC intersection levels of service and delays are reported for both the overall average delay / the approach with highest delay.

<sup>2</sup> "sat" designates *oversaturated* conditions. Delay value is not meaningful or reflective of actual conditions.



The overall intersection operations at Parish Avenue and Peralta Boulevard are shown to be LOS A under all study scenarios, although the northbound approach on Parish Avenue currently operates at LOS D under existing conditions and would operate at LOS D or E under all other study scenarios. Operations on the northbound approach on Parish Avenue would improve from LOS E under background conditions to LOS D under cumulative conditions because, as described previously, Peralta Boulevard is planned to be widened from two to four lanes under the General Plan. This improvement would provide more gaps in cross-traffic and would allow vehicles to clear Parish Avenue more quickly.

A peak-hour volume signal warrant analysis was conducted for the intersections of Fremont Boulevard & Parish Avenue and Parish Avenue & Peralta Boulevard under existing, background, and cumulative conditions with and without the project for the AM peak hour. The results show that the intersection of Fremont Boulevard & Parish Avenue meets the peak-hour signal warrant under existing plus project, background plus project, and cumulative plus project conditions during the AM peak hour. The intersection of Parish Avenue & Peralta Boulevard does not meet warrants under the same scenarios in the AM peak hour.

Traffic signal warrant checks were conducted for additional intersections and the results are presented in the Site Access section of this report. Other considerations regarding the potential need for installation of a traffic signal at the intersection of Fremont Boulevard and Parish Avenue are described in that section.

## Railroad Impacts

The vehicle queues during a typical train crossing are considerable. The queues are worse in the PM peak period than in the AM peak period, but they are significant during both periods. In the PM peak period, vehicle queues on northbound Fremont Boulevard generally extend all the way back to Centerville Junior High School, which is more than 2,000 feet, and not infrequently extends even further, with a queue of one-half mile.

The project is expected to add a net 27 peak-hour trips northbound and a net 15 trips southbound on Fremont Boulevard in the AM peak hour (the net addition of project PM peak hour traffic would be on the order of a few trips, which would be negligible). Of the 27 northbound trips, 15 would be from northbound Fremont Boulevard and 12 would be from westbound Peralta Boulevard. These volumes equate to about one additional directional trip every 2 to 4 minutes, on average. The project would therefore add to the vehicle queues, though the increase would be marginal. For comparison purposes, the existing northbound volume on Fremont Boulevard at the railroad tracks is approximately 700 vehicles, and the forecasted no project year 2035 northbound volume is over 1,000 vehicles. Overall, it is anticipated that project traffic will have a negligible effect on vehicle queues caused by the railroad crossing on Fremont Boulevard.

Traffic operations at the railroad crossing and adjacent Fremont Boulevard/Peralta Boulevard intersection were reviewed fairly extensively and no feasible improvements are apparent.

## Pedestrian, Bicycle, & Transit Facilities

Most of the streets in the project vicinity have sidewalks and crosswalks at intersections. Existing observations on Fremont Boulevard near Peralta Boulevard showed a moderately high level of pedestrian activity in the area. Most of the pedestrian activity was due to the close proximity of the Centerville Depot, or Fremont Station serving the ACE and Capitol Corridor trains. The station not only draws users of the trains, but there's a higher than average concentration of bus stops near the station because of transfers. The proposed project would generate pedestrian trips to/from transit stops, recreation areas, and employment centers. Overall, the volume of pedestrian trips generated

by the project is expected to be relatively low and not exceed the carrying capacity of the sidewalks and crosswalks nearby.

According to the U.S. Census, approximately one percent of the proposed project's users could be expected to ride bikes to and from the project site. For the proposed project, this would equate to approximately 2 new bike trips during each of the AM and PM peak hours. The low volume of bicycle trips generated by the project would not exceed the bicycle-carrying capacity of streets surrounding the site, and the increase in bicycle trips would not by itself require new off-site bicycle facilities. In addition, the volume of vehicular traffic generated by the proposed project is very small relative to the existing traffic levels on Fremont Boulevard, and thus, would have an insignificant effect on area-wide bike and pedestrian activity.

According to the Alameda County Congestion Management Program (CMP) Transportation Impact Analysis Technical Guidelines, a project would create an impact on pedestrian and bike circulation if: (1) its vehicle trips would present a barrier to bikes/pedestrians safely crossing roadways, or (2) it would reduce or sever existing or planned bike/pedestrian circulation in the area. Construction of the proposed project would not cause either of these criteria to be met. In addition, the proposed consolidation of site driveways along Fremont Boulevard from five driveways to one driveway would reduce the number of potential vehicle-pedestrian conflict points and would be beneficial for pedestrian safety. Therefore, the proposed project would not create an adverse impact to bike/pedestrian circulation in the area.

AC Transit currently provides bus service in the project vicinity. The Altamont Corridor Express (ACE) and Amtrak Capitol Corridor provide train service in the vicinity of the site. According to the ITE Trip Generation Handbook, the project would generate approximately 6 new transit trips during the AM peak commute hour and 7 new transit trips during the PM peak commute hour. This volume of riders would not exceed the carrying capacity of the existing bus or train service near the project site. In addition, the volume of vehicular traffic generated by the proposed project is small relative to the existing traffic levels on Fremont Boulevard, and thus, would have an insignificant effect on transit operations in the corridor.

According to the Alameda County (CMP) Transportation Impact Analysis Technical Guidelines, a project would create an impact on transit service if it: (1) causes vehicular congestion that would significantly degrade transit operations, (2) causes a ridership increase that would exceed existing transit capacity, or (3) conflicts with existing transit service plans or preclude future transit service to the project area. Construction of the proposed project would not cause any of these criteria to be met. Therefore, the proposed project would not cause a significant impact to transit operations in the study area. While the project would not create a significant impact to transit operations, there is an existing bus stop along the project frontage on Fremont Boulevard that does not currently provide a bench or shelter.

AC Transit was contacted regarding planned or requested upgrades in conjunction with this project. AC Transit staff requested that the project (1) install a bench and bike rack at the bus stop and (2) ensure that the placement of trees and bike racks do not impinge on an ADA accessible path to the bus stop. AC Transit would also welcome installation of a bus shelter, if possible. Providing an upgrade to the bus stop, be it a bench or shelter, would encourage transit ridership.

**Recommendation 1:** Prior to final design, the project applicant shall work with City of Fremont and AC transit staff to consider the desirability of upgrades to the existing bus stop along the project frontage.

## Site Access, Circulation and Parking Layout

Site access, on-site circulation, and the parking layout on-site are described below. The operations at each site driveway and at the intersection of Fremont Boulevard and Parish Way, which borders the site, are presented separately.

The project trips used in the evaluation of site access, on-site circulation, and parking are different than those used in the previous chapters. In this evaluation, the site is given credit for the actual trips generated by the existing uses on site, as opposed to the trips “entitled” by the existing uses. The actual trips generated by the existing uses on site were established by conducting counts at the site driveways.

### Site Access Operations

Access to the site would be provided via dedicated driveways on Fremont Boulevard and Parish Avenue, and a gated trash and recycling truck access driveway on Peralta Boulevard. In addition, the project proposes to extend Jason Way from Parish Avenue to Peralta Boulevard. The project would thereby also provide access to both Parish Avenue and Peralta Boulevard via intersections at Jason Way. The site plan is shown on Figure 2.

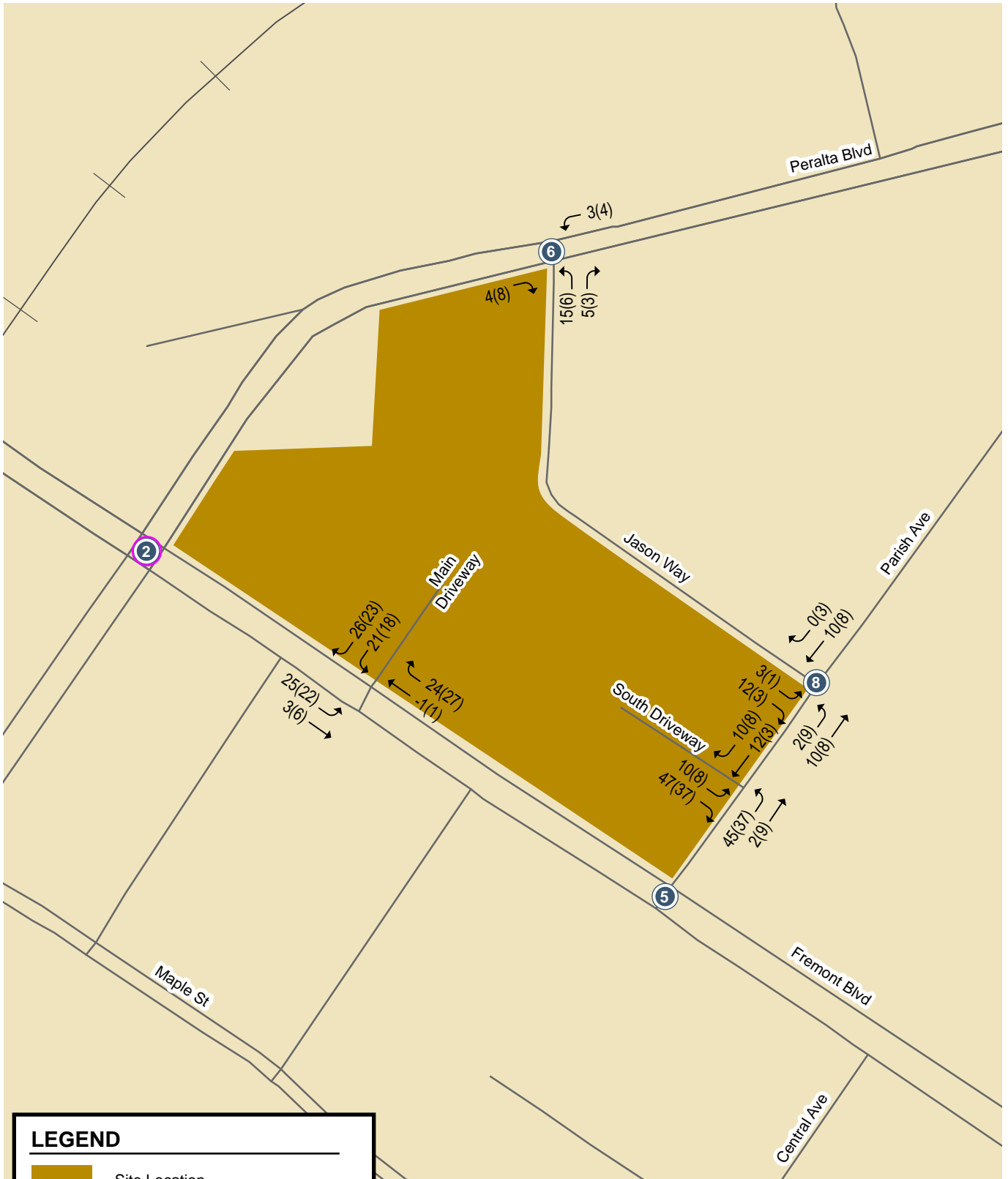
Site access operations were evaluated for existing plus project and cumulative plus project conditions in both the AM and PM peak hours. The traffic analysis reported in all previous chapters pertained to the AM peak hour only, because, as previously described, the net PM peak-hour trips generated by the project were negligible and in many cases negative (corresponding to a decrease in traffic). For the site access analysis, however, the PM peak hour was analyzed because the reconfiguration of the site layout and driveway locations will shift a considerable number of PM peak hour trips immediately around the site. All discussion below pertains to analysis under existing plus project and cumulative plus project conditions during the AM and PM peak hours.

The following unsignalized intersections and driveways were evaluated: Fremont Boulevard and Parish Avenue, Jason Way and Peralta Boulevard, Jason Way and Parish Avenue, Fremont Boulevard and the Main Site Driveway, and the South Site Driveway and Parish Avenue. The signalized intersection at Fremont Boulevard and Peralta Boulevard was also evaluated. The gross project trips (i.e. excluding any trip credits attributed to existing traffic generated by the site) at the site driveways are shown on Figure 14.

### Fremont Boulevard and Parish Avenue

A peak-hour volume signal warrant analysis was conducted for the intersection of Fremont Boulevard and Parish Avenue under existing plus project and cumulative plus project conditions in both the AM and PM peak hours. The results show that the intersection would meet the peak-hour signal warrant under both existing plus project and cumulative plus project conditions in the AM peak hour. Warrants would not be met in the PM peak hour under either scenario. The signal warrant sheet is included in Appendix C.

Level of service and vehicle queuing at the intersection of Fremont Boulevard and Parish Avenue were evaluated using TRAFFIX. The analysis showed the stop-controlled westbound approach on Parish Avenue would operate at LOS F, with delays in excess of two minutes, under project scenarios during both peak hours. Level of service for the southbound left-turn movement from Fremont Boulevard would be LOS C or better, with delays of less than 20 seconds under both project scenarios during both peak hours.



**LEGEND**

- = Site Location
- X = Unsignalized Study Intersection
- X = Signalized Study Intersection
- XX(X) = AM(PM) Peak-Hour Traffic Volumes

**Figure 14**  
**Gross Project Trips at the Site**



Vehicle queues were estimated for both the westbound approach on Parish Avenue and the southbound left-turn from Fremont Boulevard. The westbound approach would have 75 feet of storage from Fremont Boulevard to the South Site Driveway on Parish Avenue (refer to Figure 2). The existing southbound left-turn pocket on Fremont Boulevard provides 50 feet of storage.

The results indicated that the 95<sup>th</sup>-percentile maximum vehicle queues for the westbound approach on Parish Avenue would extend well past the South Site Driveway with the proposed project during both peak hours. The estimated maximum vehicle queues would extend over 300 feet in the AM peak hour under both scenarios. This is because, under the existing side-street stop control, westbound left turns from Parish Avenue to southbound Fremont Boulevard would have to wait for gaps in both northbound and southbound traffic on Fremont Boulevard before turning left. The westbound queue on Parish Avenue would therefore obstruct vehicles trying to exit the site from the South Site Driveway. The existing storage in the southbound left-turn pocket on Fremont Boulevard is sufficient to accommodate the estimated maximum vehicle queues under all conditions analyzed.

For the following reasons, engineering judgment suggests that a traffic signal be installed at the intersection of Parish Avenue and Fremont Boulevard:

1. The intersection meets the peak-hour volume signal warrant;
2. The intersection operates at LOS F under existing and cumulative conditions during both the AM and PM peak hours;
3. The vehicle queues on Fremont Boulevard leave few gaps in traffic that would permit westbound left turns;
4. The westbound queues are excessive, blocking the South Site Driveway and occasionally blocking Jason Way; and
5. The installation of a traffic signal would provide another controlled pedestrian crossing in a core retail area, which would enhance pedestrian safety.

All of these operational deficiencies would be improved with installation of a traffic signal.

**Recommendation 2:** The project applicant shall install a traffic signal at the intersection of Fremont Boulevard and Parish Avenue. Because of the close proximity of this traffic signal to the existing traffic signals on Fremont Boulevard at Peralta Boulevard and Central Avenue, the recommended traffic signal at this location should be interconnected and coordinated with the existing signal equipment at these locations. These improvements should include installation of high-visibility crosswalks and other treatments, as needed, to maximize pedestrian accessibility.

### Jason Way and Peralta Boulevard

An assessment was made of whether westbound vehicle queues on Peralta Boulevard would be likely to extend the 580 feet from Fremont Boulevard to the site driveway on Jason Way. The assessment was made by applying to observed existing maximum vehicle queues the percentage increases in traffic volumes on the westbound approach under existing plus project conditions and cumulative plus project conditions. The observed existing maximum vehicle queues on the westbound approach were 5 vehicles in the AM peak hour and 11 vehicles in the PM peak hour. This applies to normal operations, not operations during train interruptions.

The percentage increase in traffic under existing plus project conditions is negligible. The percentage increase in traffic under cumulative plus project conditions (relative to existing conditions) is projected to be approximately 85 percent in the AM peak hour and 100 percent (i.e. the volumes double) in the PM peak hour. Applying these factors to the observed maximum queues, it is estimated that the



maximum vehicle queues on the westbound approach of the intersection would be 230 feet in the AM peak hour and 540 feet in the PM peak hour. The maximum vehicle queues are therefore not expected to extend as far back as Jason Way and block access to the driveway.



A peak-hour volume signal warrant analysis was conducted for the intersection of Jason Way and Peralta Boulevard under existing plus project and cumulative plus project conditions in both the AM and PM peak hours. The results show that the intersection would not meet the peak-hour signal warrant under either existing plus project or cumulative plus project conditions in the AM and PM peak hours. The signal warrant sheet is included in Appendix C.



Level of service and vehicle queuing were evaluated for the intersection of Jason Way and Peralta Boulevard. The section of Jason Way that intersects with Peralta Boulevard is currently a seldom used, poorly paved back alley, as reflected by the fact that just 2 or 3 cars were counted using it in the peak hours. As part of the project, however, Jason Way will be fully upgraded, serving as one of the access driveways to the site. In addition, Peralta Boulevard is to be widened from two lanes to four lanes as part of the City's General Plan.



The analysis showed the stop-controlled northbound approach on Jason Way would operate at LOS E, with a delay of 37 seconds, under cumulative plus project conditions in the PM peak hour. The stop-controlled northbound approach on Jason Way would operate at LOS C or better under existing plus project conditions during both peak hours and under cumulative plus project conditions in the AM peak hour. Level of service for the westbound left-turn movement from Peralta Boulevard would be LOS B or better, with delays of less than 12 seconds, under both project scenarios during both peak hours. Note that there currently is not a separate left-turn pocket for the westbound left-turn movement. For the purpose of this analysis, there was no separate left-turn pocket assumed under cumulative conditions, when Peralta Boulevard would be four lanes wide.



Vehicle queues were estimated for the northbound approach on Jason Way. The northbound approach would have 65 feet of storage from Peralta Boulevard to the first driveway on Jason Way. The results indicated that the 95<sup>th</sup>-percentile maximum vehicle queues for the northbound approach on Jason Way would extend just 25 feet under both project scenarios during both peak hours. The maximum vehicle queues on northbound Jason Way would therefore not extend to the first driveway.



Sight distance looking left from the driveway is affected by the bend in Peralta Boulevard located approximately 240 feet west of the driveway. There currently is parking on-street allowed on this section of Peralta Boulevard. It is at this bend that eastbound Peralta Boulevard currently narrows from two lanes to one. These conditions are assumed to remain during the near-term, until Peralta Boulevard is widened to four lanes. With the speed limit on this section being 30 miles per hour, the clear sight distance from the driveway on Jason Way would need to be at least 200 feet. With parking on street over this 240-foot section, there would be inadequate sight distance from the driveway.



The precise geometry at the driveway, relative to the adjacent existing property and building to the east of the driveway is not clear with sufficient detail to ascertain the line of sight looking right. However, it is estimated that parking on-street would need to be prohibited within 60 feet east of the driveway.



**Recommendation 3:** Parking should be prohibited on the south side of Peralta Boulevard over a distance of 240 feet west, and 60 feet east, of the Jason Way driveway. In addition, landscaping near the driveway would need to be maintained such that adequate sight distance is provided.





### Jason Way and Parish Avenue

A peak-hour volume signal warrant analysis was conducted for the intersection of Jason Way and Parish Avenue under existing plus project and cumulative plus project conditions in both the AM and PM peak hours. The results showed that the intersection would not meet the peak-hour signal warrant under either existing plus project or cumulative plus project conditions in the AM and PM peak hours. The signal warrant sheet is included in Appendix C.



The site plan shows a site driveway accessing Jason Way at a location 50 feet north of Parish Avenue. A queue of more than two vehicles on southbound Jason Way would therefore obstruct the site driveway. In the future, the volume of traffic on Parish Avenue will continue to be relatively low such that there would be adequate gaps for turning traffic to and from Jason Way. At the intersection with Jason Way, neither the westbound nor eastbound approach on Parish Avenue has or is expected to have a volume greater than 230 vehicles in either peak hour under either project scenario. In addition, the traffic volumes on Jason Way are very low. The southbound approach on Jason Way has or is expected to have no more than 25 vehicles in either peak hour under any project scenario. With the very low volumes on Jason Way and adequate gaps in cross traffic on Parish Avenue, the delays to vehicles turning into and out Jason Way would be negligible and the maximum vehicle queues are not expected to exceed one or two vehicles.



### Fremont Boulevard and Main Site Driveway

A peak-hour volume signal warrant analysis was conducted for the intersection of Fremont Boulevard and the Main Site Driveway under existing plus project and cumulative plus project conditions in both the AM and PM peak hours. The results show that the intersection would not meet the peak-hour signal warrant under either existing plus project or cumulative plus project conditions in the AM and PM peak hours. The signal warrant sheet is included in Appendix C.



As described previously, the northbound vehicle queue on Fremont Boulevard frequently extends back from Peralta Boulevard to Parish Avenue in the PM peak hour. In the AM peak hour, the northbound queue often extends at least half way down the block, which is past the location where the main site driveway is proposed. The northbound queues will increase marginally with the addition of project trips, and substantially with the addition of cumulative traffic. The northbound vehicle queues can therefore be expected to block the Main Site Driveway much of the time under existing plus project and cumulative plus project conditions in both the AM and PM peak hours.



Given the extensive northbound vehicle queues that consistently extend past the Main Site Driveway, it is not recommended to permit left turns into or out of the site. Sight distance would be limited for outbound left turns and gaps in traffic would likely be infrequent, causing backups on the driveway. With a single westbound (outbound) lane on the driveway, right-turning vehicles could be subject to the same delays as left-turn vehicles should they queue behind an outbound left-turning vehicle. Similarly, it is not feasible to permit southbound left turns into the Main Site Driveway from Fremont Boulevard. The blockage created by the northbound vehicle queues would cause long delays for the southbound left-turn movement which, in turn, would cause long backups southbound behind the waiting left-turning vehicle in the shared through-left-turn lane. In addition, because the driveway would often be blocked by queued vehicles, pedestrians on the sidewalk would be obscured from the view of drivers making a southbound left turn from Fremont Boulevard into the Main Site Driveway. Finally, with the implementation of Recommendation 2 (traffic signal at Parish Avenue/Fremont Boulevard), there would be a safer and more efficient alternative available for project traffic to access Fremont Boulevard.



At the Main Site Driveway, the project site plan includes the construction of an intersection bulb-out and a crosswalk across Fremont Boulevard, just south of the proposed driveway. The purpose of the proposed bulb-out and crosswalk is to increase pedestrian accessibility in the project vicinity. The installation of this crosswalk is consistent with the City's long-term plan to improve the pedestrian



environment along Fremont Boulevard. To increase pedestrian safety, additional design features should be included in the crosswalk design per the recommendation below.

**Recommendation 4:** Restrict access to right-turn in and out only at the proposed intersection of Fremont Boulevard and the Main Site Driveway. This may require installation of a channelization island at the driveway, signage, and/or a median treatment. In addition, to enhance pedestrian safety in the proposed crosswalk, design features to improve crosswalk visibility and shorten the pedestrian crossing distance should be considered. These could include installation of: an additional bulb-out on the opposite side of Fremont Boulevard, high visibility striping, a raised median pedestrian refuge, and/or a rapid flash beacon. The final configuration of the driveway and crosswalk will be determined by City of Fremont staff.

Under existing conditions, parking is allowed on Fremont Boulevard along the project frontage. The driveway design and parking on-street as shown on the project site plan appears to restrict parking within 30 feet of the main driveway, and provides an intersection bulb-out, which would allow for adequate sight distance. In addition, the landscaping near the driveway would need to be maintained such that adequate sight distance is provided.

#### South Site Driveway and Parish Avenue

The site plan shows the South Site Driveway to be located on Parish Avenue, 75 feet east of Fremont Boulevard. The volume of traffic on Parish Avenue is relatively low and is forecast to remain low under cumulative conditions. At the intersection with the South Site Driveway, the westbound and eastbound approaches on Parish Avenue have, and are expected to continue to have, volumes less than 250 vehicles during the peak hours. The southbound traffic volumes on the South Site Driveway are expected to be relatively low, with no more than 60 vehicles in either peak hour under both project scenarios.

As described previously, under both project scenarios, without a traffic signal at Fremont Boulevard and Parish Avenue, westbound vehicle queues would back up past the South Site Driveway, thereby blocking the South Site Driveway. This is because, under the existing side-street stop control, westbound left turns from Parish Avenue to southbound Fremont Boulevard would have to wait for gaps in both northbound and southbound traffic on Fremont Boulevard before turning left.

Given the close proximity of this driveway to Fremont Boulevard (75 feet), there is considerable likelihood that eastbound vehicles on Parish Avenue could back up to Fremont Boulevard when waiting behind a car turning left into the South Site Driveway. It would take just three cars backed up from the South Site Driveway to block Parish Avenue back to Fremont Boulevard. In such a case, any vehicles on Fremont Boulevard wanting to turn into Parish Avenue would then start queuing back on Fremont Boulevard. It is therefore important that those left-turning vehicles into the driveway not be obstructed in any way.

The parking garage entrance is shown on the site plan to be only 15 feet from Parish Avenue. With this design, the garage entrance/exit will be blocked whenever a single southbound (outbound) vehicle on the driveway is stopped while waiting to turn onto Parish Avenue. In order to not block the garage entrance/exit or at least reduce the frequency of blockage, there would need to be a minimum of 50 feet of storage to accommodate outbound vehicles queued from Parish Avenue back onto the main street on site.

The location of the garage entrance/exit is problematic also because of its potential to create northbound vehicle queues from the garage entrance backing onto Parish Avenue. Vehicles turning left into the garage would need to wait for the garage entrance to become clear if it is blocked by vehicles in the southbound queue as described above. Any vehicles waiting behind that car will back up behind it and possibly back out onto Parish Avenue. As noted above, it is this obstruction that



could cause queues on eastbound Parish Avenue to back up to Fremont Boulevard. The blockage on the east leg of Parish Avenue and Fremont Boulevard could, in turn, cause backups on northbound and/or southbound Fremont Boulevard.



With the recommended traffic signal at Fremont Boulevard and Parish Avenue, westbound left turns from Parish Avenue to southbound Fremont Boulevard would have a dedicated left-turn phase and would no longer have to wait for gaps in northbound and southbound traffic on Fremont Boulevard in order to turn left. As a result, with the signal at Fremont Boulevard and Parish Avenue, westbound queues on Parish Avenue would clear faster and thereby reduce the frequency and duration of the blockage of the South Site Driveway.



The site plan shows perpendicular parking spaces directly adjacent to the garage entrance, extending north along the retail/apartment building frontage on the main street on site. For the same reasons described above, there should be no parking spaces located within 50 feet of Parish Avenue. Any such parking spaces would be blocked by southbound (outbound) queues extending back from Parish Avenue, preventing vehicles from backing out of the spaces. In addition, parking maneuvers effectively take the entire drive aisle, and thus, would block inbound vehicles from entering the site (and could cause spill back to Parish Avenue).



The location of the garage entrance/exit would have a significant effect on traffic on the South Site Driveway, on Parish Avenue and potentially on Fremont Boulevard. It is also important to facilitate left turns into and out of the South Site Driveway in order to keep traffic flowing. In light of the queuing issues on Parish Avenue and the potential to block the South Site Driveway, it is recommended that a "KEEP CLEAR" marking be placed in the westbound lane of Parish Avenue at the South Site Driveway.



**Recommendation 5:** A 50-foot clear throat is recommended for the South Site Driveway. This will require relocating the parking garage entrance/exit as well as some 90-degree parking. It is also recommended that a "KEEP CLEAR" marking be placed in the westbound lane of Parish Avenue at the South Site Driveway.



Parking is currently prohibited on the north side of Parish Avenue over the entire 160-foot distance between Jason Way and Fremont Boulevard, and should remain so under project conditions to allow for adequate sight distance. In addition, landscaping near the driveway would need to be maintained such that adequate sight distance is provided.

### ***On-Site Circulation***



The on-site circulation system includes several streets on site that connect to the aforementioned driveways. The main street on site parallels Fremont Boulevard, extending from the South Site Driveway northward nearly the entire length of the site. Several side streets on site connect the main street to Jason Way and Jason Place. One other side street, located in the northeast corner near to, and paralleling, Peralta Boulevard, connects only to Jason Way. The Main Site Driveway connects the main street to Fremont Boulevard.



The apartments and retail are accessed from the main street on site, both via the parking garage and the surface parking along the building frontage on site. The townhomes are accessed from the side streets, all but one of which connects the main street on site to Jason Place/Jason Way. The main street therefore serves as an on-site collector for the residential side streets and provides access to the retail parking, the residential guest parking, and the parking garage.



The Main Site Driveway is shown to be 30 feet wide, the main street on-site is shown to be 26 feet wide and the side streets are shown to be 24 to 26 feet wide. The main street dead-ends at the north end of the site near Peralta Boulevard. The dead-end section is approximately 135 feet long. A turnaround should be provided at this dead-end to allow vehicles to turn around if they reach the end and can't find a space.



**Recommendation 6:** A turnaround is recommended at the dead-end at the north end of the main street. This could be accomplished by marking as a no-parking area the end stall on the west side of the aisle.

The side street nearest to Peralta Boulevard accesses Jason Way only. The other end of the side street connects to Peralta Boulevard, but the driveway is gated and access is limited to trash and recycling trucks, which effectively makes the street a dead-end street. None of the other streets have dead-ends.

The curvatures of all the streets on site, and the radii of the corners and curbs, are adequate for trucks, garbage collection, and emergency vehicles, as established by AutoTurn (as shown on the site plan on Figure 2). The on-site circulation provides adequate connectivity between the residences on site and the site access points. The access and on-site circulation should adequately accommodate emergency vehicles because Jason Way and Jason Place provide continuous, unimpeded connectivity between Parish Avenue and Peralta Boulevard and it connects to all of the side streets. The main street on-site also provides satisfactory emergency access, as it connects to Fremont Boulevard and all but one of the side streets. The two dead-ends should not pose a problem for emergency vehicles since the dead-end on the main street is only 135 feet long, and the dead-end on the side street has a gate that could be opened in an emergency.

For those townhomes that border the main street, there is a landscaped area between the townhomes and the main street that varies in width from 6 feet to 7.5 feet. For vehicles turning from the side streets onto the main street on-site, the sight distance looking left would be approximately 110 feet and about 70 feet looking right. This assumes that vehicles pull up even with the curb line and not into the main street travel way. Vehicles from the side streets could pull into the main street travel way one or two feet, thereby increasing the sight distance. The volume and speeds of vehicles on site would be low enough that this would likely not cause collision issues.

There is no loading area shown on the site plan. Loading for the retail would likely occur on the main street on-site, fronting the retail. Loading in the aisle would block parking for a brief period. Though this is less than ideal, it is common in urban areas.

Pedestrian access to the site would be provided by sidewalks along the entire perimeter of the site: along Jason Place/Jason Way, Parish Avenue, Fremont Boulevard and Peralta Boulevard. The project would provide a new sidewalk on the west side of Jason Way, extending approximately 350 feet from Peralta Boulevard to just south of the bend in the street, thereby providing a continuous sidewalk from Peralta Boulevard to Parish Avenue. The project will dedicate right-of-way to allow widening of the existing sidewalk on Parish Avenue. The project site plan shows a potential speed table and crosswalks on all three approaches to the intersection of Parish Avenue and Jason Way/Jason Place. These would provide additional safety for pedestrians crossing Parish Avenue to and from the site. As an alternative to a potential speed table, the applicant could consider a speed lump west of Jason Way on Parish Avenue.

On-site pedestrian facilities would include a sidewalk along the back of the retail building between the buildings and the parking on the main street. The project would provide a pedestrian pathway through the center of the townhomes, parallel to Jason Way and Jason Place, connecting Peralta Boulevard to Parish Avenue. This same path would provide all townhomes with direct access to the pool and clubhouse. There would also be an east-west path connecting the townhomes on the northeastern part of the site directly to the retail buildings. Most, but not all, of the townhomes would have access to the main street via paths that parallel Parish Avenue and connect Jason Way and Jason Place to the main street. The site plan shows no crosswalks across the main street extending from those paths, although orthogonal crosswalks are provided across the main street from the pool/clubhouse area to the retail and apartments.



There are no sidewalks along the side streets which provide vehicle and bicycle access to the private townhome garages. The townhome units do have pedestrian access throughout the site from the front of the units, via the paths described above.

The aforementioned paths do not appear intended to serve bicycles. However, because of the low volume and speeds of vehicles on-site, bicycles can share the on-site side streets and main street with cars.

### Parking garage

Some on-site parking will be provided in the basement of the south retail building. The garage will serve residents of the apartments above the retail, as well as accommodate some of the retail parking needs. The garage would be accessible via an L-shaped two-way ramp with inside radius of 12 feet and unspecified width. The basement garage would provide 70 parking spaces, which includes 5 handicap accessible spaces and 6 compact spaces.

The garage circulation would consist of a single dead-end drive aisle with perpendicular parking. Midway down the aisle is shown to be a security gate beyond which a secure parking area would be provided for residents. Inside the gated area are 36 spaces. In the unsecured area before the gate are 34 spaces for use by retail customers. With the two separate areas, there is effectively two dead-end aisles- one for the residents and one for the retail customers.

The dead-end in the secure (residential) parking area has no turnaround. The dead-end in the resident parking area would not necessarily need a turnaround since residents would presumably have assigned parking and therefore would have a parking space available to park in. The City municipal code states that "dead-end aisles shall be avoided to the greatest extent possible." Given the dimensions of the garage, a dead-end aisle appears unavoidable. Because the garage plan provides only a conceptual level of detail, it cannot be ascertained whether the end stall meets city code. The code states that "the required stall widths shall be increased by one-half foot for any stall located immediately adjacent to a wall." This will be reviewed when a more detailed site plan is available.

The dead-end in the unsecure (retail) parking area provides a turnaround space at the very end of the aisle, next to the gate. The turnaround consists of a parking stall striped for no parking that can be used to pull into and back out to facilitate maneuvering. As described above, the end stalls, including the turnaround area, need to provide the extra width specified in the city code. Were a changeable message sign to be provided at the entrance to the garage, drivers could be advised if the garage is full before entering. During those times when the retail portion of the garage is full, for those drivers heeding the warning, a turnaround maneuver inside the garage would not be needed. The sign would need to be located at the entrance but oriented such that drivers could read it before committing to entry into the garage. Installation of a changeable message sign at the entrance to the parking garage should be considered in order to minimize the disruption to parking activity caused by vehicles that are unable to find parking in the garage.

The garage ramp design is shown conceptually, and thus a detailed review is not possible. Prior to final design, the grade of the slope, ramp vertical clearance, ramp width and radius of the turn should be reviewed by City staff. The ramp width and radius will need to be designed such that two cars can pass simultaneously. A turn template should be shown on the plan to demonstrate this.

The garage entrance/exit and surrounding layout will need to be designed such that adequate sight distance is provided for outbound vehicles. As currently designed, vehicles exiting the garage have extremely limited sight distance and likely would not be able to see approaching traffic. In addition, as described previously, the proximity of the garage entrance to Parish Avenue, as shown on the site plan, does not allow sufficient space for vehicle queues at the driveway on Parish Avenue, or enough clear throat for easy ingress.



**Recommendation 7:** The garage ramp design and entrance will likely require modification. Prior to final design, the garage ramp should be reviewed by City staff to ensure that it meets basic requirements for safety and functionality, including sight distance, location, and the ability of two vehicles to pass each other simultaneously.



Landscaping along all drive aisles needs to be maintained such that it doesn't create an obstruction to the driver's line of sight and thereby ensuring that adequate sight distance is provided.

### Bicycle Parking



The city code requires that the project provide the following parking for bicycles: 7 short-term and 4 long-term for retail; 12 short-term and no long-term for townhomes (long-term parking would be available in the units); 11 short-term and 34 long-term for the apartments. The project site plan shows bicycle parking would be provided as follows: 16 short-term and 38 long-term in the southwest corner of the garage under the retail and apartments; 70 short-term in racks along the sidewalk on Fremont Boulevard fronting the site. The parking provided as shown on the site plan would meet the city code. All of the bicycle parking is located near the uses for which it is required, with the exception of the short-term bicycle parking for the townhomes, which is located as much as 500 feet from some townhomes and, on average, about 300 feet.



### Neighborhood Traffic Issues



As described previously, Parish Avenue is a two-lane local street extending from Peralta Boulevard in the north to Fremont Boulevard in the south. It provides direct access to the project site via Jason Way (Jason Place) and would also provide access via the proposed South Site Driveway. Parish Avenue serves the site and the church/school across the street from Jason Way, but principally it serves the residential neighborhood to the northeast. From field observations it appears that most peak-hour traffic currently using Parish Avenue are either going to the school or cutting through the neighborhood to bypass the intersection at Fremont Boulevard and Peralta Boulevard.



Residential streets are sensitive to traffic increases, and east of Jason Place, Parish Avenue provides direct access to single family homes. The existing traffic volumes on Parish Avenue, east of Jason Way, are on the order of 400 vehicles in the AM peak hour and 260 in the PM peak hour in both directions combined. The project would add to Parish Avenue east of Jason Way approximately 13 net new trips in the AM peak hour and add about 5 net new trips in the PM peak hour. This corresponds to the project adding to Parish Avenue one vehicle approximately every 5 minutes in the AM peak hour and one vehicle every 12 minutes in the PM peak hour.



Because Parish Avenue is used as a cut-through street, installation of a traffic signal at Fremont Boulevard and Parish Avenue may potentially attract more ambient traffic to Parish Avenue. This is because a traffic signal would facilitate left turns from westbound Parish Avenue to southbound Fremont Boulevard. The increase in volume of traffic that could result was estimated from the existing number of left turns being made from westbound Peralta Boulevard to southbound Fremont Boulevard. Accordingly, it is estimated that the traffic volumes on westbound Parish Avenue, as a result of the traffic signal, could increase between zero and 50 vehicles in each of the AM and PM peak hours.



The speed limit on Parish Avenue is 25 miles per hour, with an advisory speed of 15 miles per hour in both directions approaching the bend in the street. The City of Fremont does not have significance criteria to determine when a project would materially contribute to an existing speeding or cut-through traffic problem. The City of Fremont has a citizen-initiated traffic calming policy that determines under what conditions speed control measures should be used. Education and enforcement are typically considered the first steps when evaluating traffic calming devices. The city's traffic calming policy





considers a wide range of applicable criteria, such as the posted speed limit, street design, percent grade, the 85<sup>th</sup>-percentile speed, presence of single family homes, street segment length, average daily traffic (ADT), and support by residents (both as a neighborhood and those directly adjacent to a planned traffic calming device). Traffic calming devices are typically installed only after a comprehensive study and neighborhood outreach process.



There are currently no crosswalks across any of the approaches of the intersection of Parish Avenue and Jason Way. The project site plan shows a potential speed table and crosswalks on all three approaches to the intersection of Jason Way and Parish Avenue. As an alternative to a potential speed table, the applicant could consider a speed lump west of Jason Way on Parish Avenue. There are also proposed plans (through a different development project) to install one or more other traffic calming devices on Parish Avenue east of Jason Way. The combination of these devices would likely reduce speeds on Parish Avenue and potentially discourage cut-through traffic.





## 8. Project Variant Conditions

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The project variant, located on the project site, would include 72 townhomes, 90 apartments, and 24,450 square feet of retail space, including a 1,550 square-foot café. This compares to the project, which proposes 72 townhomes, 64 apartments, and 23,450 square feet of retail space, including a 1,550 square-foot café, and a 2,610 square-foot daycare center in the former fire station. The project variant site plan is shown on Figure 15.



### Project Traffic Estimates

The trip generation and assignment for the project variant were determined as described previously for the project. The trip generation estimates for both the proposed project variant and the existing site uses were adjusted using adjustment factors for internal trip reduction, retail pass-by reduction, and transit trip reduction. The project variant trip generation, and these trip reductions, are shown in Table 10.



The table shows that, after all of the adjustments and site credits, the project variant is estimated to generate 109 net new trips in the AM peak hour and 0 net new trips in the PM peak hour. Relative to the project, the project variant would generate 16 fewer AM peak hour trips and 12 fewer PM peak-hour trips. This is attributed to the fact that, although the project variant includes more residential, the project variant does not have a daycare center, as does the project.



The project trip distribution for the project variant was the same as that used for the project, with two different distributions- one for residential and one for retail. Figure 16 shows the net trip assignment for the project variant.



As shown on Figure 16, the proposed project variant would cause a negligible increase in PM peak-hour traffic. At signalized intersections, for a given movement, the proposed project is projected to contribute no more than one new PM peak hour trip every 15 minutes, which is insufficient to create an impact based on City of Fremont level of service impact thresholds. It is for this reason that the traffic analysis did not include an evaluation of offsite PM peak-hour conditions.



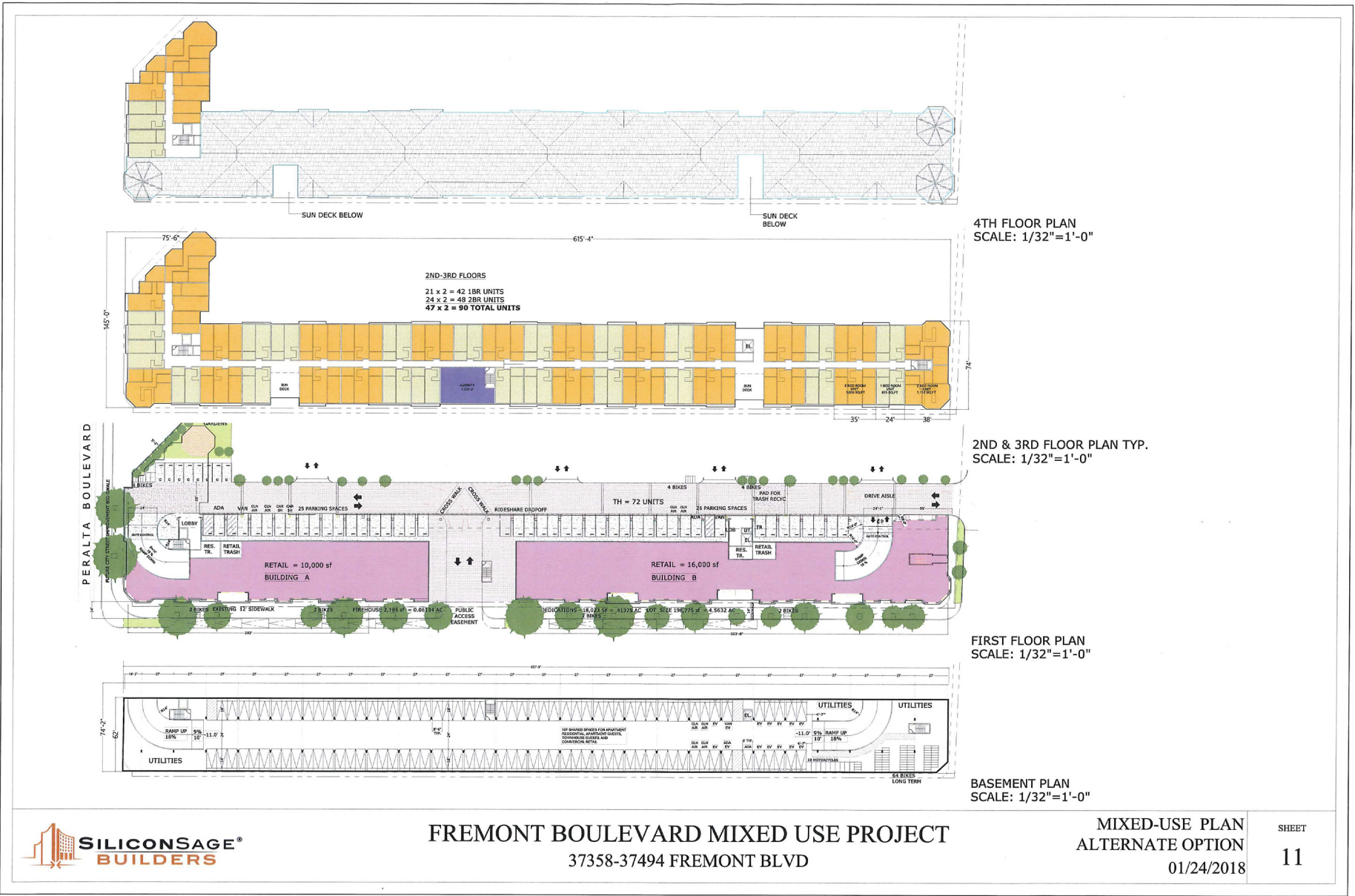


Figure 15  
Project Variant Plan



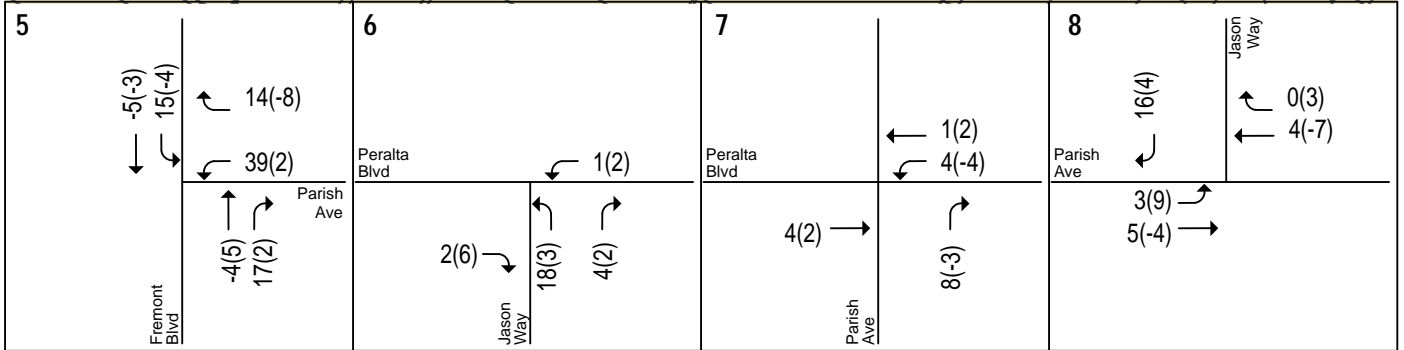
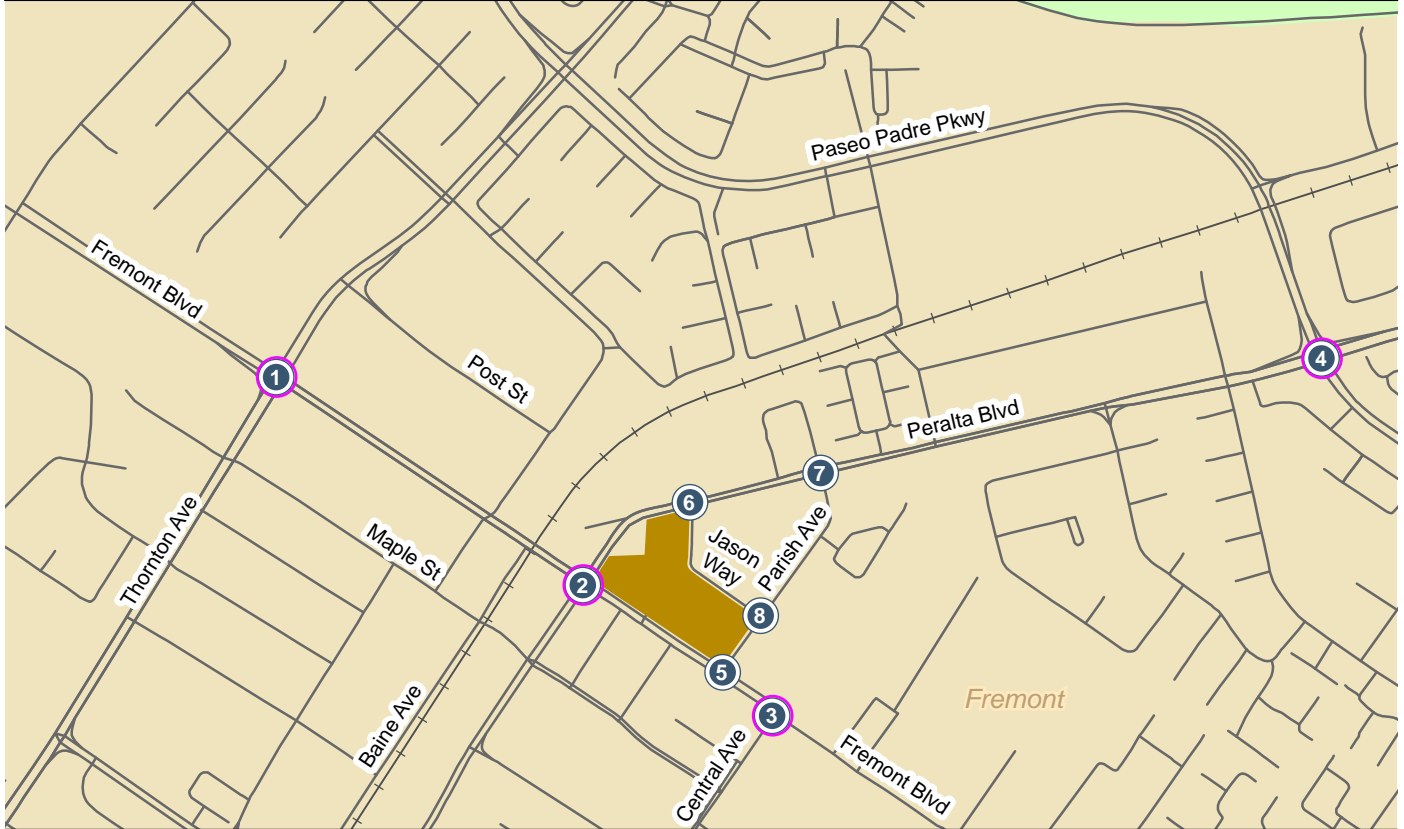
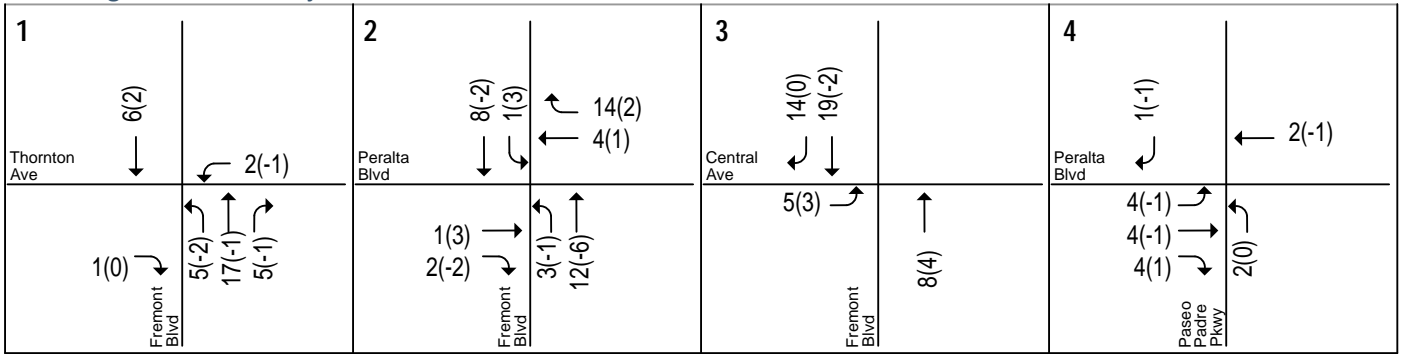
**Table 10  
Project Variant Trip Generation**

Land Use	Size	Daily Rate	Daily Trips	AM Peak Hour			PM Peak Hour				
				Rate	Total Trips	In	Out	Rate	Total Trips	In	Out
<b>Proposed Project</b>											
Townhomes <sup>1</sup>	72 units	5.81	418	0.44	32	5	27	0.52	37	25	12
Apartments <sup>2</sup>	90 units	6.65	599	0.51	46	9	37	0.62	56	36	20
Total			1,017		78	14	64		93	61	32
Housing and Retail/ Café Shop Internal Reduction <sup>3</sup>			(160)		(13)	(4)	(9)		(16)	(9)	(7)
<i>Subtotal</i>			857		65	10	55		77	52	25
Shopping Center <sup>4</sup>	24,450 sq.ft.	42.70	1,044	0.96	24	15	9	3.71	91	44	47
Retail Pass-By Reduction (Daily, AM, PM)(17%,0%,34%) <sup>5</sup>			(177)						(31)	(15)	(16)
Café <sup>6</sup>	1,550 sq.ft.	745.65	1,156	108.38	168	86	82	40.75	63	32	31
Retail Pass-By Reduction (Daily, AM, PM)(50%,49%,50%) <sup>7</sup>			(578)		(82)	(42)	(40)		(32)	(16)	(16)
Housing and Retail/ Café Shop Internal Reduction <sup>3</sup>			(160)		(13)	(9)	(4)		(16)	(7)	(9)
<i>Subtotal</i>			1,285		97	50	47		75	38	37
Transit Trip Reduction <sup>9</sup>			(49)		(8)	(2)	(6)		(9)	(6)	(3)
<b>Total Primary Project Trips</b>			<b>2,093</b>		<b>154</b>	<b>58</b>	<b>96</b>		<b>143</b>	<b>84</b>	<b>59</b>
<b>Trip generation for Existing Use based on ITE Rates</b>											
Shopping Center <sup>4</sup>	43,468 sq.ft.	42.70	1,856	0.96	42	26	16	3.71	161	77	84
Restaurant <sup>8</sup>	7,843 sq.ft.	89.95	705	0.81	6	4	2	7.49	59	39	20
Total			2,561		48	30	18		220	116	104
Retail Pass-By Reduction (Daily, AM, PM)(17%,0%,34%) <sup>5</sup>			(435)						(74)	(39)	(35)
<i>Subtotal</i>			2,126		48	30	18		146	77	69
Mini Warehouse <sup>10</sup>	970 sq.ft.	2.50	2	0.14	1	1	0	0.26	1	1	0
Single family house <sup>11</sup>	1 units	9.52	10	0.75	1	0	1	1.00	1	1	0
Transit Trip Reduction <sup>12</sup>			(25)		(5)	(3)	(2)		(5)	(2)	(3)
<b>Total Primary Existing Trips</b>			<b>2,113</b>		<b>45</b>	<b>28</b>	<b>17</b>		<b>143</b>	<b>77</b>	<b>66</b>
<b>Net New Project Trips</b>			<b>(20)</b>		<b>109</b>	<b>30</b>	<b>79</b>		<b>0</b>	<b>7</b>	<b>(7)</b>

<sup>1</sup> Rates based on ITE Trip Generation, 9th Edition: average rates for Townhomes (ITE 230).  
<sup>2</sup> Rates based on ITE Trip Generation, 9th Edition: average rates for Apartments (ITE 220).  
<sup>3</sup> Per ITE Trip Generation Handbook (Second Edition). Daily trips were estimated by averaging AM & PM peak hour percentages.  
<sup>4</sup> Rates based on ITE Trip Generation, 9th Edition: average rates for Shopping Center (ITE 820).  
<sup>5</sup> PM peak hour passer-by trips are based on ITE Trip Generation Handbook (Second Edition).  
<sup>6</sup> Rates based on ITE Trip Generation, 9th Edition: average rates for Coffee / Donut Shop (ITE 936). Daily trips were estimated by assuming average of AM & PM peak hour trips rates to be 10% of daily trips.  
<sup>7</sup> AM & PM peak hour passer-by trips are based on ITE Trip Generation Handbook (Second Edition) for Fast-Food Restaurant (ITE 934).  
<sup>8</sup> Rates based on ITE Trip Generation, 9th Edition: average rates for Quality Restaurant (ITE 931).  
<sup>9</sup> Based on ITE Trip Generation Handbook Trip Reduction Table B.2 (Development around bus transit corridors). PM transit reduction trips for shopping center was applied to employees only.  
<sup>10</sup> Rates based on ITE Trip Generation, 9th Edition: average rates for Mini-warehouse (ITE 151).  
<sup>11</sup> Rates based on ITE Trip Generation, 9th Edition: average rates for Single family detached house (ITE 210).  
<sup>12</sup> Transit trip reduction to Shopping Center, Restaurants and Mini Warehouse were applied based on ITE Trip Generation Handbook Trip Reduction Table B.2 (Development around bus transit corridors). PM transit reduction trips were applied to employees only.



Silicon Sage Mixed-Use Project



**LEGEND**

- = Site Location
- = Unsignalized Study Intersection
- = Signalized Study Intersection
- XX(X) = AM(PM) Peak-Hour Trips

**Figure 16**  
Net Trip Assignment for Project Variant

## Project Variant Conditions Levels of Service

For the project variant, existing plus project, background plus project, and cumulative plus project conditions were evaluated to determine to what extent, if any, the impacts of the project variant would differ from those previously reported for the project. In order to do so, the net project trips for the proposed project variant were added to each of the existing, background and cumulative (no project) volumes established previously, and AM peak-hour levels of service were calculated using TRAFFIX. The AM peak-hour level of service results for the signalized intersections under all project scenarios are summarized in Table 11. The results show that the project variant would cause no material changes to delays or level of service at the signalized intersections. All intersections previously reported as operating at acceptable conditions, or conversely, under unacceptable conditions, and the scenarios and time periods during which they occurred, would continue to operate the same. Thus, the project variant would similarly have no significant intersection level of service impacts. The level of service calculation sheets for all project variant conditions are included in Appendix D.

## Unsignalized Intersections

The results of the unsignalized intersection level of service analysis under all project variant study scenarios are summarized in Table 12. The project variant would result in no material changes to delays or level of service at the unsignalized intersections. All intersections previously reported as operating at acceptable conditions, or conversely, under unacceptable conditions, and the scenarios and time periods during which they occurred, would continue to operate the same. The level of service calculation sheets for all project variant conditions are included in Appendix D.

As reported under conditions with the project, with the project variant, a peak-hour volume signal warrant analysis showed that the intersection of Fremont Boulevard & Parish Avenue meets the peak-hour signal warrant under existing plus project, background plus project, and cumulative plus project conditions during the AM peak hour. The signal warrant analysis sheets for all project variant conditions are included in Appendix D.

## Railroad Impacts

The project variant would result in no material changes to traffic volumes or traffic patterns on Fremont Boulevard at the railroad crossing. By time period and by direction of travel, some traffic volumes would increase and some traffic volumes would decrease by one or two vehicles per hour. The findings reported in the previous chapter therefore would apply equally to the project variant.

## Pedestrian, Bicycle, & Transit Facilities

The project variant is expected to cause neither an increase nor decrease in pedestrian or bicycle demand, and would not change the off-site pedestrian or bicycle circulation or infrastructure relative to those changes already described previously for the project.

Relative to the project, the project variant is estimated to create up to two additional transit trips in each of the AM and PM peak hours. The project variant does not propose any system or service changes to the existing transit system relative to those changes already described previously for the project. Based on the Alameda County (CMP) Transportation Impact Analysis Technical Guidelines described in Chapter 7, the project variant would not cause a significant impact to transit operations in the study area. The recommendation for possible improvements (Recommendation 1) to the existing bus stop along the site frontage are applicable to the project variant.

**Table 11**  
**Signalized Intersection Level of Service Summary Project Variant Conditions**

No. Intersection	LOS	Existing						Background						Cumulative					
		No Project			With Project			No Project			With Project			No Project			With Project		
		Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Incr. In Avg Delay	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Incr. In Avg Delay	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Incr. In Avg Delay	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Incr. In Avg Delay	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Incr. In Avg Delay			
1 Fremont Blvd & Thornton Ave	E	37.9	D	0.1	38.0	D	0.1	38.1	D	38.2	D	0.1	28.6	C	29.2	C	0.6		
2 Fremont Blvd & Peralta Blvd	E	27.0	C	0.3	27.3	C	0.3	27.3	C	27.5	C	0.2	32.7	C	32.9	C	0.2		
3 Fremont Blvd & Central Ave	E	34.8	C	0.0	34.8	C	0.0	35.1	D	35.5	D	0.4	71.3	E	75.3	E	4.0		
4 Paseo Padre Pkwy & Peralta Bl	E	46.4	D	0.2	46.6	D	0.2	46.8	D	47.3	D	0.5	81.9	F	83.0	F	1.1		

<sup>1</sup> Signalized intersection level of service is based on the Highway Capacity Manual (HCM) methodology, using average control delay for the entire intersection.



**Table 12**  
**Unsignalized Intersection Level of Service Summary Project Variant Conditions**

No.	Intersection	Existing				Background				Buildout			
		No Project		With Project		No Project		With Project		No Project		With Project	
		Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>	Avg. Delay <sup>1</sup>	LOS <sup>1</sup>
5	Fremont Blvd & Parish Ave	4.2/54.9	A/F	15.5/156.6	C/F	6.1/77.7	A/F	21.7/sat <sup>2</sup>	C/F	15.7/sat <sup>2</sup>	C/F	45.6/sat <sup>2</sup>	E/F
6	Jason Way & Peralta Blvd	0.1/13.8	A/B	0.5/16.4	A/C	0.1/14.0	A/B	0.5/16.6	A/C	0.1/14.1	A/B	0.3/17.4	A/C
7	Parish Avenue & Peralta BI	4.5/33.0	A/D	4.7/34.6	A/D	4.7/35.4	A/E	5.0/37.3	A/E	2.7/32.2	A/D	2.8/33.1	A/D
8	Jason Way & Parish Ave	0.3/10.3	A/B	0.8/10.2	A/B	0.3/10.4	A/B	0.8/10.2	A/B	0.3/10.5	A/B	0.8/10.3	A/B

Note: all intersections were counted in May 2017.

<sup>1</sup> unsignalized intersections were analyzed based on Highway Capacity Manual (HCM) methodology using TRAFFIX analysis software. All unsignalized study intersections are Side Street Stop Control (SSSC). SSSC intersection levels of service and delays are reported for both the overall average delay / the approach with highest delay.

<sup>2</sup> "sat" designates *oversaturated* conditions. Delay value is not meaningful or reflective of actual conditions.

## Site Access, Circulation and Parking Layout

Site access, on-site circulation, and the parking layout on-site are described below for the project variant site plan. The project variant site plan consists of only that part of the plan that differs from the project site plan- which is the part of the site between Fremont Boulevard and the Main Street on site. The operations at the site driveways and at the intersection of Fremont Boulevard and Parish Way are reported below only to the extent that the layout of the site and the effect on operations differ from what is reported in previous chapters of this report. Where the findings for the project indicated impacts and recommendations, they will be repeated, as applicable. The project variant site plan was shown previously on Figure 15.

### ***Access Operations at Fremont Boulevard and Parish Avenue***

As reported for the project, the intersection of Fremont Boulevard and Parish Avenue would meet the peak-hour signal warrant under all project scenarios during the AM peak hour. Similarly, the level of service and vehicle queuing analysis at the intersection of Fremont Boulevard and Parish Avenue under the project variant conditions showed that, just as with the project, the stop-controlled westbound approach on Parish Avenue would operate at LOS F, with delays in excess of two minutes, under project scenarios during both peak hours. Thus, the recommendation for installation of a traffic signal at the intersection of Fremont Boulevard and Parish Avenue applies to the project variant, as well. The signal warrant and level of service calculation sheets for project variant conditions are included in Appendix D.

### ***Access Operations at Jason Way and Peralta Boulevard***

The project variant, evaluated relative to the project, would result in no material changes to traffic volumes or traffic patterns at the intersection of Jason Way and Peralta Boulevard. The findings for the project, as reported previously, remain applicable to the project variant. These include the finding that a signal is not warranted under any project scenarios. To ensure adequate sight distance from Jason Way, the recommendation described previously for restricting parking on Peralta Boulevard should be followed for the project variant. The signal warrant calculation sheet for project variant conditions is included in Appendix D.

### ***Access Operations at Jason Way and Parish Avenue***

Relative to the project, the project variant would result in no material changes to traffic volumes or traffic patterns at the intersection of Jason Way and Parish Avenue. The findings for the project, as reported previously, remain applicable to the project variant. These include the finding that a signal is not warranted under any project conditions. The signal warrant calculation sheet for project variant conditions is included in Appendix D.

### ***Access Operations at Fremont Boulevard and Main Site Driveway***

The project variant, when evaluated in relation to the project, would result in no material changes to traffic volumes or traffic patterns at the intersection of Fremont Boulevard and the Main Site Driveway. Relative to the project, the project variant will, in some directions and time periods add one or two peak-hour trips, and in other cases subtract one or two peak-hour trips, the net effect being negligible. The findings for the project, as reported previously, remain applicable to the project variant. These include the finding that a signal is not warranted under any project conditions. To ensure that the existing and future vehicle backups on Fremont Boulevard would not be worsened by the project, or project variant, the recommendation described previously to restrict access to right-turn in and out only at the Main Site Driveway should be followed for the project variant. The signal warrant calculation sheet for project variant conditions is included in Appendix D.

## Access Operations at South Site Driveway and Parish Avenue

Under the project variant site design, the location of the South Site Driveway would be unchanged—located 75 feet east of Fremont Boulevard. Relative to the project, the project variant will, in some directions and time periods, add one or two peak-hour trips, and in other cases subtract one or two peak-hour trips, the net effect being negligible. Accordingly, the recommendation for installation of a signal at the intersection of Fremont Boulevard and Parish Avenue, per Recommendation 2, applies to the project variant, as well. The signal warrant calculation sheet for project variant conditions is included in Appendix D.

The parking garage shown on the site plan for the project variant has two entrances. The entrance/exit at the south end, on the south driveway, would be located approximately 50 feet from Parish Avenue. With this design, the southbound driveway approach at the intersection could accommodate two queued vehicles without obstructing the garage entrance/exit. The average vehicle arrival rate on the southbound approach of Parish Avenue would be less than one vehicle per minute during the peak hours. The rate would be higher during brief surges in demand. There could also be brief periods when surges in demand on westbound Parish Avenue temporarily back up to the south driveway, affecting the ability of southbound vehicles on the South Site Driveway to clear. However, these periods would be the exception, and the installation of the traffic signal at Fremont Boulevard and Parish Avenue, per Recommendation 2 above, would reduce the frequency and duration of the blockage of the South Site Driveway.

As the vehicle queuing issues on Parish Avenue would remain, there would remain the need for Recommendation 5: installation of the “KEEP CLEAR” marking in the westbound lane of Parish Avenue at the South Site Driveway.

With regard to the location of the south garage entrance/exit, consideration must also be made for the northbound driveway access and the potential for queues to develop. The location of the garage entrance/exit provides 50 feet of storage for (two) queued vehicles in the northbound direction on the south driveway. With 50 feet of storage, a queue exceeding two vehicles would spill back onto Parish Avenue. In the worst case, this obstruction could cause queues on eastbound Parish Avenue to potentially back up to Fremont Boulevard.

The inbound (northbound) peak-hour volumes on the south driveway are less than 60 vehicles. Specifically, it's the northbound left-turn into the south garage entrance that would cause the northbound vehicle backup onto Parish Avenue. The northbound left-turn demand into the garage is estimated to be 30 to 35 vehicles in each of the AM and PM peak hours. This translates into about one vehicle every two minutes, which is relatively infrequent.

The garage entrance is controlled by a gate that will be activated upon arrival. The service rate of the gate (vehicles served per hour) will depend on the type of access control used, e.g., Automatic Vehicle Identification (AVI), card reader, ticket dispenser, etc. Use of the garage by non-residents will require that a vehicle storage reservoir be provided inbound between the main street on site and the gate. Based on the low volume of inbound vehicles, storage for one vehicle should be adequate. The reservoir length should be approximately 25 feet, depending on the space requirements for operation of the gate. The site plan does not show this dimension, but it scales to approximately 15 feet. In order to minimize the occurrence of vehicles in the subject reservoir spilling into the main drive aisle, it is recommended that the gate control service rate be at least 300 vehicles per hour.

**Recommendation 8:** The gate control at the south garage entrance should be designed using a control system that will provide access to both residents and non-residents, at a service rate of at least 300 vehicles per hour, and should provide a vehicle storage reservoir for at least one vehicle inbound between the main street on site and the gate. Prior to final design, the gate access and control system should be reviewed by City staff to ensure that it meets basic requirements for safety and functionality.





With implementation of this recommendation, the 50-foot setback of the south garage entrance from Parish Avenue should be adequate. As previously mentioned, the current parking prohibition on the north side of Parish Avenue over the 160-foot section between Jason Way and Fremont Boulevard should be maintained, as do all other previous recommendations regarding sight distance at this location.

### ***On-Site Circulation***



East of the main street on site, the part that includes the townhomes, the project variant plan is the same as the project site plan. A discussion of that part of the site plan is included in Chapter 7 and is not repeated here.



The Main Site Driveway connects the main street on site to Fremont Boulevard. The apartments and retail are accessed from the main street on site, both via the parking garage and the surface parking along the building frontage on site. The townhomes are accessed from the side streets. The main street therefore serves as an on-site collector for the residential side streets and provides access to the retail parking, the residential guest parking, and the parking garage.



The Main Site Driveway is shown to be 30 feet wide and the main street on-site is shown to be 26 feet wide, which is unchanged from the original site plan. There are no indications that the project variant modifications to the site would adversely affect access or on-site circulation for trucks, garbage collection, or emergency vehicles.

Pedestrian circulation at grade on the project variant site plan appears unchanged from the project site plan.

### ***Parking garage***



As in the previous study, the below-grade garage will serve residents of the apartments above the commercial-retail, as well as accommodate some of the commercial-retail parking needs. The garage would provide 107 shared parking spaces for apartment residents, apartment guests, townhome guests, and commercial-retail customers and employees, which includes handicap accessible spaces and compact spaces.



Under the project variant site design, the parking garage has been extended (below-grade) the entire length of the block, from Parish Avenue to Peralta Boulevard. It is shown having two entrances/exits, one at each of the north and south ends. Both entrances/exits are shown to have gates. The south garage entrance/exit is located 50 feet north of Parish Avenue, as described previously in the discussion of south site driveway operations.



The north garage entrance/exit is located at the very north end of the main street on site, at what was previously (under the project site plan dated July 25, 2017) a dead-end aisle. With the project variant site plan showing a north garage entrance/exit located at the end of the main street on site, the entire on site circulation system effectively forms a continuous loop for vehicles, with no vehicular conflicts at the north garage entrance/exit.



The vehicle queuing conditions that were at issue at the south garage entrance/exit would not be an issue at the north garage entrance/exit. Because there would be no vehicle conflicts for inbound or outbound traffic and the travel way itself would serve as the vehicle storage, there would be no need to provide a specific storage reservoir at the north garage entrance/exit. The north garage entrance/exit would need an access control system- the same one used at the south entrance.





Beyond the gate at each of the north and south entrances, the garage would be accessible via a curved, L-shaped two-way ramp. The adequacy of the ramp design, as shown, cannot be determined based on the information provided, as the design is still conceptual. In addition to vertical clearance and grade/slope, of particular importance is that the ramp width and radius be designed to permit two cars to pass simultaneously. A turn template should be shown on the plan to demonstrate this. As stated for the single ramp of the project site plan, for both ramps of the project variant site plan, per Recommendation 7, the garage ramps should be reviewed by City staff prior to final design to ensure that they meet standard design specifications and, in particular, to confirm that ramp widths and radii are designed to permit two cars to pass simultaneously.



The garage circulation would consist of one single 520-foot straight drive aisle connecting the two ramps, with perpendicular parking along both sides. A straight aisle of this length could encourage unsafe speeds in the garage. It is recommended that one or more speed humps be installed to reduce speeds in the parking aisle.



**Recommendation 9:** It is recommended that one or more speed humps be installed in the drive aisle of the parking garage in order to reduce speeds in the parking aisle. Prior to final design, the speed hump design should be reviewed by City staff to ensure that it meets basic requirements for safety and functionality.



Pedestrian circulation below grade in the garage is facilitated by three stairwells and an elevator. There is one stairwell at each of the north and south ends of the garage, and one in the middle that lets out at-grade at a location on the south side of the Main Site driveway on Fremont Boulevard. The north stairs and the elevator let out onto the east side of the building adjacent to the main street on site, and the south stairwell appears to be internal to the building and provides no outside access. As there are no pedestrian pathways in the garage, pedestrians will access the stairs or elevator via the drive aisle. The maximum walking distance down the drive aisle, from any parking space to any stairwell or elevator, would be 150 to 200 feet. The volume of vehicles is expected to be low. With the speed humps recommended in Recommendation 10, vehicle speeds should be low.



The garage entrance/exit and surrounding layout will need to be designed such that adequate sight distance is provided for outbound vehicles. At the north garage entrance/exit, it appears that sight distance would be adequate. At the south garage entrance/exit, the issue of sight distance for outbound vehicles needs to be addressed within the context of the previous discussion regarding access control and vehicle storage requirements for inbound vehicles.



**Recommendation 10:** Prior to final design, sight distance at the south garage entrance/exit should be reviewed by City staff to ensure that it meets basic requirements for safety.

### ***Bicycle Parking***



The change in project description under the project variant changed the bicycle parking requirements on site, and the redesign of the site plan under the project variant has revised the proposed supply accordingly, to meet the code, both in terms of short-term and long-term parking requirements.

## **Neighborhood Traffic Issues**



The project variant, when evaluated in relation to the project, would result in no material changes to traffic volumes or traffic patterns on Parish Avenue. Relative to the project, the project variant will, in some directions and time periods add one or two peak-hour trips, and in other cases subtract one or two peak-hour trips, the net effect being negligible. The findings for the project, as reported previously, remain applicable to the project variant.



# **Silicon Sage Mixed-Use Project Transportation Impact Analysis**

## **Technical Appendices**

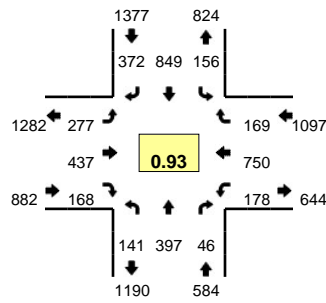
April 9, 2018

# Appendix A

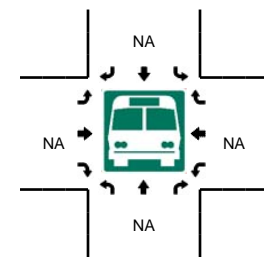
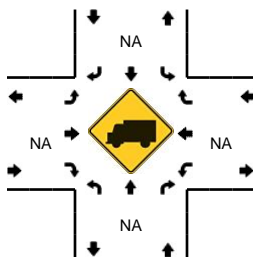
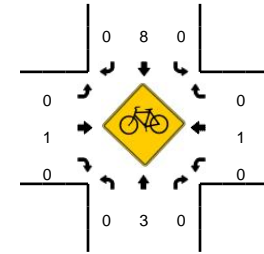
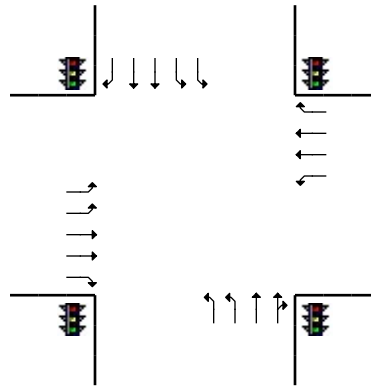
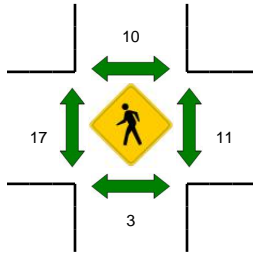
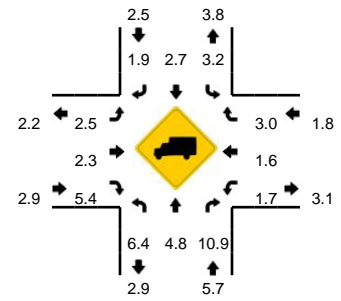
## Traffic Counts

**LOCATION:** Fremont Blvd -- Thornton Ave  
**CITY/STATE:** Fremont, CA

**QC JOB #:** 14413513  
**DATE:** Wed, May 10 2017



**Peak-Hour: 7:40 AM -- 8:40 AM**  
**Peak 15-Min: 7:45 AM -- 8:00 AM**

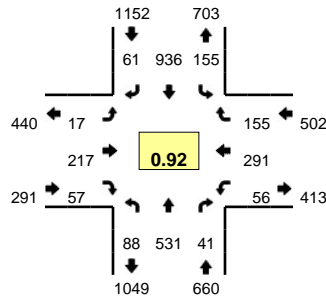


5-Min Count Period Beginning At	Fremont Blvd (Northbound)				Fremont Blvd (Southbound)				Thornton Ave (Eastbound)				Thornton Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	7	23	2	0	1	32	18	0	7	17	12	1	1	42	7	0	170	
7:05 AM	9	14	2	0	3	28	15	0	9	14	9	2	4	42	6	0	157	
7:10 AM	6	15	0	0	5	39	23	0	7	18	5	1	2	31	8	0	160	
7:15 AM	11	14	0	0	8	39	14	0	11	20	7	1	10	48	14	0	197	
7:20 AM	18	18	4	0	12	42	24	0	9	25	14	1	11	52	6	0	236	
7:25 AM	9	20	3	0	6	42	25	0	11	27	13	0	6	59	3	0	224	
7:30 AM	5	15	4	0	12	32	30	0	24	23	13	2	13	51	11	2	237	
7:35 AM	8	35	3	0	7	49	36	0	13	24	12	2	13	60	6	1	269	
7:40 AM	6	27	2	0	5	63	43	0	27	35	12	1	9	63	20	0	313	
7:45 AM	9	38	2	0	17	65	50	0	18	48	13	1	17	76	17	0	371	
7:50 AM	7	34	2	0	10	66	38	0	28	37	12	0	15	64	19	0	332	
7:55 AM	16	38	6	0	13	45	35	0	46	40	10	1	26	66	15	0	357	3023
8:00 AM	7	33	1	0	6	66	24	0	21	67	15	0	18	96	17	0	371	3224
8:05 AM	16	39	7	0	11	90	20	0	17	35	18	1	5	45	9	1	314	3381
8:10 AM	13	28	3	0	21	86	24	0	22	20	16	3	13	63	16	0	328	3549
8:15 AM	13	34	7	0	15	70	22	0	9	28	4	5	13	63	11	1	295	3647
8:20 AM	4	13	4	0	21	74	31	0	13	23	13	2	14	57	22	1	292	3703
8:25 AM	20	44	4	0	10	71	23	0	26	32	15	3	17	57	9	1	332	3811
8:30 AM	16	33	4	0	14	73	27	0	16	51	20	0	13	61	7	0	335	3909
8:35 AM	14	36	4	0	13	80	35	0	15	21	20	2	13	39	7	1	300	3940
8:40 AM	3	29	5	0	20	60	29	0	25	36	12	3	12	49	6	0	289	3916
8:45 AM	16	27	6	0	10	65	33	0	17	30	11	2	3	50	14	0	284	3829
8:50 AM	10	39	2	0	9	69	18	0	15	22	16	2	17	48	7	0	274	3771
8:55 AM	12	34	4	0	11	46	26	0	17	30	12	3	18	52	10	1	276	3690
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	128	440	40	0	160	704	492	0	368	500	140	8	232	824	204	0	4240	
Heavy Trucks	8	12	4		12	12	4		12	8	8		8	0	4		92	
Pedestrians		0				12				28				8			48	
Bicycles	0	2	0		0	0	0		0	0	0		0	1	0		3	
Railroad																		
Stopped Buses																		

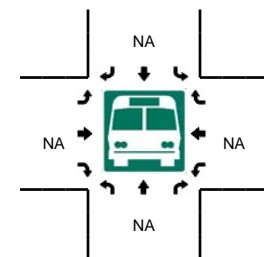
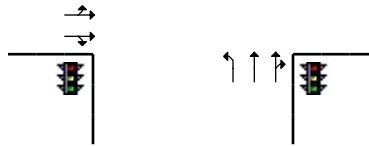
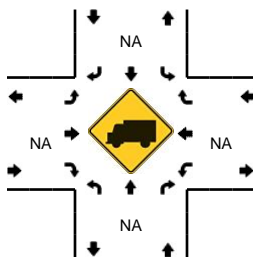
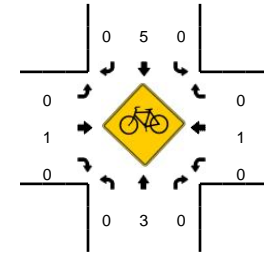
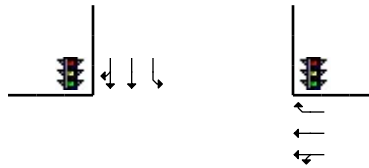
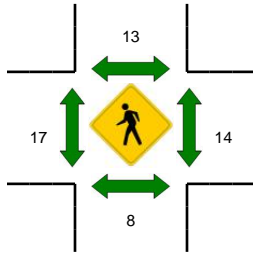
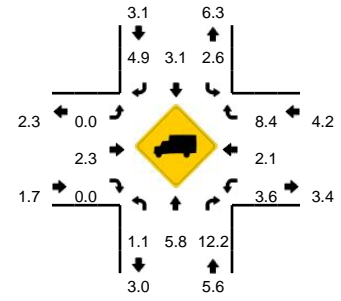
Comments:

**LOCATION:** Fremont Blvd -- Peralta Blvd  
**CITY/STATE:** Fremont, CA

**QC JOB #:** 14413531  
**DATE:** Wed, May 10 2017



**Peak-Hour: 7:45 AM -- 8:45 AM**  
**Peak 15-Min: 8:25 AM -- 8:40 AM**



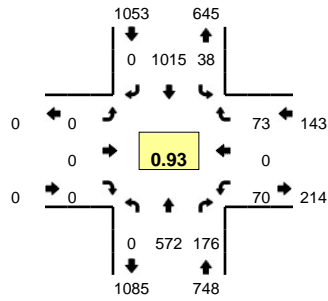
5-Min Count Period Beginning At	Fremont Blvd (Northbound)				Fremont Blvd (Southbound)				Peralta Blvd (Eastbound)				Peralta Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	25	3	0	9	51	1	0	1	4	2	0	0	10	6	0	112	
7:05 AM	2	22	5	0	5	44	2	0	0	8	3	0	4	8	7	0	110	
7:10 AM	2	20	2	0	0	29	3	0	1	6	2	0	1	13	14	0	93	
7:15 AM	2	16	2	0	4	36	4	0	0	8	2	0	5	14	8	0	101	
7:20 AM	2	17	2	0	7	57	3	0	1	3	6	0	0	8	7	0	113	
7:25 AM	2	19	4	0	8	63	6	0	0	5	4	0	6	7	8	0	132	
7:30 AM	4	33	1	0	4	49	1	0	0	5	4	0	6	16	13	0	136	
7:35 AM	8	36	5	0	7	70	5	0	1	10	3	0	6	14	8	0	173	
7:40 AM	1	34	5	0	7	69	2	0	1	15	10	0	6	13	12	0	175	
7:45 AM	10	50	4	0	13	64	6	0	1	19	5	0	6	20	13	0	211	
7:50 AM	9	45	3	0	12	83	9	0	0	15	8	0	4	32	16	0	236	
7:55 AM	6	45	8	0	17	62	6	0	0	22	3	0	2	22	10	0	203	1795
8:00 AM	7	55	3	0	5	62	5	0	2	24	9	0	4	28	10	0	214	1897
8:05 AM	10	40	4	0	14	102	5	0	2	18	4	0	5	26	16	0	246	2033
8:10 AM	9	36	3	0	20	90	5	0	4	14	3	0	5	24	11	0	224	2164
8:15 AM	5	55	5	0	11	81	4	0	1	20	4	0	3	24	9	0	222	2285
8:20 AM	2	32	2	0	2	46	1	0	1	14	2	0	3	23	5	0	133	2305
8:25 AM	9	48	2	0	15	97	3	0	1	14	3	0	7	31	22	0	252	2425
8:30 AM	6	38	2	0	16	91	5	0	3	27	6	0	10	28	14	0	246	2535
8:35 AM	5	31	3	0	24	82	9	0	2	19	2	0	2	14	14	0	207	2569
8:40 AM	10	56	2	0	6	76	3	0	0	11	8	0	5	19	15	0	211	2605
8:45 AM	3	28	2	0	14	61	2	0	4	10	8	0	4	19	6	0	161	2555
8:50 AM	11	51	8	0	13	65	3	0	3	13	12	0	8	30	14	0	231	2550
8:55 AM	7	49	8	0	11	67	9	0	1	14	5	0	5	21	16	0	213	2560
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	80	468	28	0	220	1080	68	0	24	240	44	0	76	292	200	0	2820	
Heavy Trucks	0	40	4		12	28	4		0	4	0		0	8	24		124	
Pedestrians		12				16				8				12			48	
Bicycles	0	1	0		0	2	0		0	0	0		0	1	0		4	
Railroad																		
Stopped Buses																		

Comments:

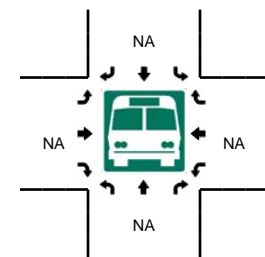
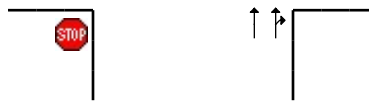
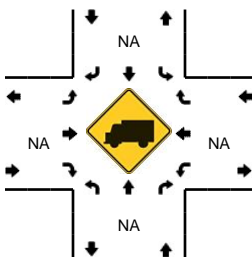
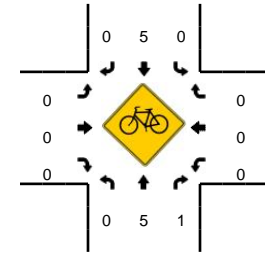
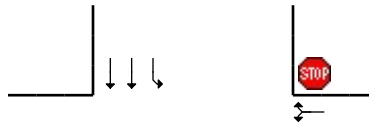
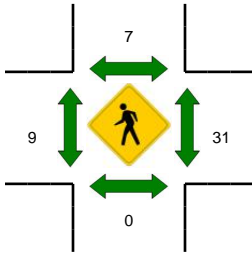
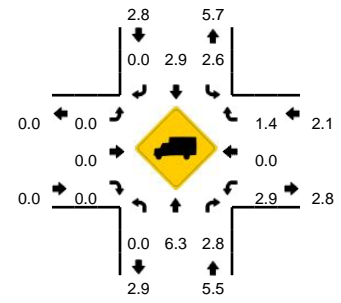


**LOCATION:** Fremont Blvd -- Parish Ave  
**CITY/STATE:** Fremont, CA

**QC JOB #:** 14413533  
**DATE:** Wed, May 10 2017



**Peak-Hour: 7:45 AM -- 8:45 AM**  
**Peak 15-Min: 8:00 AM -- 8:15 AM**

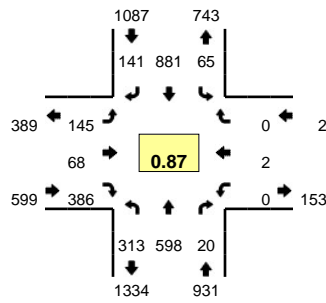


5-Min Count Period Beginning At	Fremont Blvd (Northbound)				Fremont Blvd (Southbound)				Parish Ave (Eastbound)				Parish Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	26	4	0	7	42	0	0	0	0	0	0	2	0	2	0	83	
7:05 AM	0	22	5	0	1	44	0	0	0	0	0	0	6	0	2	0	80	
7:10 AM	0	28	5	0	1	35	0	0	0	0	0	0	3	0	1	0	73	
7:15 AM	0	21	6	0	1	42	0	0	0	0	0	0	4	0	0	0	74	
7:20 AM	0	20	4	0	4	63	0	0	0	0	0	0	5	0	0	0	96	
7:25 AM	0	27	3	0	4	72	0	0	0	0	0	0	3	0	2	0	111	
7:30 AM	0	34	9	0	2	56	0	0	0	0	0	0	10	0	12	0	123	
7:35 AM	0	29	2	0	4	76	0	0	0	0	0	0	10	0	2	0	123	
7:40 AM	0	42	8	0	2	88	0	0	0	0	0	0	6	0	1	0	147	
7:45 AM	0	53	15	0	3	73	0	0	0	0	0	0	8	0	11	0	163	
7:50 AM	0	50	18	0	1	91	0	0	0	0	0	0	9	0	12	0	181	
7:55 AM	0	54	19	0	2	71	0	0	0	0	0	0	7	0	12	0	165	1419
8:00 AM	0	51	26	0	3	73	0	0	0	0	0	0	6	0	8	0	167	1503
8:05 AM	0	35	29	0	5	101	0	0	0	0	0	0	6	0	9	0	185	1608
8:10 AM	0	44	15	0	5	98	0	0	0	0	0	0	4	0	4	0	170	1705
8:15 AM	0	52	17	0	1	87	0	0	0	0	0	0	8	0	1	0	166	1797
8:20 AM	0	44	11	0	3	39	0	0	0	0	0	0	3	0	3	0	103	1804
8:25 AM	0	52	6	0	7	109	0	0	0	0	0	0	4	0	1	0	179	1872
8:30 AM	0	42	4	0	4	99	0	0	0	0	0	0	7	0	6	0	162	1911
8:35 AM	0	38	7	0	4	82	0	0	0	0	0	0	4	0	1	0	136	1924
8:40 AM	0	57	9	0	0	92	0	0	0	0	0	0	4	0	5	0	167	1944
8:45 AM	0	50	6	0	2	69	0	0	0	0	0	0	8	0	4	0	139	1920
8:50 AM	0	59	7	0	1	72	0	0	0	0	0	0	5	0	4	0	148	1887
8:55 AM	0	39	11	0	3	87	0	0	0	0	0	0	7	0	6	0	153	1875
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	520	280	0	52	1088	0	0	0	0	0	0	64	0	84	0	2088	
Heavy Trucks	0	24	4		4	36	0		0	0	0		0	0	0		68	
Pedestrians		0				4				4				32				40
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																		
Stopped Buses																		

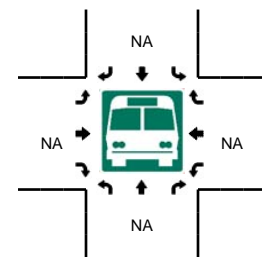
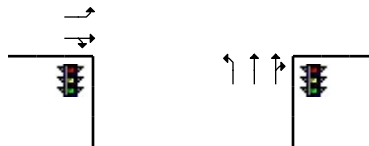
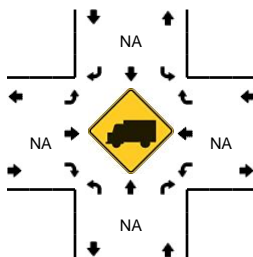
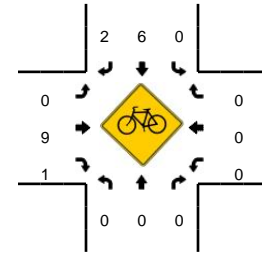
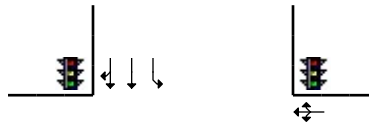
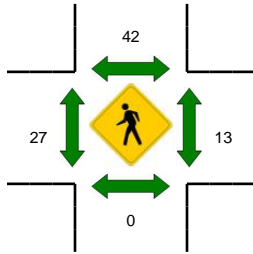
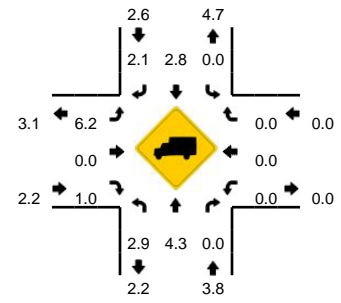
Comments:

**LOCATION:** Fremont Blvd -- Central Ave  
**CITY/STATE:** Fremont, CA

**QC JOB #:** 14413539  
**DATE:** Wed, May 10 2017



**Peak-Hour: 7:40 AM -- 8:40 AM**  
**Peak 15-Min: 7:50 AM -- 8:05 AM**

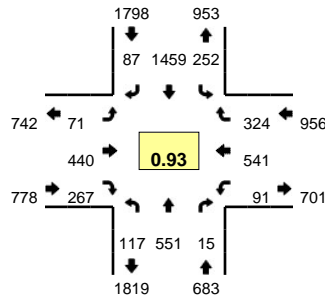


5-Min Count Period Beginning At	Fremont Blvd (Northbound)				Fremont Blvd (Southbound)				Central Ave (Eastbound)				Central Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	12	20	0	3	2	33	9	0	6	1	7	0	0	0	0	0	93	
7:05 AM	7	18	0	0	0	36	14	0	8	0	18	0	0	0	0	0	101	
7:10 AM	8	30	1	3	0	31	8	0	7	1	14	0	0	0	0	0	103	
7:15 AM	7	14	0	4	0	42	5	0	10	0	9	0	0	2	0	0	93	
7:20 AM	12	19	1	5	5	54	8	0	3	1	16	0	0	0	0	0	124	
7:25 AM	10	20	0	3	3	58	10	0	11	3	17	0	1	3	0	0	139	
7:30 AM	11	36	2	2	2	57	8	0	6	2	22	0	6	2	0	0	156	
7:35 AM	14	20	1	5	11	53	16	0	9	3	25	0	0	0	0	0	157	
7:40 AM	25	45	1	1	10	69	9	0	9	5	42	0	0	0	0	0	216	
7:45 AM	27	60	3	0	14	61	10	0	7	13	23	0	0	0	0	0	218	
7:50 AM	17	61	4	9	16	81	15	0	16	15	42	0	0	0	0	0	276	
7:55 AM	21	64	3	12	13	54	14	0	12	23	41	0	0	0	0	0	257	1933
8:00 AM	23	55	2	12	6	60	8	0	10	9	34	0	0	1	0	0	220	2060
8:05 AM	21	50	2	7	0	83	9	0	17	2	37	0	0	0	0	0	228	2187
8:10 AM	26	47	2	11	2	87	13	0	9	0	28	0	0	0	0	0	225	2309
8:15 AM	22	56	1	7	1	96	17	0	12	0	21	0	0	0	0	0	233	2449
8:20 AM	16	37	1	3	0	37	4	0	19	1	32	0	0	0	0	0	150	2475
8:25 AM	15	56	0	1	0	97	15	0	8	0	31	0	0	0	0	0	223	2559
8:30 AM	14	29	1	1	2	89	11	0	10	0	23	0	0	0	0	0	180	2583
8:35 AM	19	38	0	3	1	67	16	0	16	0	32	0	0	1	0	0	193	2619
8:40 AM	17	46	1	0	1	81	14	0	11	0	15	0	0	0	0	0	186	2589
8:45 AM	22	43	2	2	0	61	16	0	12	0	32	0	1	1	0	0	192	2563
8:50 AM	27	58	1	1	0	51	11	0	10	2	29	0	1	0	0	0	191	2478
8:55 AM	14	31	1	2	0	84	21	0	15	0	30	0	3	0	1	0	202	2423
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	244	720	36	132	140	780	148	0	152	188	468	0	0	4	0	0	3012	
Heavy Trucks	4	24	0		0	20	4		4	0	12		0	0	0		68	
Pedestrians		0				64				32				28			124	
Bicycles	0	0	0		0	1	0		0	8	0		0	0	0		9	
Railroad																		
Stopped Buses																		

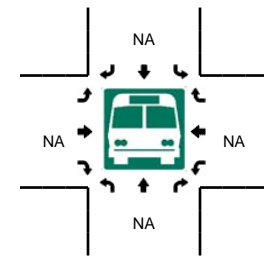
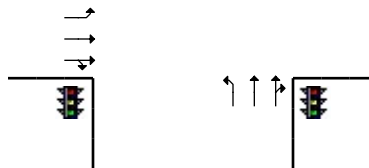
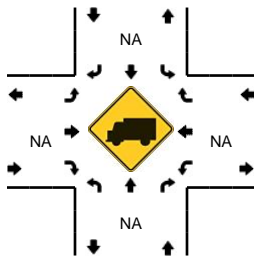
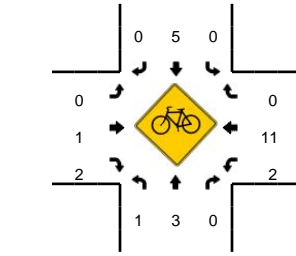
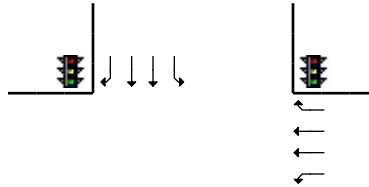
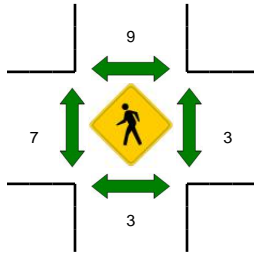
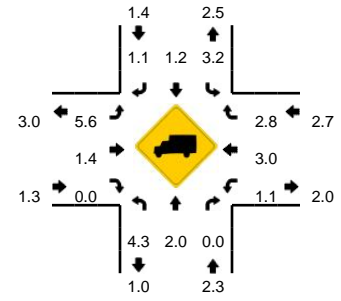
Comments:

**LOCATION:** Paseo Padre Pkwy -- Peralta Blvd  
**CITY/STATE:** Fremont, CA

**QC JOB #:** 14413537  
**DATE:** Wed, May 10 2017



**Peak-Hour: 7:35 AM -- 8:35 AM**  
**Peak 15-Min: 7:50 AM -- 8:05 AM**



5-Min Count Period Beginning At	Paseo Padre Pkwy (Northbound)				Paseo Padre Pkwy (Southbound)				Peralta Blvd (Eastbound)				Peralta Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	4	11	1	0	11	58	2	0	5	9	5	0	1	25	30	0	162	
7:05 AM	3	31	1	0	6	54	6	0	2	11	2	0	2	15	16	0	149	
7:10 AM	1	16	0	0	12	76	7	0	3	17	3	0	9	34	29	0	207	
7:15 AM	3	16	1	0	12	93	4	0	4	12	8	0	3	22	28	0	206	
7:20 AM	1	34	3	0	16	118	6	3	3	8	11	0	1	10	25	0	239	
7:25 AM	2	38	1	0	16	130	5	0	4	8	10	0	1	18	36	0	269	
7:30 AM	6	33	1	0	16	108	3	0	5	23	12	0	13	42	33	0	295	
7:35 AM	3	48	0	0	20	139	6	0	4	11	11	0	7	25	24	0	298	
7:40 AM	4	48	0	0	17	135	11	0	2	21	9	0	11	43	27	0	328	
7:45 AM	7	36	2	0	22	117	9	0	9	38	34	0	10	64	32	0	380	
7:50 AM	15	45	0	1	16	96	14	1	3	35	29	0	14	66	34	0	369	
7:55 AM	11	70	3	0	24	124	9	2	10	35	25	0	4	38	21	0	376	3278
8:00 AM	12	40	1	0	18	118	10	0	18	44	36	0	6	59	23	0	385	3501
8:05 AM	9	26	2	0	12	96	6	1	1	73	39	0	10	51	27	0	353	3705
8:10 AM	16	48	3	0	29	113	9	0	6	54	30	0	7	40	28	0	383	3881
8:15 AM	8	56	0	1	16	128	3	1	9	41	15	0	13	34	32	0	357	4032
8:20 AM	18	44	1	0	19	110	3	0	1	30	12	0	2	64	25	0	329	4122
8:25 AM	1	45	1	1	28	154	4	2	4	32	14	0	4	25	21	0	336	4189
8:30 AM	10	45	2	0	24	129	3	0	4	26	13	0	2	32	30	1	321	4215
8:35 AM	6	29	0	0	25	102	2	1	3	35	16	0	10	33	33	0	295	4212
8:40 AM	8	32	2	0	17	96	5	1	3	17	7	0	4	22	39	0	253	4137
8:45 AM	5	53	0	0	13	173	5	1	6	11	15	0	2	28	27	0	339	4096
8:50 AM	3	30	0	0	19	126	9	0	10	19	15	0	11	44	32	1	319	4046
8:55 AM	6	50	2	0	25	125	4	0	3	24	12	0	10	24	27	0	312	3982
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	152	620	16	4	232	1352	132	12	124	456	360	0	96	652	312	0	4520	
Heavy Trucks	8	20	0		8	12	4		0	8	0		4	12	16		92	
Pedestrians		8				24				16				4			52	
Bicycles	0	0	0		0	2	0		0	0	0		0	7	0		9	
Railroad																		
Stopped Buses																		

Comments:



Location: Peralta Blvd & Parish Cir

Date: 5/10/2017

Site Code: 14413535

Start Time	Parish Cir (West) Southbound					Parish Cir (East) From Northeast					Peralta Blvd Westbound					Parish Ave Northbound					Peralta Blvd Eastbound						
	Right	Thru	Left	Left to Parish Cir (East)	U-Turns	Right to Parish Cir (West)	Right to Peralta Blvd	Thru to Parish Ave	Left to Peralta Blvd	U-Turns	Right to Parish Cir (East)	Right	Thru	Left	U-Turns	Thru to Parish Cir (East)	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Left to Parish Cir (East)	Left	U-Turns	
07:00	0	0	0	0	0	0	1	0	0	0	0	0	0	17	5	0	2	0	0	0	0	0	0	0	7	0	0
07:05	0	0	0	0	0	0	0	0	0	0	0	0	0	18	7	0	6	0	0	0	0	0	0	0	12	0	0
07:10	0	0	0	0	0	0	0	0	0	0	0	0	0	25	3	0	3	0	0	0	0	0	0	0	11	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	30	3	0	8	0	0	0	0	0	0	0	11	0	0
07:20	0	0	0	0	0	0	0	0	0	0	0	0	0	21	7	0	7	0	0	0	0	0	0	0	13	0	0
07:25	0	0	0	0	0	0	0	0	0	0	0	0	0	12	5	0	4	0	0	0	0	0	0	0	15	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	32	9	0	12	0	0	0	0	0	0	0	13	0	0
07:35	2	0	0	0	0	0	1	0	0	0	0	0	0	27	4	0	10	0	0	0	0	0	0	0	10	0	0
07:40	1	0	1	0	0	0	1	0	0	0	0	0	0	30	4	0	11	0	0	0	0	0	0	0	19	0	0
07:45	1	0	0	0	0	0	0	0	0	0	0	0	0	47	4	0	16	0	0	0	0	0	0	0	40	0	0
07:50	0	0	1	0	0	0	0	0	0	0	0	0	0	59	6	0	31	0	0	0	0	0	0	0	29	0	0
07:55	1	0	0	0	0	0	1	0	0	0	0	0	0	41	7	0	22	0	0	0	0	0	0	0	41	0	0
08:00	2	0	1	0	0	0	1	0	0	0	0	0	0	33	5	0	40	0	0	0	0	0	0	0	23	0	0
08:05	0	0	3	0	0	0	0	0	0	0	0	0	0	46	9	0	37	0	0	0	0	0	0	0	40	0	0
08:10	0	0	1	0	0	0	0	0	0	0	0	0	0	44	6	0	24	0	0	0	0	0	0	0	36	0	0
08:15	1	0	0	0	0	0	0	0	0	0	0	0	0	40	7	0	20	0	0	0	0	0	0	0	37	0	0
08:20	1	0	0	0	0	0	0	0	0	0	0	0	0	56	6	0	9	0	0	0	0	0	0	0	26	0	0
08:25	0	0	0	0	0	0	0	0	0	0	0	0	0	41	11	0	16	0	0	0	0	0	0	0	30	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	39	4	0	8	0	0	0	0	0	0	0	34	0	0
08:35	0	1	0	0	0	0	1	0	0	0	0	0	0	37	2	0	4	0	0	0	0	0	0	0	36	0	0
08:40	0	0	0	0	0	0	2	0	0	0	0	0	0	32	3	0	6	0	0	0	0	0	0	0	20	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	27	4	0	8	0	0	0	0	0	0	0	20	0	0
08:50	1	0	1	0	0	0	0	0	0	0	0	0	0	43	5	0	7	0	0	0	0	0	0	0	26	0	0
08:55	0	1	0	0	0	0	0	0	0	0	0	0	0	41	6	0	11	0	0	0	0	0	0	0	32	1	0
<b>Total</b>	<b>10</b>	<b>2</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>9</b>	<b>3</b>	<b>838</b>	<b>132</b>	<b>0</b>	<b>322</b>	<b>3</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>10</b>	<b>581</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	

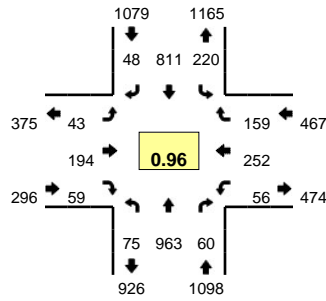
Peak Hour: 7:40 AM - 8:40 AM

Peak 15: 7:55 AM - 8:05 AM

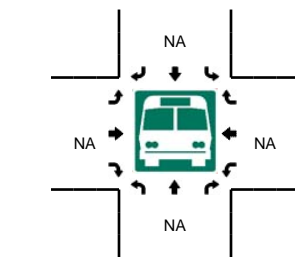
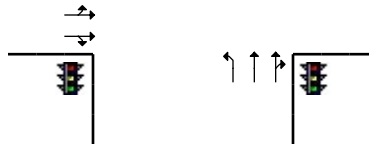
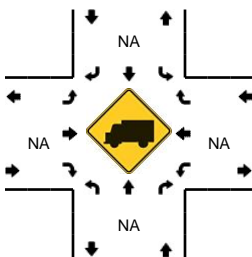
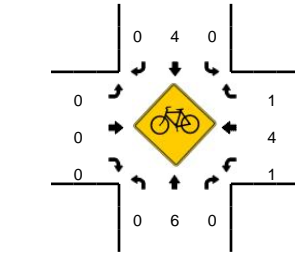
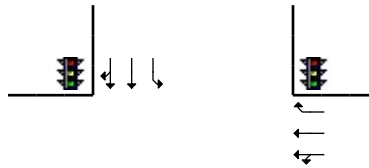
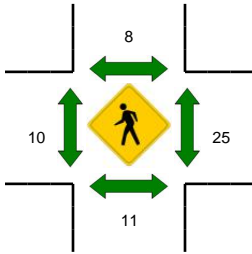
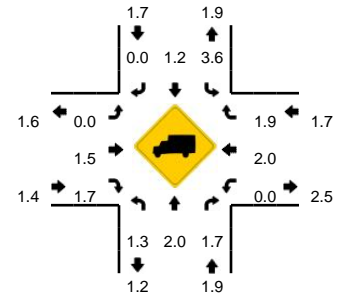
PHF: 0.87

**LOCATION:** Fremont Blvd -- Peralta Blvd  
**CITY/STATE:** Fremont, CA

**QC JOB #:** 14413532  
**DATE:** Wed, May 10 2017



**Peak-Hour: 5:00 PM -- 6:00 PM**  
**Peak 15-Min: 5:25 PM -- 5:40 PM**

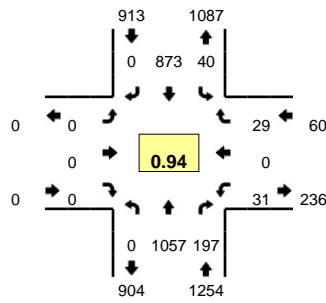


5-Min Count Period Beginning At	Fremont Blvd (Northbound)				Fremont Blvd (Southbound)				Peralta Blvd (Eastbound)				Peralta Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	8	61	4	0	13	59	7	0	5	11	5	0	4	24	16	0	217	
4:05 PM	4	51	4	0	12	34	4	0	6	12	4	0	3	24	14	0	172	
4:10 PM	11	91	7	0	22	53	11	0	4	6	6	0	2	21	12	0	246	
4:15 PM	4	94	4	0	14	38	4	0	2	11	4	0	2	16	14	0	207	
4:20 PM	3	63	6	0	13	55	7	0	3	12	1	0	2	18	3	0	186	
4:25 PM	4	78	9	0	12	40	5	0	3	17	3	0	1	16	9	0	197	
4:30 PM	9	84	5	0	18	59	5	0	4	12	4	0	5	21	16	0	242	
4:35 PM	5	74	6	0	15	54	4	0	3	21	6	0	5	18	9	0	220	
4:40 PM	8	69	8	0	14	35	3	0	4	16	3	0	5	17	20	0	202	
4:45 PM	5	67	7	0	10	54	4	0	6	15	4	0	6	28	13	0	219	
4:50 PM	4	67	2	0	12	53	4	0	4	8	3	0	8	23	12	0	200	
4:55 PM	5	73	2	0	13	51	9	0	6	12	6	0	5	24	12	0	218	2526
5:00 PM	9	81	1	0	18	62	0	0	8	14	7	0	5	27	14	0	246	2555
5:05 PM	5	57	6	0	9	30	2	0	1	20	3	0	6	20	20	0	179	2562
5:10 PM	7	90	5	0	24	78	3	0	3	16	6	0	3	11	9	0	255	2571
5:15 PM	10	95	5	0	14	64	4	0	2	22	5	0	3	27	13	0	264	2628
5:20 PM	9	52	6	0	27	69	2	0	3	13	5	0	5	19	13	0	223	2665
5:25 PM	7	86	5	0	12	89	4	0	4	10	3	0	4	24	13	0	261	2729
5:30 PM	1	102	2	0	22	62	6	0	3	18	1	0	7	22	10	0	256	2743
5:35 PM	6	83	7	0	17	74	6	0	3	12	3	0	5	13	17	0	246	2769
5:40 PM	4	69	5	0	26	71	9	0	3	14	6	0	5	24	13	0	249	2816
5:45 PM	7	77	7	0	12	64	4	0	2	22	3	0	6	26	12	0	242	2839
5:50 PM	7	61	5	0	23	78	6	0	5	18	9	0	3	23	17	0	255	2894
5:55 PM	3	110	6	0	16	70	2	0	6	15	8	0	4	16	8	0	264	2940
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	56	1084	56	0	204	900	64	0	40	160	28	0	64	236	160	0	3052	
Heavy Trucks	0	24	0		4	12	0		0	0	0		0	8	0		48	
Pedestrians		0				8				16				28			52	
Bicycles	0	2	0		0	1	0		0	0	0		0	0	0		3	
Railroad																		
Stopped Buses																		

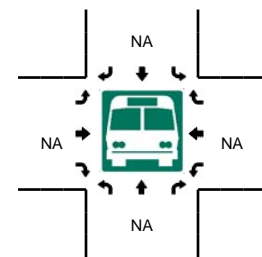
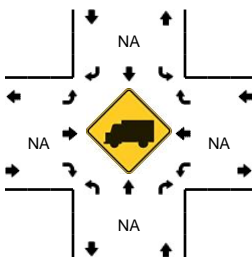
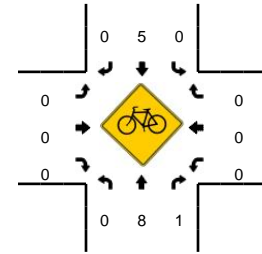
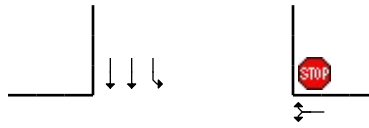
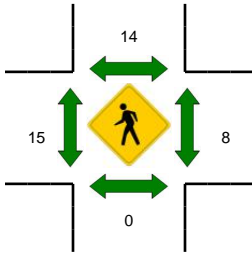
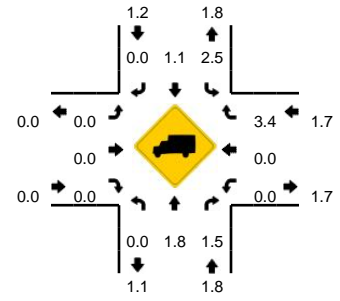
Comments:

**LOCATION:** Fremont Blvd -- Parish Ave  
**CITY/STATE:** Fremont, CA

**QC JOB #:** 14413534  
**DATE:** Wed, May 10 2017



**Peak-Hour: 5:00 PM -- 6:00 PM**  
**Peak 15-Min: 5:25 PM -- 5:40 PM**



5-Min Count Period Beginning At	Fremont Blvd (Northbound)				Fremont Blvd (Southbound)				Parish Ave (Eastbound)				Parish Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	76	18	0	4	65	0	0	0	0	0	0	1	0	1	0	165	
4:05 PM	0	80	10	0	1	41	0	0	0	0	0	0	4	0	2	0	138	
4:10 PM	0	93	15	0	4	54	0	0	0	0	0	0	4	0	3	0	173	
4:15 PM	0	85	14	0	4	43	0	0	0	0	0	0	4	0	0	0	150	
4:20 PM	0	70	11	0	4	54	0	0	0	0	0	0	4	0	2	0	145	
4:25 PM	0	91	8	0	2	43	0	0	0	0	0	0	4	0	4	0	152	
4:30 PM	0	97	8	0	3	64	0	0	0	0	0	0	0	0	5	0	177	
4:35 PM	0	81	11	0	1	67	0	0	0	0	0	0	2	0	1	0	163	
4:40 PM	0	82	19	0	2	38	0	0	0	0	0	0	2	0	1	0	144	
4:45 PM	0	90	15	0	1	57	0	0	0	0	0	0	3	0	0	0	166	
4:50 PM	0	64	9	0	4	65	0	0	0	0	0	0	4	0	2	0	148	
4:55 PM	0	95	21	0	3	55	0	0	0	0	0	0	2	0	1	0	177	1898
5:00 PM	0	87	13	0	7	62	0	0	0	0	0	0	3	0	2	0	174	1907
5:05 PM	0	93	28	0	3	34	0	0	0	0	0	0	1	0	2	0	161	1930
5:10 PM	0	91	16	0	2	77	0	0	0	0	0	0	3	0	2	0	191	1948
5:15 PM	0	81	11	0	8	71	0	0	0	0	0	0	2	0	7	0	180	1978
5:20 PM	0	77	16	0	1	64	0	0	0	0	0	0	1	0	3	0	162	1995
5:25 PM	0	91	11	0	5	81	0	0	0	0	0	0	5	0	2	0	195	2038
5:30 PM	0	119	17	0	1	78	0	0	0	0	0	0	1	0	1	0	217	2078
5:35 PM	0	74	18	0	3	81	0	1	0	0	0	0	1	0	1	0	179	2094
5:40 PM	0	89	22	0	3	65	0	0	0	0	0	0	5	0	3	0	187	2137
5:45 PM	0	80	17	0	2	92	0	0	0	0	0	0	3	0	1	0	195	2166
5:50 PM	0	84	10	0	1	87	0	0	0	0	0	0	2	0	3	0	187	2205
5:55 PM	0	91	18	0	3	81	0	0	0	0	0	0	4	0	2	0	199	2227
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	1136	184	0	36	960	0	4	0	0	0	0	28	0	16	0	2364	
Heavy Trucks	0	16	0	0	0	12	0	0	0	0	0	0	0	0	0	0	28	
Pedestrians	0	0	0	0	0	16	0	0	0	12	0	0	0	8	0	0	36	
Bicycles	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0	5	
Railroad																		
Stopped Buses																		

Comments:



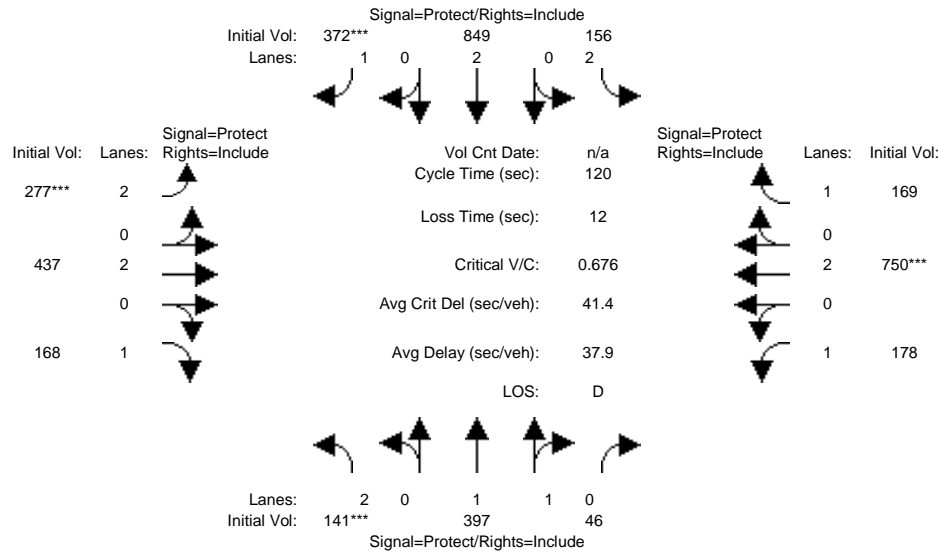
# **Appendix B**

## **LOS Calculations**

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Existing AM

Intersection #1: Fremont & Thornton



Street Name:	Fremont Blvd						Thornton Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	4	10	10	4	10	10	4	10	10	4	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:	Fremont NB			Fremont SB			Thornton EB			Thornton WB		
Base Vol:	141	397	46	156	849	372	277	437	168	178	750	169
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	141	397	46	156	849	372	277	437	168	178	750	169
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	152	427	49	168	913	400	298	470	181	191	806	182
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	152	427	49	168	913	400	298	470	181	191	806	182
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	152	427	49	168	913	400	298	470	181	191	806	182

Saturation Flow Module:	Fremont NB			Fremont SB			Thornton EB			Thornton WB		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.93	0.93	0.92	0.95	0.82	0.92	0.95	0.81	0.95	0.95	0.83
Lanes:	2.00	1.79	0.21	2.00	2.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	3183	369	3502	3610	1558	3502	3610	1548	1805	3610	1568

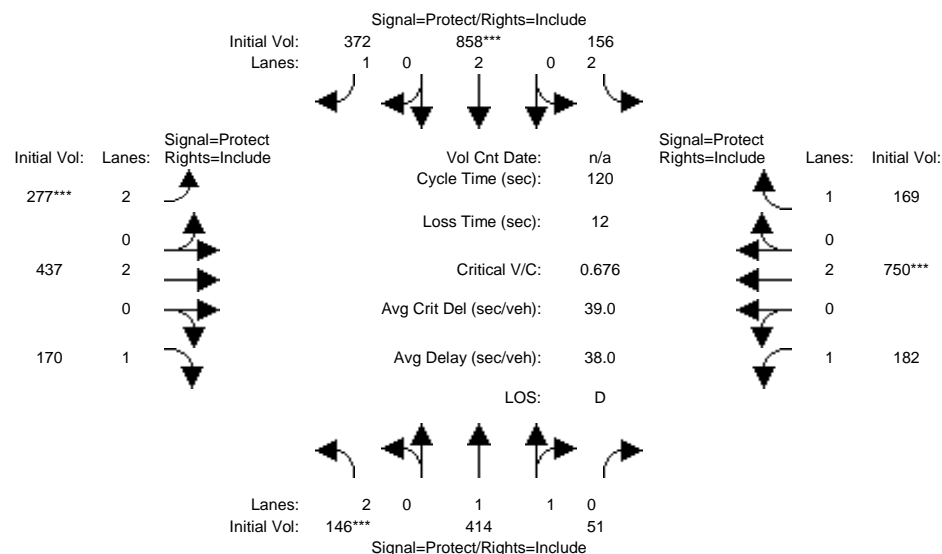
Capacity Analysis Module:	Fremont NB			Fremont SB			Thornton EB			Thornton WB		
Vol/Sat:	0.04	0.13	0.13	0.05	0.25	0.26	0.09	0.13	0.12	0.11	0.22	0.12
Crit Moves:	****					****	****				****	
Green Time:	7.7	39.2	39.2	14.0	45.6	45.6	15.1	30.2	30.2	24.6	39.7	39.7
Volume/Cap:	0.68	0.41	0.41	0.41	0.67	0.68	0.68	0.52	0.46	0.52	0.68	0.35
Delay/Veh:	62.9	31.6	31.6	49.8	32.2	34.2	54.3	39.2	38.9	43.7	36.2	30.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	62.9	31.6	31.6	49.8	32.2	34.2	54.3	39.2	38.9	43.7	36.2	30.8
LOS by Move:	E	C	C	D	C	C	D	D	D	D	D	C
HCM2k95thQ:	8	14	14	7	27	23	13	15	11	13	25	10

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Existing + Project AM

Intersection #1: Fremont & Thornton



Street Name:	Fremont Blvd						Thornton Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	4	10	10	4	10	10	4	10	10	4	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	146	414	51	156	858	372	277	437	170	182	750	169
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	146	414	51	156	858	372	277	437	170	182	750	169
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	157	445	55	168	923	400	298	470	183	196	806	182
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	157	445	55	168	923	400	298	470	183	196	806	182
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	157	445	55	168	923	400	298	470	183	196	806	182

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.93	0.93	0.92	0.95	0.84	0.92	0.95	0.83	0.95	0.95	0.84
Lanes:	2.00	1.78	0.22	2.00	2.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	3162	390	3502	3610	1591	3502	3610	1569	1805	3610	1589

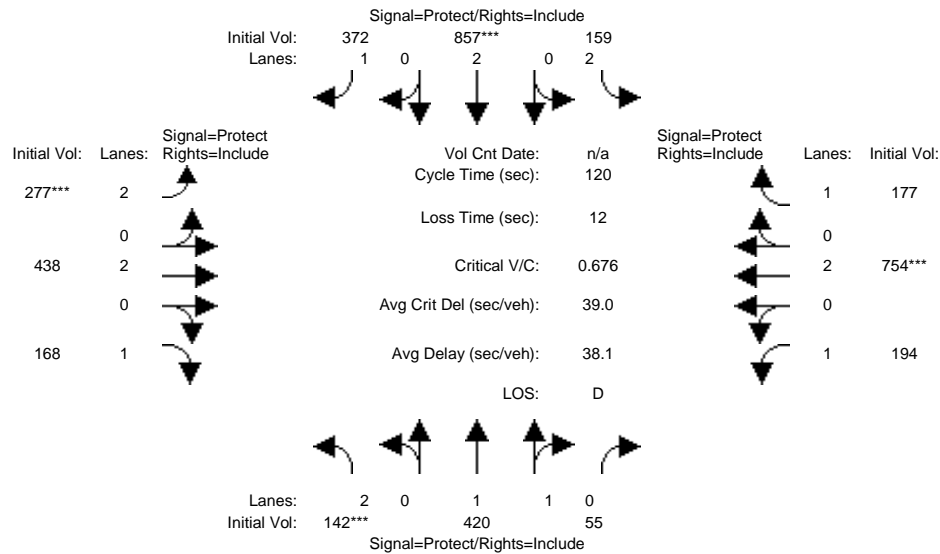
Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.04	0.14	0.14	0.05	0.26	0.25	0.09	0.13	0.12	0.11	0.22	0.11
Crit Moves:	****			****			****			****		
Green Time:	8.0	39.8	39.8	13.5	45.3	45.3	15.1	29.9	29.9	24.9	39.6	39.6
Volume/Cap:	0.68	0.42	0.42	0.42	0.68	0.67	0.68	0.52	0.47	0.52	0.68	0.35
Delay/Veh:	62.5	31.5	31.5	50.3	32.6	33.9	54.3	39.5	39.2	43.6	36.2	30.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	62.5	31.5	31.5	50.3	32.6	33.9	54.3	39.5	39.2	43.6	36.2	30.8
LOS by Move:	E	C	C	D	C	C	D	D	D	D	D	C
HCM2k95thQ:	8	14	14	7	27	23	13	15	12	13	25	10

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Background AM

Intersection #1: Fremont & Thornton



Street Name:	Fremont Blvd						Thornton Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	4	10	10	4	10	10	4	10	10	4	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	142	420	55	159	857	372	277	438	168	194	754	177
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	142	420	55	159	857	372	277	438	168	194	754	177
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	153	452	59	171	922	400	298	471	181	209	811	190
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	153	452	59	171	922	400	298	471	181	209	811	190
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	153	452	59	171	922	400	298	471	181	209	811	190

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.93	0.93	0.92	0.95	0.84	0.92	0.95	0.83	0.95	0.95	0.84
Lanes:	2.00	1.77	0.23	2.00	2.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	3138	411	3502	3610	1591	3502	3610	1569	1805	3610	1589

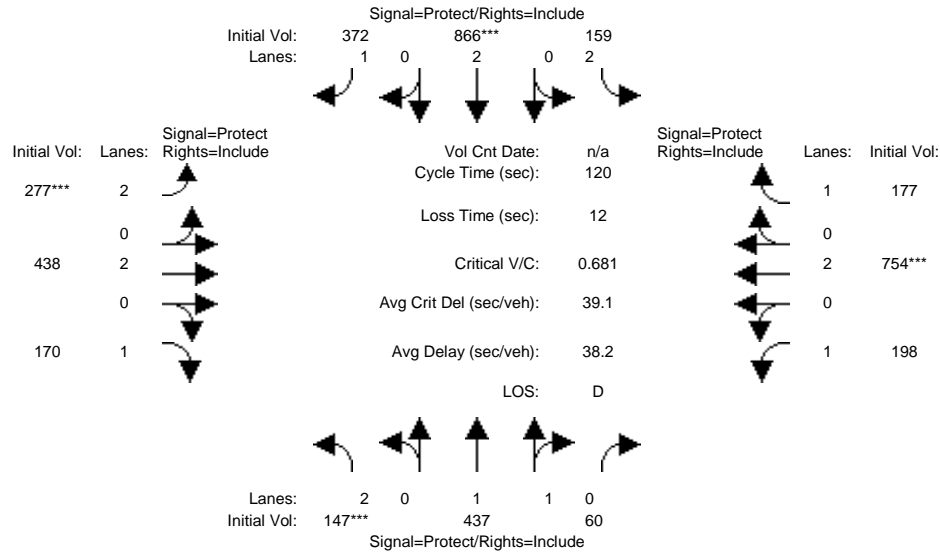
Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.04	0.14	0.14	0.05	0.26	0.25	0.09	0.13	0.12	0.12	0.22	0.12
Crit Moves:	****			****			****			****		
Green Time:	7.7	39.6	39.6	13.4	45.3	45.3	15.1	29.1	29.1	25.8	39.9	39.9
Volume/Cap:	0.68	0.44	0.44	0.44	0.68	0.67	0.68	0.54	0.47	0.54	0.68	0.36
Delay/Veh:	62.8	31.7	31.7	50.5	32.6	33.9	54.3	40.2	39.8	43.3	36.1	30.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	62.8	31.7	31.7	50.5	32.6	33.9	54.3	40.2	39.8	43.3	36.1	30.8
LOS by Move:	E	C	C	D	C	C	D	D	D	D	D	C
HCM2k95thQ:	8	15	15	7	27	23	13	16	12	14	25	10

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Background + Project AM

Intersection #1: Fremont & Thornton



Street Name:	Fremont Blvd						Thornton Ave					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	4	10	10	4	10	10	4	10	10	4	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:												
Base Vol:	147	437	60	159	866	372	277	438	170	198	754	177
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	147	437	60	159	866	372	277	438	170	198	754	177
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	158	470	65	171	931	400	298	471	183	213	811	190
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	158	470	65	171	931	400	298	471	183	213	811	190
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	158	470	65	171	931	400	298	471	183	213	811	190

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.93	0.93	0.92	0.95	0.84	0.92	0.95	0.83	0.95	0.95	0.84
Lanes:	2.00	1.76	0.24	2.00	2.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	3117	428	3502	3610	1591	3502	3610	1569	1805	3610	1589

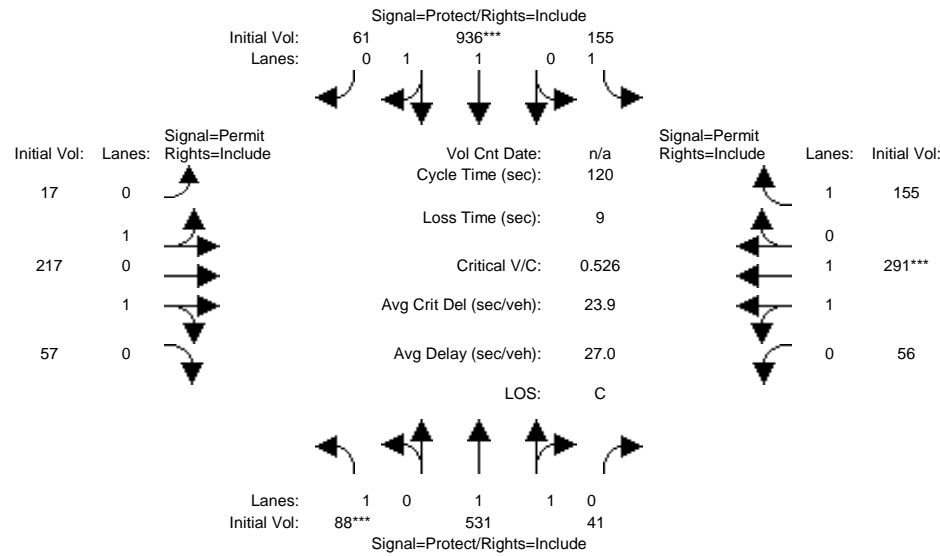
Capacity Analysis Module:												
Vol/Sat:	0.05	0.15	0.15	0.05	0.26	0.25	0.09	0.13	0.12	0.12	0.22	0.12
Crit Moves:	****			****			****			****		
Green Time:	8.0	40.4	40.4	13.1	45.5	45.5	15.0	28.7	28.7	25.9	39.6	39.6
Volume/Cap:	0.68	0.45	0.45	0.45	0.68	0.66	0.68	0.55	0.49	0.55	0.68	0.36
Delay/Veh:	62.8	31.4	31.4	50.9	32.6	33.7	54.6	40.7	40.3	43.4	36.4	31.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	62.8	31.4	31.4	50.9	32.6	33.7	54.6	40.7	40.3	43.4	36.4	31.0
LOS by Move:	E	C	C	D	C	C	D	D	D	D	D	C
HCM2k95thQ:	8	15	15	7	27	23	13	16	12	14	25	10

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Existing AM

Intersection #2: Fremont & Peralta



Street Name:	Fremont Blvd						Peralta Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Min. Green:	4	6	6	4	6	6	4	4	4	4	4	4
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:												
Base Vol:	88	531	41	155	936	61	17	217	57	56	291	155
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	88	531	41	155	936	61	17	217	57	56	291	155
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	96	577	45	168	1017	66	18	236	62	61	316	168
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	96	577	45	168	1017	66	18	236	62	61	316	168
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	96	577	45	168	1017	66	18	236	62	61	316	168

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.85	0.85	0.84	0.76	0.76	0.82
Lanes:	1.00	1.86	0.14	1.00	1.88	0.12	0.12	1.49	0.39	0.32	1.68	1.00
Final Sat.:	1805	3314	256	1805	3358	219	188	2399	630	467	2427	1567

Capacity Analysis Module:												
Vol/Sat:	0.05	0.17	0.17	0.09	0.30	0.30	0.10	0.10	0.10	0.13	0.13	0.11
Crit Moves:	****				****					****		
Green Time:	12.1	52.9	52.9	28.4	69.2	69.2	29.7	29.7	29.7	29.7	29.7	29.7
Volume/Cap:	0.53	0.40	0.40	0.40	0.53	0.53	0.40	0.40	0.40	0.53	0.53	0.43
Delay/Veh:	54.1	22.9	22.9	39.2	15.7	15.7	38.0	38.0	38.0	39.7	39.7	38.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.1	22.9	22.9	39.2	15.7	15.7	38.0	38.0	38.0	39.7	39.7	38.8
LOS by Move:	D	C	C	D	B	B	D	D	D	D	D	D
HCM2k95thQ:	8	15	15	10	23	23	10	10	10	13	13	11

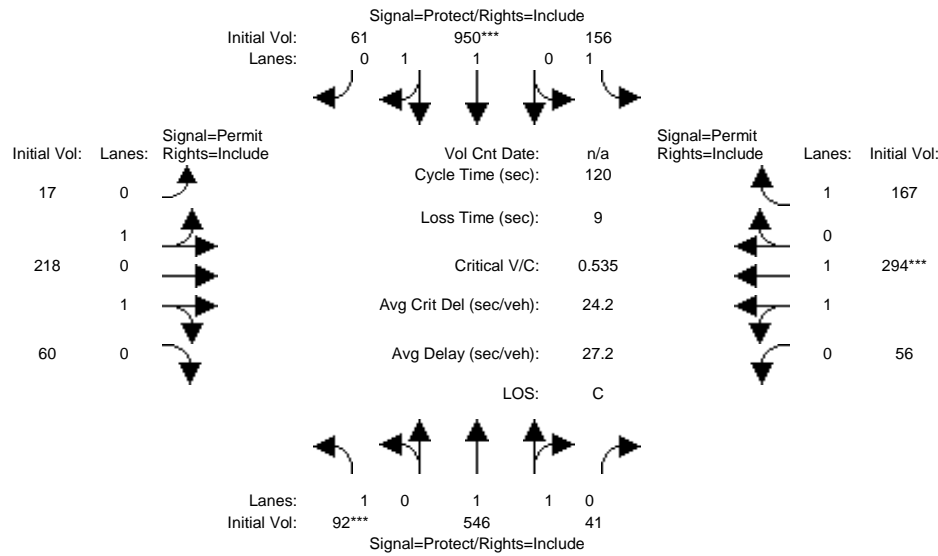
Note: Queue reported is the number of cars per lane.



Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Existing + Project AM

Intersection #2: Fremont & Peralta



Street Name:	Fremont Blvd						Peralta Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Min. Green:	4	6	6	4	6	6	4	4	4	4	4	4
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:												
Base Vol:	92	546	41	156	950	61	17	218	60	56	294	167
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	92	546	41	156	950	61	17	218	60	56	294	167
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	100	593	45	170	1033	66	18	237	65	61	320	182
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	100	593	45	170	1033	66	18	237	65	61	320	182
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	100	593	45	170	1033	66	18	237	65	61	320	182

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.85	0.85	0.84	0.76	0.76	0.84
Lanes:	1.00	1.86	0.14	1.00	1.88	0.12	0.11	1.48	0.41	0.32	1.68	1.00
Final Sat.:	1805	3324	250	1805	3362	216	185	2376	654	461	2422	1588

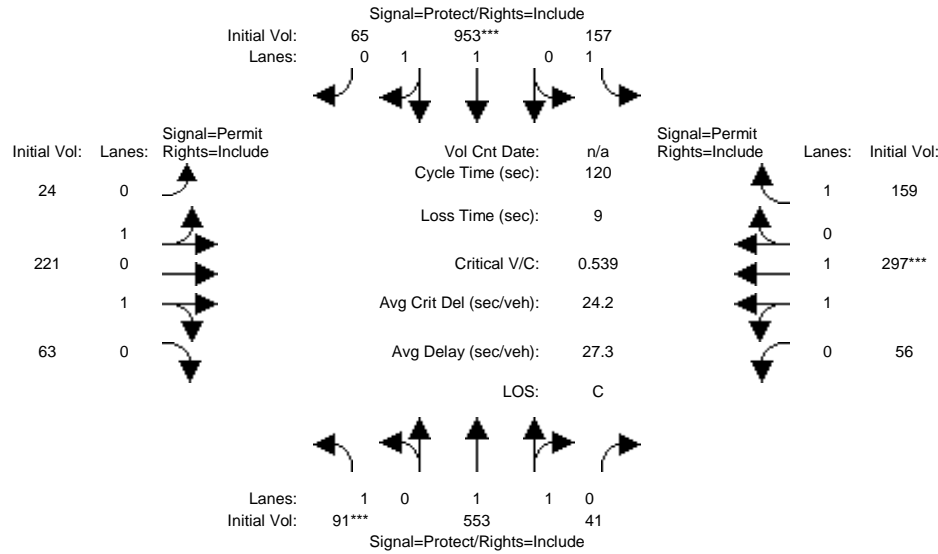
Capacity Analysis Module:												
Vol/Sat:	0.06	0.18	0.18	0.09	0.31	0.31	0.10	0.10	0.10	0.13	0.13	0.11
Crit Moves:	****				****					****		
Green Time:	12.4	53.3	53.3	28.1	69.0	69.0	29.6	29.6	29.6	29.6	29.6	29.6
Volume/Cap:	0.53	0.40	0.40	0.40	0.53	0.53	0.40	0.40	0.40	0.53	0.53	0.46
Delay/Veh:	54.0	22.7	22.7	39.5	15.9	15.9	38.1	38.1	38.1	40.0	40.0	39.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.0	22.7	22.7	39.5	15.9	15.9	38.1	38.1	38.1	40.0	40.0	39.3
LOS by Move:	D	C	C	D	B	B	D	D	D	D	D	D
HCM2k95thQ:	8	15	15	11	23	23	10	10	10	13	13	12

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Background AM

Intersection #2: Fremont & Peralta



Street Name:	Fremont Blvd						Peralta Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Min. Green:	4	6	6	4	6	6	4	4	4	4	4	4
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:

Base Vol:	91	553	41	157	953	65	24	221	63	56	297	159
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	91	553	41	157	953	65	24	221	63	56	297	159
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	99	601	45	171	1036	71	26	240	68	61	323	173
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	99	601	45	171	1036	71	26	240	68	61	323	173
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	99	601	45	171	1036	71	26	240	68	61	323	173

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.83	0.83	0.83	0.75	0.75	0.84
Lanes:	1.00	1.86	0.14	1.00	1.87	0.13	0.16	1.43	0.41	0.32	1.68	1.00
Final Sat.:	1805	3327	247	1805	3346	228	245	2257	643	453	2405	1588

Capacity Analysis Module:

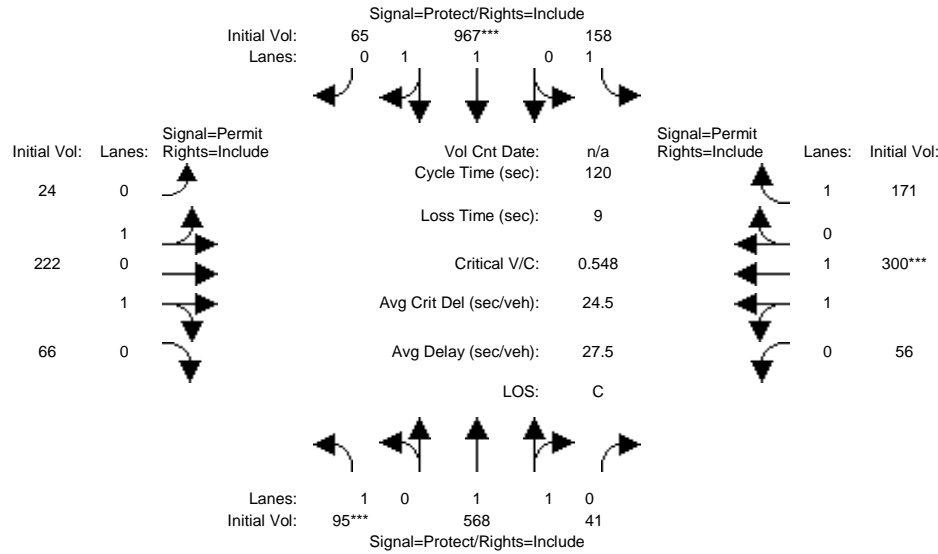
Vol/Sat:	0.05	0.18	0.18	0.09	0.31	0.31	0.11	0.11	0.11	0.13	0.13	0.11
Crit Moves:	****				****					****		
Green Time:	12.2	53.3	53.3	27.9	68.9	68.9	29.9	29.9	29.9	29.9	29.9	29.9
Volume/Cap:	0.54	0.41	0.41	0.41	0.54	0.54	0.43	0.43	0.43	0.54	0.54	0.44
Delay/Veh:	54.4	22.8	22.8	39.7	16.0	16.0	38.2	38.2	38.2	39.9	39.9	38.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.4	22.8	22.8	39.7	16.0	16.0	38.2	38.2	38.2	39.9	39.9	38.7
LOS by Move:	D	C	C	D	B	B	D	D	D	D	D	D
HCM2k95thQ:	8	16	16	11	23	23	11	11	11	13	13	11

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Background + Project AM

Intersection #2: Fremont & Peralta



Street Name:	Fremont Blvd						Peralta Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Min. Green:	4	6	6	4	6	6	4	4	4	4	4	4
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:

Base Vol:	95	568	41	158	967	65	24	222	66	56	300	171
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	95	568	41	158	967	65	24	222	66	56	300	171
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	103	617	45	172	1051	71	26	241	72	61	326	186
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	103	617	45	172	1051	71	26	241	72	61	326	186
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	103	617	45	172	1051	71	26	241	72	61	326	186

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.83	0.83	0.83	0.75	0.75	0.84
Lanes:	1.00	1.87	0.13	1.00	1.87	0.13	0.15	1.43	0.42	0.32	1.68	1.00
Final Sat.:	1805	3333	241	1805	3352	225	242	2241	666	448	2400	1588

Capacity Analysis Module:

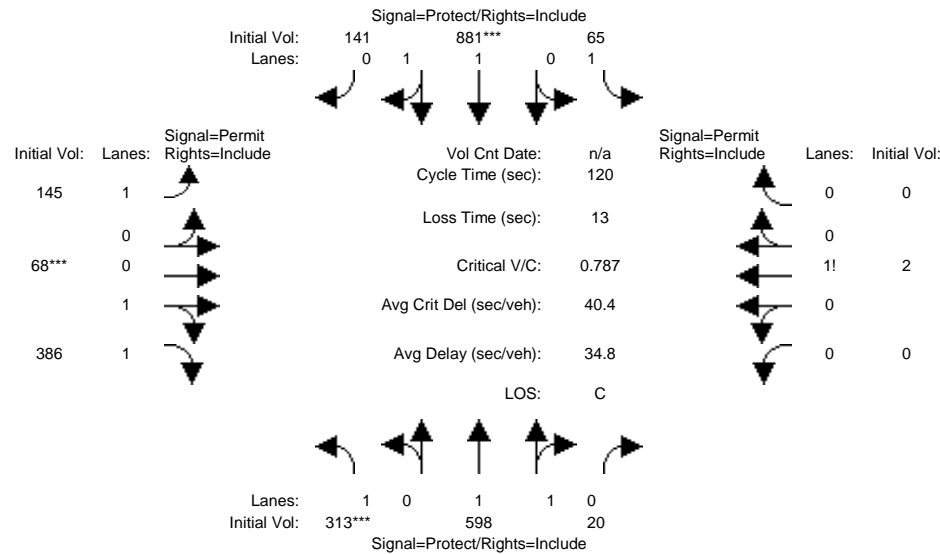
Vol/Sat:	0.06	0.19	0.19	0.10	0.31	0.31	0.11	0.11	0.11	0.14	0.14	0.12
Crit Moves:	****				****					****		
Green Time:	12.5	53.7	53.7	27.6	68.7	68.7	29.8	29.8	29.8	29.8	29.8	29.8
Volume/Cap:	0.55	0.41	0.41	0.41	0.55	0.55	0.43	0.43	0.43	0.55	0.55	0.47
Delay/Veh:	54.4	22.7	22.7	40.0	16.3	16.3	38.4	38.4	38.4	40.2	40.2	39.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.4	22.7	22.7	40.0	16.3	16.3	38.4	38.4	38.4	40.2	40.2	39.3
LOS by Move:	D	C	C	D	B	B	D	D	D	D	D	D
HCM2k95thQ:	9	16	16	11	24	24	11	11	11	13	13	12

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Existing AM

Intersection #3: Fremont & Central



Street Name:	Fremont Blvd						Central Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:

Base Vol:	313	598	20	65	881	141	145	68	386	0	2	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	313	598	20	65	881	141	145	68	386	0	2	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	360	687	23	75	1013	162	167	78	444	0	2	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	360	687	23	75	1013	162	167	78	444	0	2	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	360	687	23	75	1013	162	167	78	444	0	2	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.93	0.92	0.75	0.87	0.80	1.00	1.00	1.00
Lanes:	1.00	1.94	0.06	1.00	1.72	0.28	1.00	0.28	1.72	0.00	1.00	0.00
Final Sat.:	1805	3476	116	1805	3042	487	1431	462	2622	0	1900	0

Capacity Analysis Module:

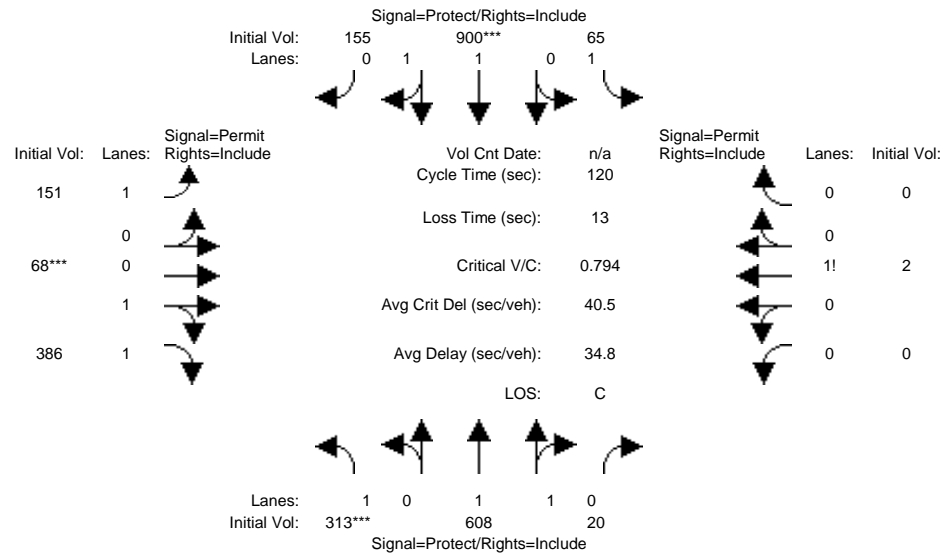
Vol/Sat:	0.20	0.20	0.20	0.04	0.33	0.33	0.12	0.17	0.17	0.00	0.00	0.00
Crit Moves:	****				****		****					
Green Time:	30.4	67.1	67.1	14.1	50.8	50.8	25.8	25.8	25.8	0.0	25.8	0.0
Volume/Cap:	0.79	0.35	0.35	0.35	0.79	0.79	0.54	0.79	0.79	0.00	0.01	0.00
Delay/Veh:	50.6	14.6	14.6	49.8	32.8	32.8	43.8	50.7	50.7	0.0	37.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.6	14.6	14.6	49.8	32.8	32.8	43.8	50.7	50.7	0.0	37.0	0.0
LOS by Move:	D	B	B	D	C	C	D	D	D	A	D	A
HCM2k95thQ:	25	14	14	6	35	35	12	21	20	0	0	0

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Existing + Project AM

Intersection #3: Fremont & Central



Street Name:	Fremont Blvd						Central Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:	313	608	20	65	900	155	151	68	386	0	2	0
Base Vol:	313	608	20	65	900	155	151	68	386	0	2	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	313	608	20	65	900	155	151	68	386	0	2	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	360	699	23	75	1034	178	174	78	444	0	2	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	360	699	23	75	1034	178	174	78	444	0	2	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	360	699	23	75	1034	178	174	78	444	0	2	0

Saturation Flow Module:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.93	0.92	0.75	0.87	0.82	1.00	1.00	1.00
Lanes:	1.00	1.94	0.06	1.00	1.70	0.30	1.00	0.29	1.71	0.00	1.00	0.00
Final Sat.:	1805	3478	114	1805	3009	518	1430	473	2687	0	1900	0

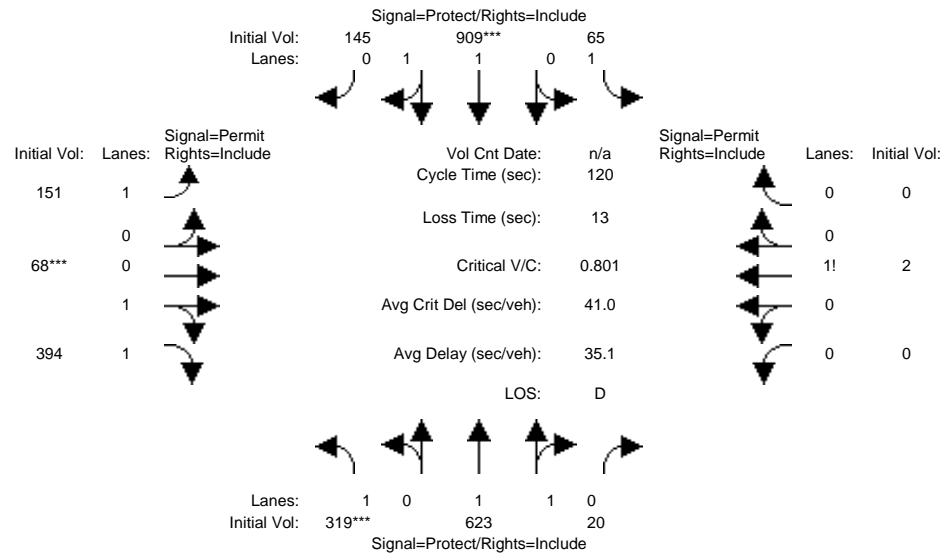
Capacity Analysis Module:	0.20	0.20	0.20	0.04	0.34	0.34	0.12	0.17	0.17	0.00	0.00	0.00
Vol/Sat:	0.20	0.20	0.20	0.04	0.34	0.34	0.12	0.17	0.17	0.00	0.00	0.00
Crit Moves:	****				****			****				
Green Time:	30.1	68.0	68.0	14.0	51.9	51.9	24.9	24.9	24.9	0.0	24.9	0.0
Volume/Cap:	0.79	0.35	0.35	0.35	0.79	0.79	0.58	0.79	0.79	0.00	0.01	0.00
Delay/Veh:	51.4	14.2	14.2	49.9	32.4	32.4	45.8	51.7	51.7	0.0	37.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.4	14.2	14.2	49.9	32.4	32.4	45.8	51.7	51.7	0.0	37.7	0.0
LOS by Move:	D	B	B	D	C	C	D	D	D	A	D	A
HCM2k95thQ:	25	14	14	6	36	36	12	21	20	0	0	0

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Background AM

Intersection #3: Fremont & Central



Street Name:	Fremont Blvd						Central Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:												
Base Vol:	319	623	20	65	909	145	151	68	394	0	2	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	319	623	20	65	909	145	151	68	394	0	2	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	367	716	23	75	1045	167	174	78	453	0	2	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	367	716	23	75	1045	167	174	78	453	0	2	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	367	716	23	75	1045	167	174	78	453	0	2	0

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.93	0.92	0.75	0.87	0.82	1.00	1.00	1.00
Lanes:	1.00	1.94	0.06	1.00	1.72	0.28	1.00	0.28	1.72	0.00	1.00	0.00
Final Sat.:	1805	3480	112	1805	3045	486	1430	465	2693	0	1900	0

Capacity Analysis Module:												
Vol/Sat:	0.20	0.21	0.21	0.04	0.34	0.34	0.12	0.17	0.17	0.00	0.00	0.00
Crit Moves:	****				****			****				
Green Time:	30.4	68.1	68.1	13.7	51.4	51.4	25.2	25.2	25.2	0.0	25.2	0.0
Volume/Cap:	0.80	0.36	0.36	0.36	0.80	0.80	0.58	0.80	0.80	0.00	0.01	0.00
Delay/Veh:	51.7	14.2	14.2	50.2	33.0	33.0	45.4	52.0	52.0	0.0	37.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.7	14.2	14.2	50.2	33.0	33.0	45.4	52.0	52.0	0.0	37.5	0.0
LOS by Move:	D	B	B	D	C	C	D	D	D	A	D	A
HCM2k95thQ:	26	14	14	6	37	37	12	21	21	0	0	0

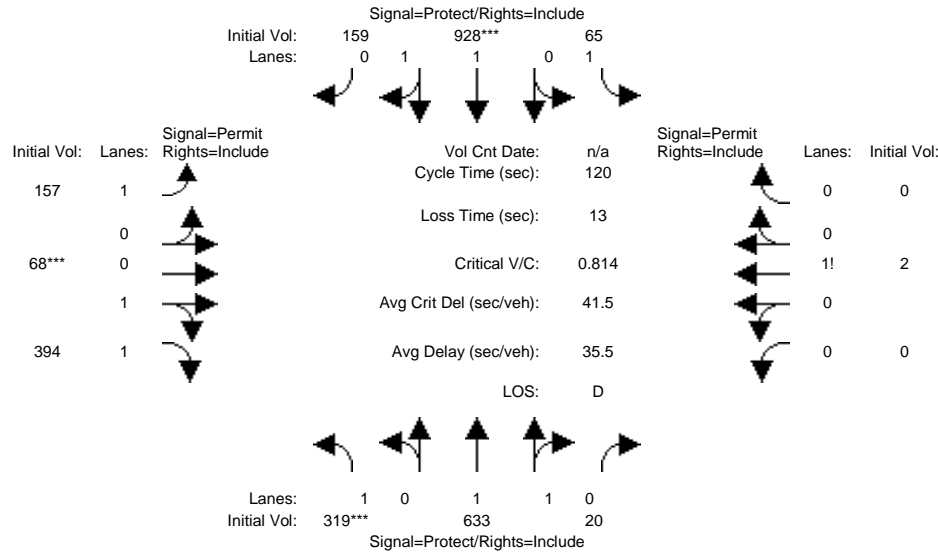
Note: Queue reported is the number of cars per lane.



Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Background + Project AM

Intersection #3: Fremont & Central



Street Name:	Fremont Blvd						Central Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:												
Base Vol:	319	633	20	65	928	159	157	68	394	0	2	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	319	633	20	65	928	159	157	68	394	0	2	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	367	728	23	75	1067	183	180	78	453	0	2	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	367	728	23	75	1067	183	180	78	453	0	2	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	367	728	23	75	1067	183	180	78	453	0	2	0

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.93	0.92	0.75	0.87	0.82	1.00	1.00	1.00
Lanes:	1.00	1.94	0.06	1.00	1.71	0.29	1.00	0.28	1.72	0.00	1.00	0.00
Final Sat.:	1805	3482	110	1805	3011	516	1430	464	2691	0	1900	0

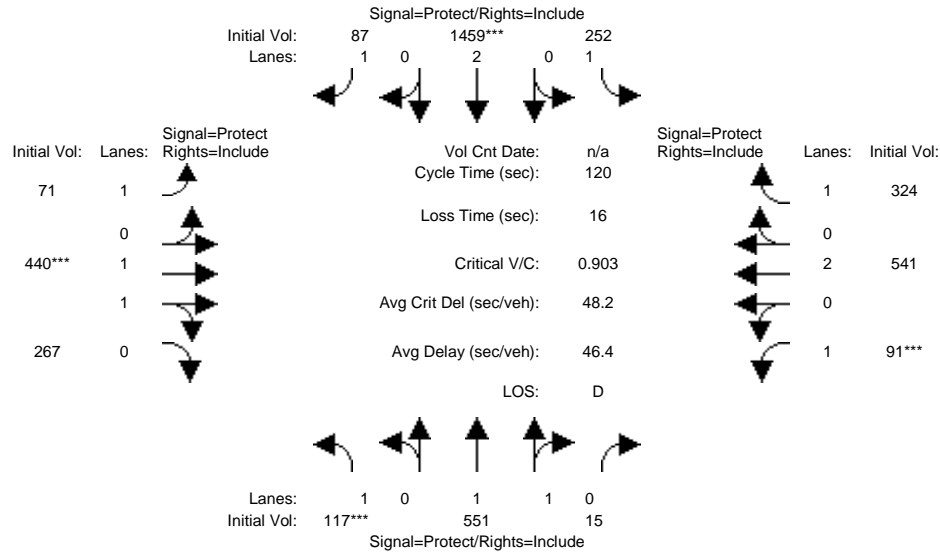
Capacity Analysis Module:												
Vol/Sat:	0.20	0.21	0.21	0.04	0.35	0.35	0.13	0.17	0.17	0.00	0.00	0.00
Crit Moves:	****				****			****				
Green Time:	30.0	68.6	68.6	13.6	52.2	52.2	24.8	24.8	24.8	0.0	24.8	0.0
Volume/Cap:	0.81	0.37	0.37	0.37	0.81	0.81	0.61	0.81	0.81	0.00	0.01	0.00
Delay/Veh:	53.3	14.0	14.0	50.3	33.1	33.1	46.9	53.1	53.1	0.0	37.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	53.3	14.0	14.0	50.3	33.1	33.1	46.9	53.1	53.1	0.0	37.8	0.0
LOS by Move:	D	B	B	D	C	C	D	D	D	A	D	A
HCM2k95thQ:	26	15	15	6	38	38	13	22	21	0	0	0

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Existing AM

Intersection #4: Paseo Padre & Peralta



Street Name:	Paseo Padre Pkwy						Peralta Blvd					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	4	10	10	4	10	10	4	10	10	4	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:												
Base Vol:	117	551	15	252	1459	87	71	440	267	91	541	324
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	117	551	15	252	1459	87	71	440	267	91	541	324
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	126	592	16	271	1569	94	76	473	287	98	582	348
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	126	592	16	271	1569	94	76	473	287	98	582	348
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	126	592	16	271	1569	94	76	473	287	98	582	348

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.95	0.82	0.95	0.90	0.89	0.95	0.95	0.82
Lanes:	1.00	1.95	0.05	1.00	2.00	1.00	1.00	1.24	0.76	1.00	2.00	1.00
Final Sat.:	1805	3500	95	1805	3610	1556	1805	2110	1281	1805	3610	1565

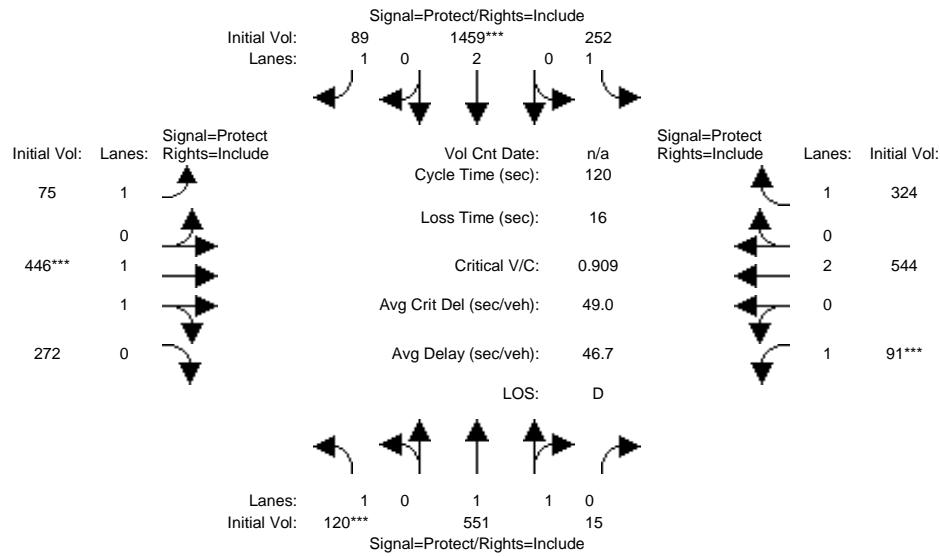
Capacity Analysis Module:												
Vol/Sat:	0.07	0.17	0.17	0.15	0.43	0.06	0.04	0.22	0.22	0.05	0.16	0.22
Crit Moves:	****			****			****			****		
Green Time:	9.3	35.5	35.5	31.5	57.7	57.7	5.9	29.8	29.8	7.2	31.1	31.1
Volume/Cap:	0.90	0.57	0.57	0.57	0.90	0.12	0.86	0.90	0.90	0.90	0.62	0.86
Delay/Veh:	103.2	36.6	36.6	40.1	35.6	17.3	109.0	56.7	56.7	112.9	40.6	59.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	103.2	36.6	36.6	40.1	35.6	17.3	109.0	56.7	56.7	112.9	40.6	59.0
LOS by Move:	F	D	D	D	D	B	F	E	E	F	D	E
HCM2k95thQ:	14	19	19	17	50	4	10	31	31	12	19	26

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Existing + Project AM

Intersection #4: Paseo Padre & Peralta



Street Name:	Paseo Padre Pkwy						Peralta Blvd					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	4	10	10	4	10	10	4	10	10	4	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:												
Base Vol:	120	551	15	252	1459	89	75	446	272	91	544	324
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	120	551	15	252	1459	89	75	446	272	91	544	324
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	129	592	16	271	1569	96	81	480	292	98	585	348
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	129	592	16	271	1569	96	81	480	292	98	585	348
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	129	592	16	271	1569	96	81	480	292	98	585	348

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.95	0.83	0.95	0.90	0.89	0.95	0.95	0.85
Lanes:	1.00	1.95	0.05	1.00	2.00	1.00	1.00	1.24	0.76	1.00	2.00	1.00
Final Sat.:	1805	3500	95	1805	3610	1586	1805	2110	1287	1805	3610	1607

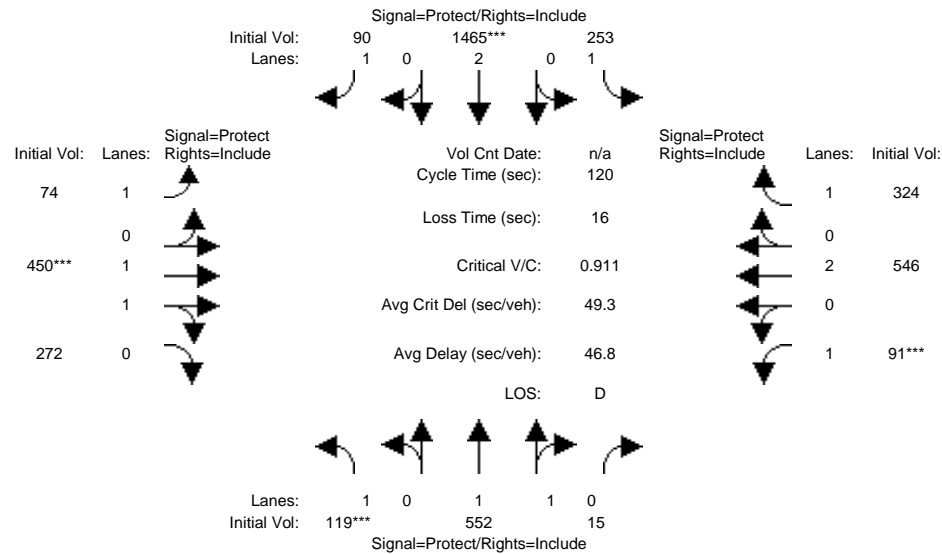
Capacity Analysis Module:												
Vol/Sat:	0.07	0.17	0.17	0.15	0.43	0.06	0.04	0.23	0.23	0.05	0.16	0.22
Crit Moves:	****			****			****			****		
Green Time:	9.4	35.4	35.4	31.4	57.4	57.4	6.4	30.0	30.0	7.2	30.8	30.8
Volume/Cap:	0.91	0.57	0.57	0.57	0.91	0.13	0.84	0.91	0.91	0.91	0.63	0.84
Delay/Veh:	103.9	36.6	36.6	40.2	36.4	17.5	102.6	57.2	57.2	114.7	41.0	57.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	103.9	36.6	36.6	40.2	36.4	17.5	102.6	57.2	57.2	114.7	41.0	57.0
LOS by Move:	F	D	D	D	D	B	F	E	E	F	D	E
HCM2k95thQ:	14	19	19	17	51	4	10	31	31	12	20	26

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Background AM

Intersection #4: Paseo Padre & Peralta



Street Name:	Paseo Padre Pkwy						Peralta Blvd					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	4	10	10	4	10	10	4	10	10	4	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:												
Base Vol:	119	552	15	253	1465	90	74	450	272	91	546	324
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	119	552	15	253	1465	90	74	450	272	91	546	324
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	128	594	16	272	1575	97	80	484	292	98	587	348
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	128	594	16	272	1575	97	80	484	292	98	587	348
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	128	594	16	272	1575	97	80	484	292	98	587	348

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.95	0.83	0.95	0.90	0.89	0.95	0.95	0.85
Lanes:	1.00	1.95	0.05	1.00	2.00	1.00	1.00	1.24	0.76	1.00	2.00	1.00
Final Sat.:	1805	3500	95	1805	3610	1586	1805	2118	1280	1805	3610	1607

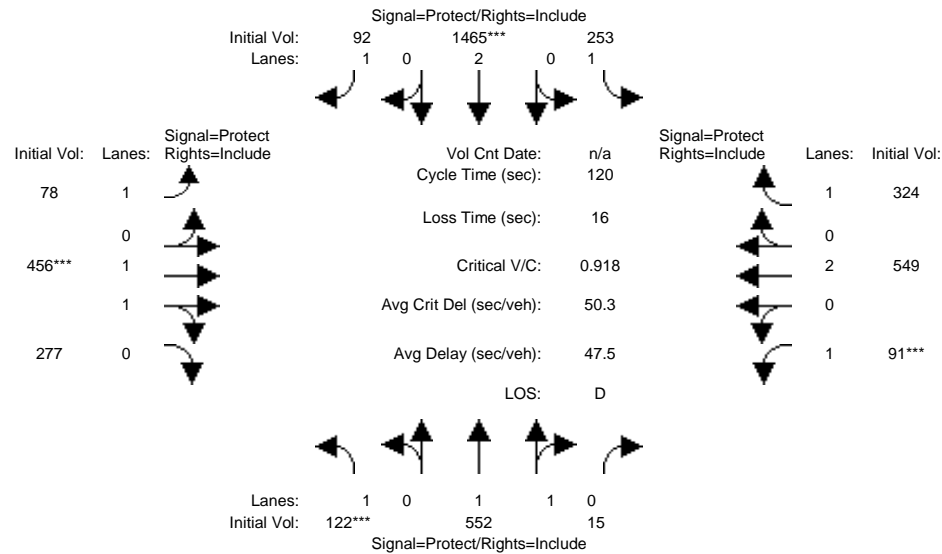
Capacity Analysis Module:												
Vol/Sat:	0.07	0.17	0.17	0.15	0.44	0.06	0.04	0.23	0.23	0.05	0.16	0.22
Crit Moves:	****			****			****			****		
Green Time:	9.3	35.4	35.4	31.4	57.4	57.4	6.3	30.1	30.1	7.1	30.9	30.9
Volume/Cap:	0.91	0.58	0.58	0.58	0.91	0.13	0.84	0.91	0.91	0.91	0.63	0.84
Delay/Veh:	105.1	36.7	36.7	40.2	36.6	17.4	102.2	57.5	57.5	115.6	40.9	56.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	105.1	36.7	36.7	40.2	36.6	17.4	102.2	57.5	57.5	115.6	40.9	56.5
LOS by Move:	F	D	D	D	D	B	F	E	E	F	D	E
HCM2k95thQ:	14	19	19	17	51	4	10	31	31	12	20	26

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Background + Project AM

Intersection #4: Paseo Padre & Peralta



Street Name:	Paseo Padre Pkwy						Peralta Blvd					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	4	10	10	4	10	10	4	10	10	4	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:												
Base Vol:	122	552	15	253	1465	92	78	456	277	91	549	324
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	122	552	15	253	1465	92	78	456	277	91	549	324
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	131	594	16	272	1575	99	84	490	298	98	590	348
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	131	594	16	272	1575	99	84	490	298	98	590	348
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	131	594	16	272	1575	99	84	490	298	98	590	348

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.95	0.83	0.95	0.90	0.89	0.95	0.95	0.85
Lanes:	1.00	1.95	0.05	1.00	2.00	1.00	1.00	1.24	0.76	1.00	2.00	1.00
Final Sat.:	1805	3500	95	1805	3610	1586	1805	2114	1284	1805	3610	1607

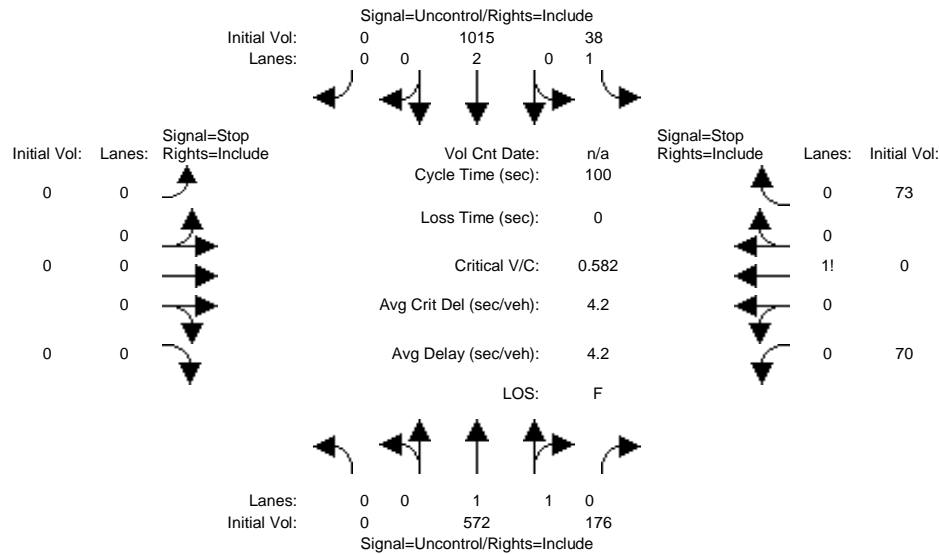
Capacity Analysis Module:												
Vol/Sat:	0.07	0.17	0.17	0.15	0.44	0.06	0.05	0.23	0.23	0.05	0.16	0.22
Crit Moves:	****			****			****			****		
Green Time:	9.5	35.2	35.2	31.3	57.1	57.1	6.6	30.3	30.3	7.1	30.8	30.8
Volume/Cap:	0.92	0.58	0.58	0.58	0.92	0.13	0.84	0.92	0.92	0.92	0.64	0.84
Delay/Veh:	106.0	36.8	36.8	40.4	37.6	17.7	101.1	58.2	58.2	117.6	41.1	57.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	106.0	36.8	36.8	40.4	37.6	17.7	101.1	58.2	58.2	117.6	41.1	57.0
LOS by Move:	F	D	D	D	D	B	F	E	E	F	D	E
HCM2k95thQ:	15	19	19	17	52	4	10	32	32	12	20	26

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Existing AM

Intersection #5: Fremont & Parish



Street Name: Fremont Blvd Parish Ave  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:												
Base Vol:	0	572	176	38	1015	0	0	0	0	70	0	73
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	572	176	38	1015	0	0	0	0	70	0	73
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	0	615	189	41	1091	0	0	0	0	75	0	78
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	615	189	41	1091	0	0	0	0	75	0	78

Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	6.5	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3

Capacity Module:												
Cnflct Vol:	xxxx	xxxx	xxxxx	811	xxxx	xxxxx	xxxx	xxxx	xxxxx	1375	1890	409
Potent Cap.:	xxxx	xxxx	xxxxx	824	xxxx	xxxxx	xxxx	xxxx	xxxxx	139	71	597
Move Cap.:	xxxx	xxxx	xxxxx	819	xxxx	xxxxx	xxxx	xxxx	xxxxx	129	67	594
Volume/Cap:	xxxx	xxxx	xxxx	0.05	xxxx	xxxx	xxxx	xxxx	xxxx	0.58	0.00	0.13

Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	9.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	215	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	4.7	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	54.9	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	F	*
ApproachDel:	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	54.9	xxxxxxx
ApproachLOS:	*	*	*	*	*	*	*	*	*	*	F	*

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

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 Intersection #5 Fremont & Parish  
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 Base Volume Alternative: Peak Hour Warrant NOT Met

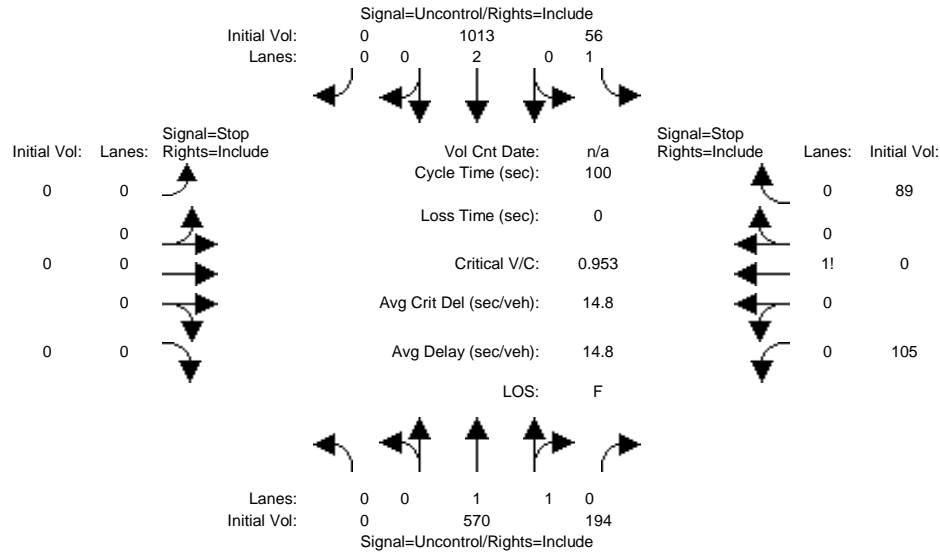
Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R



Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Existing + Project AM

Intersection #5: Fremont & Parish



Street Name: Fremont Blvd Parish Ave  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	0	570	194	56	1013	0	0	0	0	105	0	89
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	570	194	56	1013	0	0	0	0	105	0	89
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	0	613	209	60	1089	0	0	0	0	113	0	96
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	613	209	60	1089	0	0	0	0	113	0	96

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	6.5	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	829	xxxx	xxxxx	xxxx	xxxx	xxxxx	1420	1934	418
Potent Cap.:	xxxx	xxxx	xxxxx	812	xxxx	xxxxx	xxxx	xxxx	xxxxx	130	67	590
Move Cap.:	xxxx	xxxx	xxxxx	807	xxxx	xxxxx	xxxx	xxxx	xxxxx	118	61	586
Volume/Cap:	xxxx	xxxx	xxxx	0.07	xxxx	xxxx	xxxx	xxxx	xxxx	0.95	0.00	0.16

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	9.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	187	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.3	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	152	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	F	*
ApproachDel:	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	152.2	xxxxxxx	xxxxxxx
ApproachLOS:	*	*	*	*	*	*	*	*	*	F	*	*

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

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Intersection #5 Fremont & Parish  
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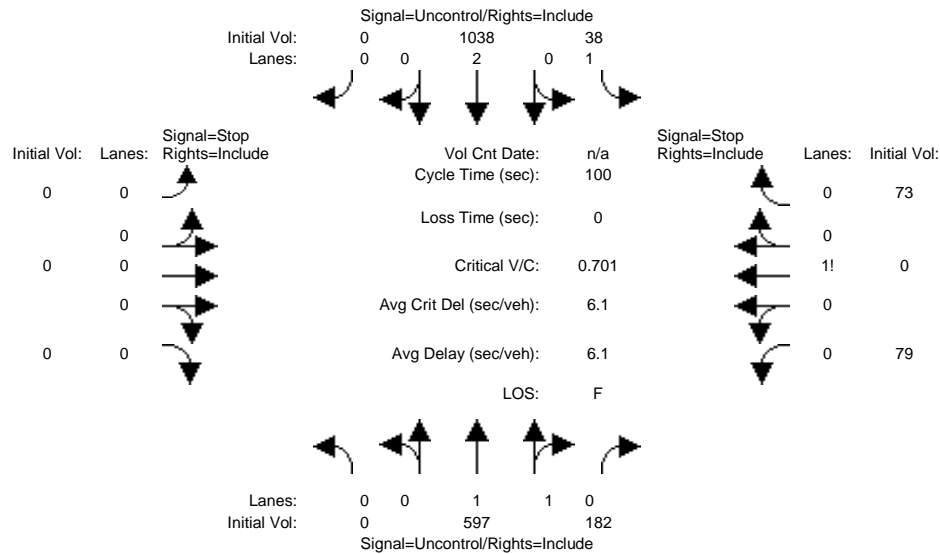
Base Volume Alternative: Peak Hour Warrant Met

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Background AM

Intersection #5: Fremont & Parish



Street Name: Fremont Blvd Parish Ave  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:												
Base Vol:	0	597	182	38	1038	0	0	0	0	79	0	73
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	597	182	38	1038	0	0	0	0	79	0	73
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	0	642	196	41	1116	0	0	0	0	85	0	78
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	642	196	41	1116	0	0	0	0	85	0	78

Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	6.5	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3

Capacity Module:												
Cnflct Vol:	xxxx	xxxx	xxxxx	845	xxxx	xxxxx	xxxx	xxxx	xxxxx	1418	1945	426
Potent Cap.:	xxxx	xxxx	xxxxx	801	xxxx	xxxxx	xxxx	xxxx	xxxxx	130	66	583
Move Cap.:	xxxx	xxxx	xxxxx	796	xxxx	xxxxx	xxxx	xxxx	xxxxx	121	62	579
Volume/Cap:	xxxx	xxxx	xxxx	0.05	xxxx	xxxx	xxxx	xxxx	xxxx	0.70	0.00	0.14

Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	9.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	195	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	6.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	77.7	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	F	*
ApproachDel:	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	77.7	xxxxxxx
ApproachLOS:	*	*	*	*	*	*	*	*	*	*	F	*

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

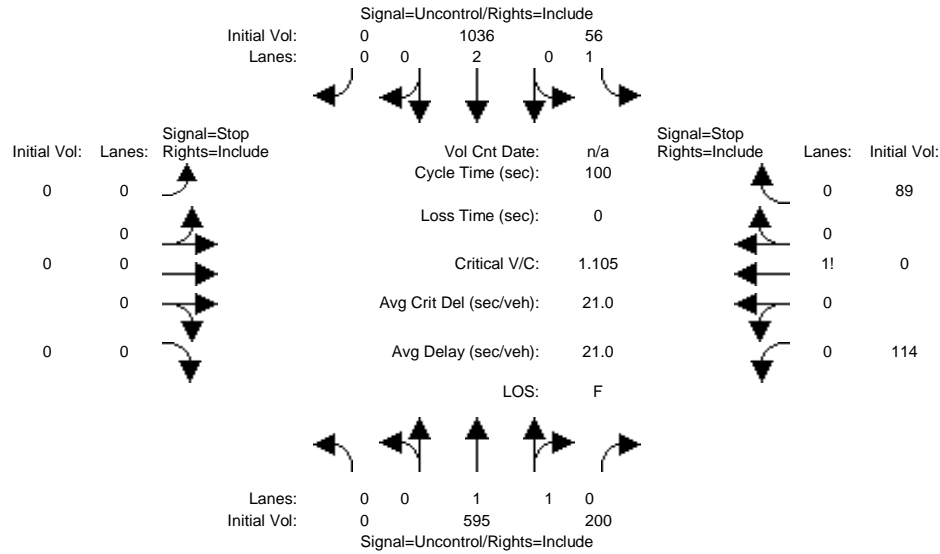
\*\*\*\*\*  
 Intersection #5 Fremont & Parish  
 \*\*\*\*\*  
 Base Volume Alternative: Peak Hour Warrant NOT Met

Level Of Service Computation Report											
Approach:	North Bound	South Bound	East Bound	West Bound							
Movement:	L - T - R	L - T - R	L - T - R	L - T - R							

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Background + Project AM

Intersection #5: Fremont & Parish



Street Name: Fremont Blvd Parish Ave  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	0	595	200	56	1036	0	0	0	0	114	0	89
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	595	200	56	1036	0	0	0	0	114	0	89
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	0	640	215	60	1114	0	0	0	0	123	0	96
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	640	215	60	1114	0	0	0	0	123	0	96

Critical Gap Module:	North Bound			South Bound			East Bound			West Bound		
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	6.5	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3

Capacity Module:	North Bound			South Bound			East Bound			West Bound		
Cnflct Vol:	xxxx	xxxx	xxxxx	862	xxxx	xxxxx	xxxx	xxxx	xxxxx	1463	1989	434
Potent Cap.:	xxxx	xxxx	xxxxx	789	xxxx	xxxxx	xxxx	xxxx	xxxxx	122	62	575
Move Cap.:	xxxx	xxxx	xxxxx	784	xxxx	xxxxx	xxxx	xxxx	xxxxx	111	57	572
Volume/Cap:	xxxx	xxxx	xxxx	0.08	xxxx	xxxx	xxxx	xxxx	xxxx	1.11	0.00	0.17

Level Of Service Module:	North Bound			South Bound			East Bound			West Bound		
2Way95thQ:	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	10.0	xxxx	xxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	172	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	12.4	xxxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	213	xxxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	F	*
ApproachDel:	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	213.0	xxxxxxx	
ApproachLOS:	*	*	*	*	*	*	*	*	*	F	*	

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

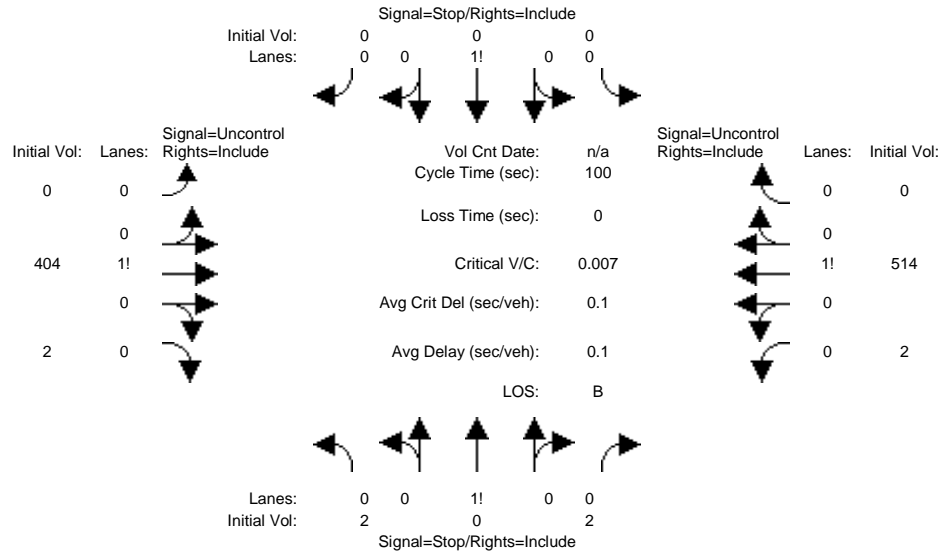
\*\*\*\*\*  
 Intersection #5 Fremont & Parish  
 \*\*\*\*\*  
 Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Existing AM

Intersection #6: Jason & Peralta



Street Name: Jason Way Peralta Blvd  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	2	0	2	0	0	0	0	404	2	2	514	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	0	2	0	0	0	0	404	2	2	514	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	0	2	0	0	0	0	404	2	2	514	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	2	0	2	0	0	0	0	404	2	2	514	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	923	923	405	924	924	514	xxxx	xxxx	xxxxx	406	xxxx	xxxxx
Potent Cap.:	302	272	650	252	271	564	xxxx	xxxx	xxxxx	1164	xxxx	xxxxx
Move Cap.:	302	271	650	251	271	564	xxxx	xxxx	xxxxx	1164	xxxx	xxxxx
Volume/Cap:	0.01	0.00	0.00	0.00	0.00	0.00	xxxx	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	412	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	13.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*
ApproachDel:	13.8			xxxxxxx			xxxxxxx		xxxxxxx		xxxxxxx	
ApproachLOS:	B			*			*		*		*	

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

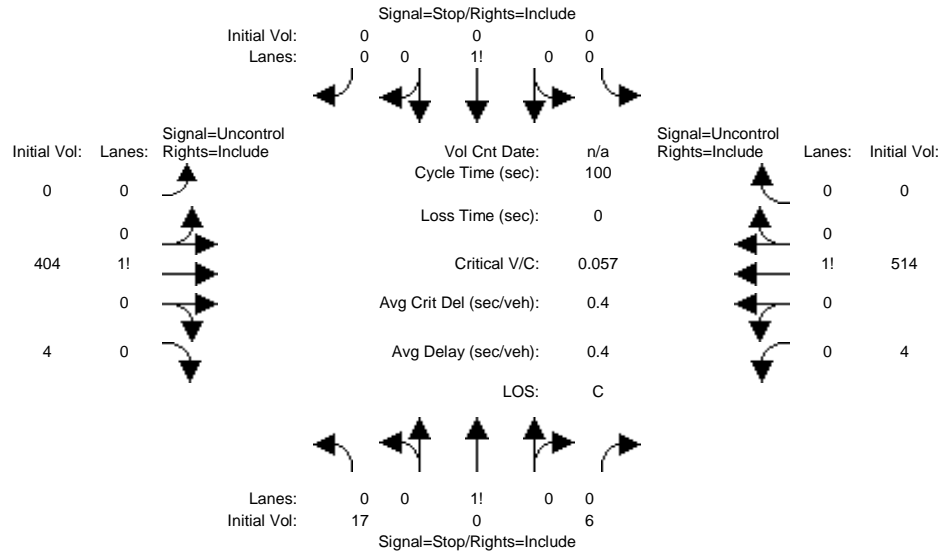
\*\*\*\*\*  
Intersection #6 Jason & Peralta  
\*\*\*\*\*  
Base Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Existing + Project AM

Intersection #6: Jason & Peralta



Street Name: Jason Way Peralta Blvd  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	17	0	6	0	0	0	0	404	4	4	514	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	17	0	6	0	0	0	0	404	4	4	514	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	17	0	6	0	0	0	0	404	4	4	514	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	17	0	6	0	0	0	0	404	4	4	514	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	928	928	406	931	930	514	xxxx	xxxx	xxxxx	408	xxxx	xxxxx
Potent Cap.:	300	270	649	249	269	564	xxxx	xxxx	xxxxx	1162	xxxx	xxxxx
Move Cap.:	299	269	649	246	268	564	xxxx	xxxx	xxxxx	1162	xxxx	xxxxx
Volume/Cap:	0.06	0.00	0.01	0.00	0.00	0.00	xxxx	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	348	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	16.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx
Shared LOS:	*	C	*	*	*	*	*	*	*	A	*	*
ApproachDel:	16.1			xxxxxxx			xxxxxxx		xxxxxxx		xxxxxxx	
ApproachLOS:	C				*			*			*	

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

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 Intersection #6 Jason & Peralta  
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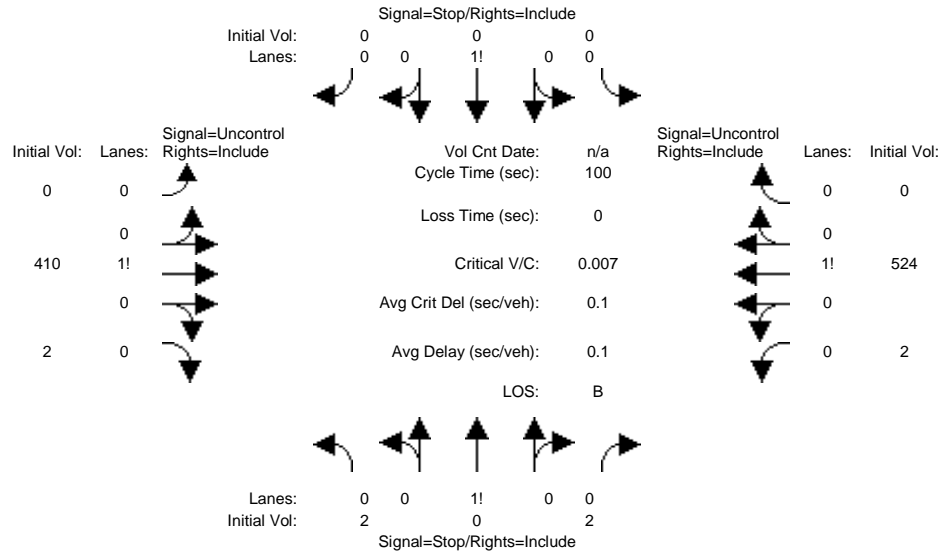
Base Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Background AM

Intersection #6: Jason & Peralta



Street Name: Jason Way Peralta Blvd  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:												
Base Vol:	2	0	2	0	0	0	0	410	2	2	524	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	0	2	0	0	0	0	410	2	2	524	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	0	2	0	0	0	0	410	2	2	524	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	2	0	2	0	0	0	0	410	2	2	524	0

Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:												
Cnflct Vol:	939	939	411	940	940	524	xxxx	xxxx	xxxxx	412	xxxx	xxxxx
Potent Cap.:	295	266	645	246	266	557	xxxx	xxxx	xxxxx	1158	xxxx	xxxxx
Move Cap.:	295	266	645	245	265	557	xxxx	xxxx	xxxxx	1158	xxxx	xxxxx
Volume/Cap:	0.01	0.00	0.00	0.00	0.00	0.00	xxxx	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	405	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	14.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*
ApproachDel:	14.0			xxxxxxx			xxxxxxx		xxxxxxx	xxxxxxx		
ApproachLOS:	B				*			*			*	

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

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Intersection #6 Jason & Peralta

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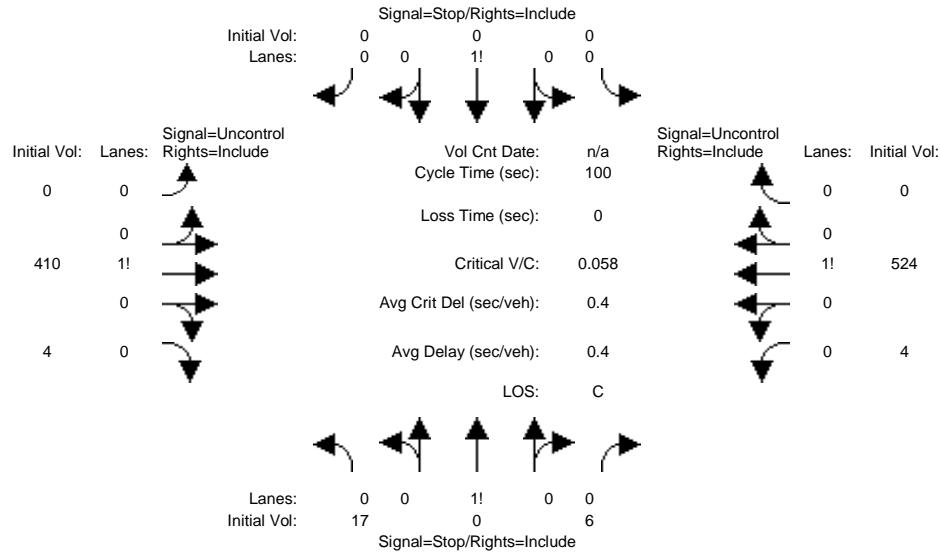
Base Volume Alternative: Peak Hour Warrant NOT Met

Level Of Service Module:												
Approach:	North Bound	South Bound	East Bound	West Bound								
Movement:	L - T - R	L - T - R	L - T - R	L - T - R								

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Background + Project AM

Intersection #6: Jason & Peralta



Street Name: Jason Way Peralta Blvd  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:												
Base Vol:	17	0	6	0	0	0	0	410	4	4	524	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	17	0	6	0	0	0	0	410	4	4	524	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	17	0	6	0	0	0	0	410	4	4	524	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	17	0	6	0	0	0	0	410	4	4	524	0

Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:												
Cnflct Vol:	944	944	412	947	946	524	xxxx	xxxx	xxxxx	414	xxxx	xxxxx
Potent Cap.:	293	264	644	243	264	557	xxxx	xxxx	xxxxx	1156	xxxx	xxxxx
Move Cap.:	293	263	644	240	263	557	xxxx	xxxx	xxxxx	1156	xxxx	xxxxx
Volume/Cap:	0.06	0.00	0.01	0.00	0.00	0.00	xxxx	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	341	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	16.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx
Shared LOS:	*	C	*	*	*	*	*	*	*	A	*	*
ApproachDel:	16.3			xxxxxxx			xxxxxxx		xxxxxxx	xxxxxxx		
ApproachLOS:	C				*			*			*	

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

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Intersection #6 Jason & Peralta

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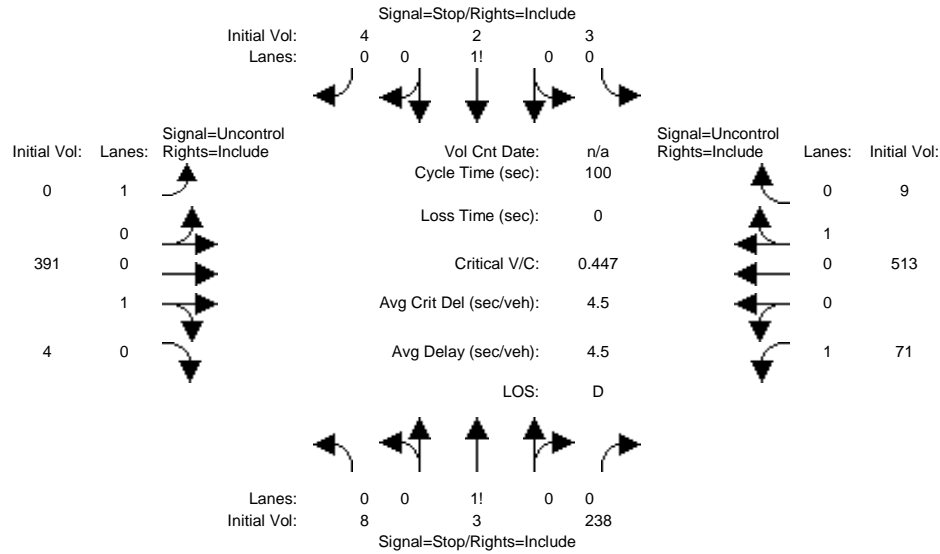
Base Volume Alternative: Peak Hour Warrant NOT Met

Level Of Service Module:												
Approach:	North Bound	South Bound	East Bound	West Bound								
Movement:	L - T - R	L - T - R	L - T - R	L - T - R								

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Existing AM

Intersection #7: Parish & Peralta



Street Name: Parish Ave Peralta Blvd  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	8	3	238	3	2	4	0	391	4	71	513	9
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	3	238	3	2	4	0	391	4	71	513	9
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	9	3	274	3	2	5	0	449	5	82	590	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	9	3	274	3	2	5	0	449	5	82	590	10

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	1213	1215	452	1348	1212	595	xxxx	xxxx	xxxxx	454	xxxx	xxxxx
Potent Cap.:	160	183	612	129	184	508	xxxx	xxxx	xxxxx	1117	xxxx	xxxxx
Move Cap.:	148	170	612	66	170	508	xxxx	xxxx	xxxxx	1117	xxxx	xxxxx
Volume/Cap:	0.06	0.02	0.45	0.05	0.01	0.01	xxxx	xxxx	xxxx	0.07	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT			
Shared Cap.:	xxxx	541	xxxxx	xxxx	139	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	3.1	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	18.9	xxxxx	xxxxx	33.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	D	*	*	*	*	*	*	*
ApproachDel:	18.9			33.0			xxxxxxx		xxxxxxx			
ApproachLOS:	C			D			*		*		*	

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

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 Intersection #7 Parish & Peralta  
 \*\*\*\*\*  
 Base Volume Alternative: Peak Hour Warrant NOT Met

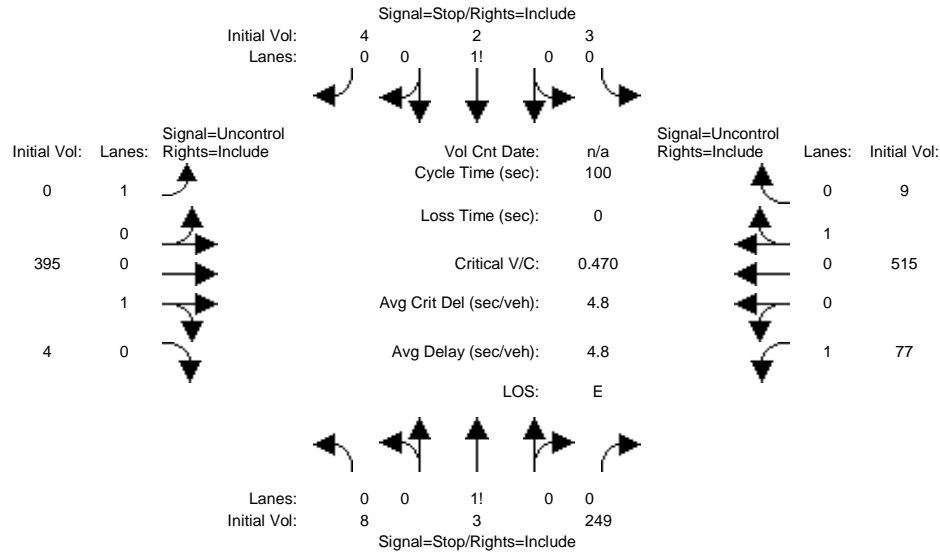
Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R



Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Existing + Project AM

Intersection #7: Parish & Peralta



Street Name: Parish Ave Peralta Blvd  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	8	3	249	3	2	4	0	395	4	77	515	9
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	3	249	3	2	4	0	395	4	77	515	9
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	9	3	286	3	2	5	0	454	5	89	592	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	9	3	286	3	2	5	0	454	5	89	592	10

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflct Vol:	1234	1236	456	1375	1233	597	xxxxx	xxxxx	xxxxx	459	xxxxx	xxxxx
Potent Cap.:	155	178	608	124	178	507	xxxxx	xxxxx	xxxxx	1113	xxxxx	xxxxx
Move Cap.:	143	164	608	61	164	507	xxxxx	xxxxx	xxxxx	1113	xxxxx	xxxxx
Volume/Cap:	0.06	0.02	0.47	0.06	0.01	0.01	xxxxx	xxxxx	xxxxx	0.08	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.3	xxxxx	xxxxx
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	8.5	xxxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxxx	538	xxxxx	xxxxx	129	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	3.4	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	19.8	xxxxx	xxxxx	35.2	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	C	*	*	E	*	*	*	*	*	*	*
ApproachDel:	19.8			35.2			xxxxxxx			xxxxxxx		
ApproachLOS:	C			E			*			*		*

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

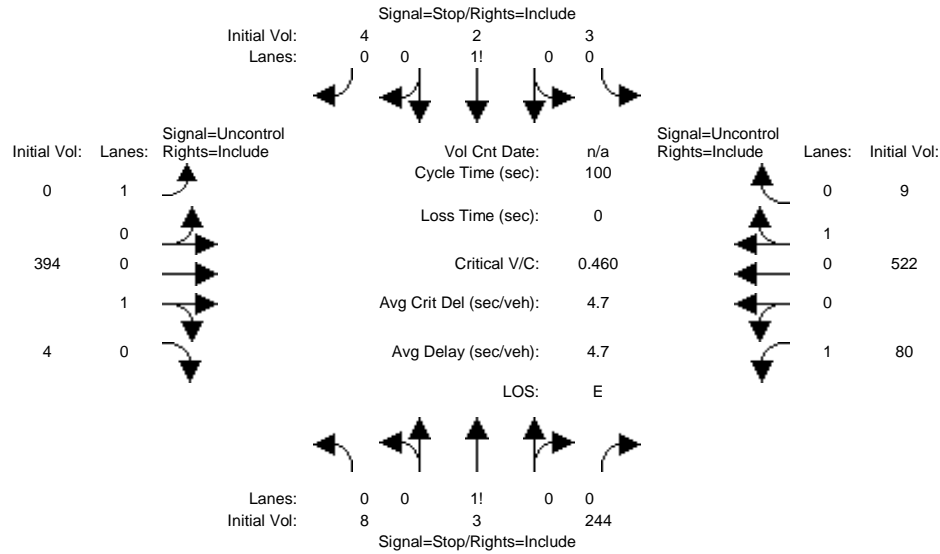
\*\*\*\*\*  
 Intersection #7 Parish & Peralta  
 \*\*\*\*\*  
 Base Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Background AM

Intersection #7: Parish & Peralta



Street Name: Parish Ave Peralta Blvd  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	8	3	244	3	2	4	0	394	4	80	522	9
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	3	244	3	2	4	0	394	4	80	522	9
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	9	3	280	3	2	5	0	453	5	92	600	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	9	3	280	3	2	5	0	453	5	92	600	10

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	1248	1249	455	1386	1247	605	xxxx	xxxx	xxxxx	457	xxxx	xxxxx
Potent Cap.:	152	174	609	122	175	501	xxxx	xxxx	xxxxx	1114	xxxx	xxxxx
Move Cap.:	139	160	609	61	161	501	xxxx	xxxx	xxxxx	1114	xxxx	xxxxx
Volume/Cap:	0.07	0.02	0.46	0.06	0.01	0.01	xxxx	xxxx	xxxx	0.08	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT			
Shared Cap.:	xxxx	535	xxxxx	xxxx	129	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	3.3	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	19.6	xxxxx	xxxxx	35.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	E	*	*	*	*	*	*	*
ApproachDel:	19.6			35.4			xxxxxxx		xxxxxxx			
ApproachLOS:	C			E			*		*		*	

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

Intersection #7 Parish & Peralta

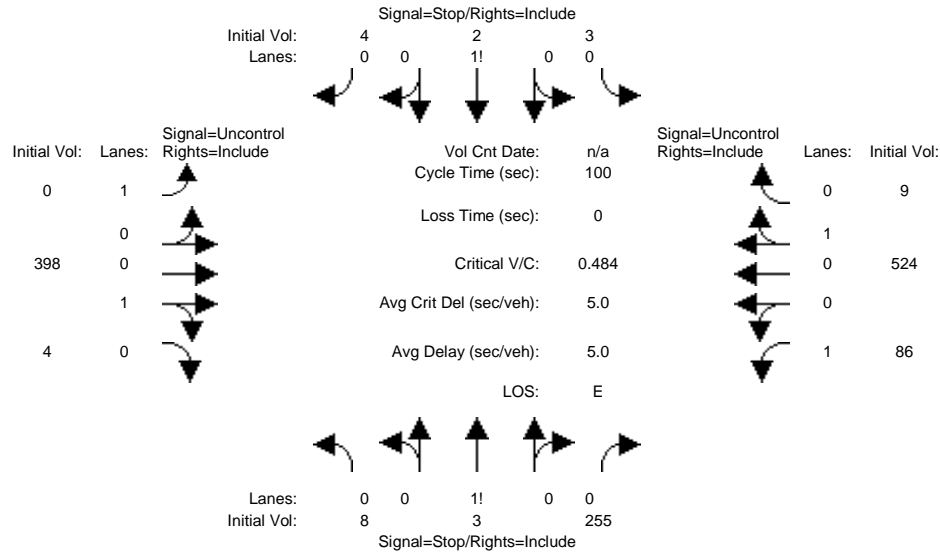
Base Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Background + Project AM

Intersection #7: Parish & Peralta



Street Name: Parish Ave Peralta Blvd  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	8	3	255	3	2	4	0	398	4	86	524	9
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	3	255	3	2	4	0	398	4	86	524	9
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	9	3	293	3	2	5	0	457	5	99	602	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	9	3	293	3	2	5	0	457	5	99	602	10

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	1268	1270	460	1413	1267	607	xxxx	xxxx	xxxxx	462	xxxx	xxxxx
Potent Cap.:	147	170	606	117	170	500	xxxx	xxxx	xxxxx	1110	xxxx	xxxxx
Move Cap.:	134	154	606	55	155	500	xxxx	xxxx	xxxxx	1110	xxxx	xxxxx
Volume/Cap:	0.07	0.02	0.48	0.06	0.01	0.01	xxxx	xxxx	xxxx	0.09	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT			
Shared Cap.:	xxxx	532	xxxxx	xxxx	119	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	3.6	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	20.5	xxxxx	xxxxx	38.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	E	*	*	*	*	*	*	*
ApproachDel:	20.5			38.0			xxxxxxx		xxxxxxx			
ApproachLOS:	C			E			*		*		*	

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

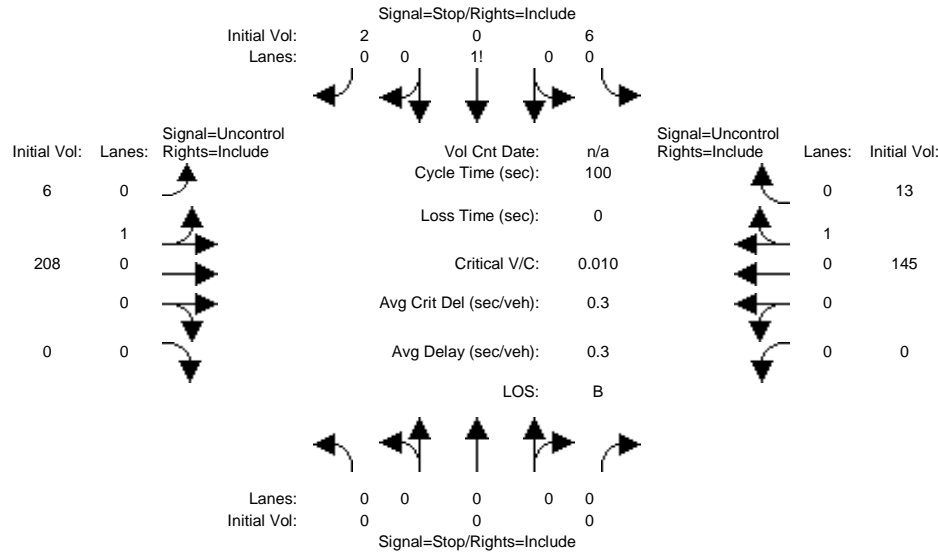
\*\*\*\*\*  
 Intersection #7 Parish & Peralta  
 \*\*\*\*\*  
 Base Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Existing AM

Intersection #8: Jason & Parish



Street Name: Jason Way Parish Ave  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	0	0	0	6	0	2	6	208	0	0	145	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	6	0	2	6	208	0	0	145	13
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	6	0	2	6	208	0	0	145	13
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	6	0	2	6	208	0	0	145	13

Critical Gap Module:	North Bound			South Bound			East Bound			West Bound		
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:	North Bound			South Bound			East Bound			West Bound		
Cnflct Vol:	xxxx	xxxx	xxxxx	372	372	152	158	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	633	562	900	1434	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	631	559	900	1434	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.01	0.00	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:	North Bound			South Bound			East Bound			West Bound		
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	682	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.0	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	10.3	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxxx	10.3	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	
ApproachLOS:	*	B	*	*	B	*	*	*	*	*	*	

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

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Intersection #8 Jason & Parish  
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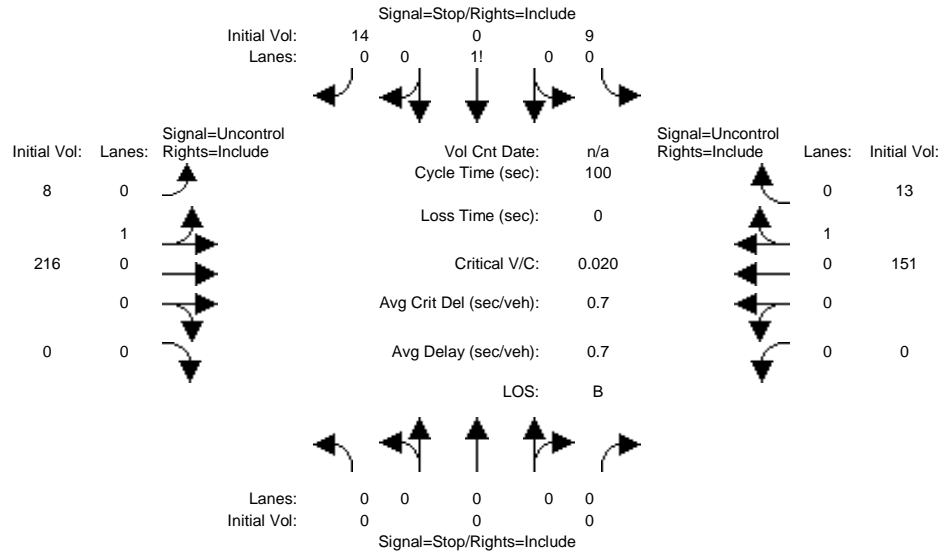
Base Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Existing + Project AM

Intersection #8: Jason & Parish



Street Name: Jason Way Parish Ave  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	0	0	0	9	0	14	8	216	0	0	151	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	9	0	14	8	216	0	0	151	13
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
PHF Volume:	0	0	0	11	0	17	10	263	0	0	184	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	11	0	17	10	263	0	0	184	16

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	475	475	192	200	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	552	491	855	1384	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	549	488	855	1384	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.02	0.00	0.02	0.01	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	702	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	10.3	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxxx			10.3			xxxxxxx			xxxxxxx		
ApproachLOS:	*			B			*			*		*

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

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Intersection #8 Jason & Parish  
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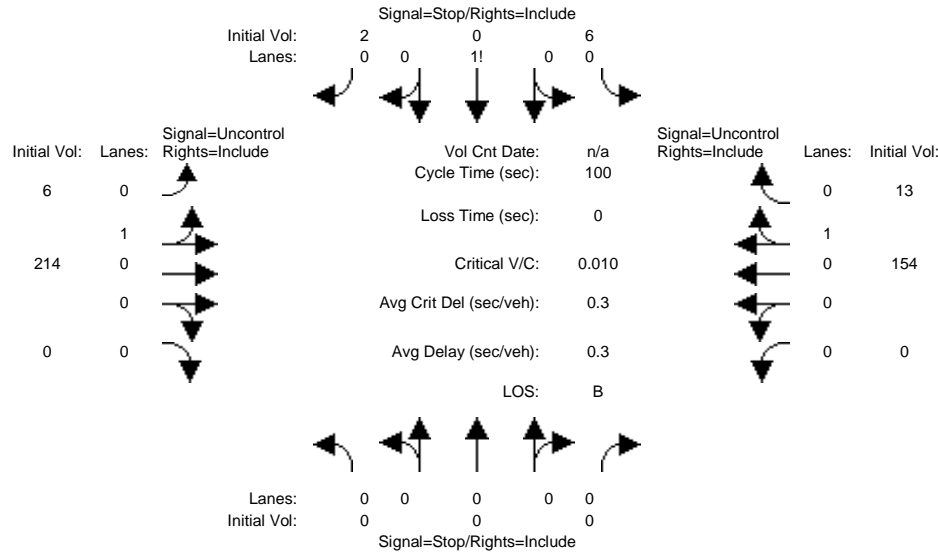
Base Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Background AM

Intersection #8: Jason & Parish



Street Name: Jason Way Parish Ave  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	0	0	0	6	0	2	6	214	0	0	154	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	6	0	2	6	214	0	0	154	13
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	6	0	2	6	214	0	0	154	13
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	6	0	2	6	214	0	0	154	13

Critical Gap Module:	North Bound			South Bound			East Bound			West Bound		
Critical Gp:	xxxxx	xxxx	xxxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
FollowUpTim:	xxxxx	xxxx	xxxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx

Capacity Module:	North Bound			South Bound			East Bound			West Bound		
Cnflct Vol:	xxxx	xxxx	xxxxxx	387	387	161	167	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Potent Cap.:	xxxx	xxxx	xxxxxx	621	551	890	1423	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Move Cap.:	xxxx	xxxx	xxxxxx	619	549	890	1423	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.01	0.00	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:	North Bound			South Bound			East Bound			West Bound		
2Way95thQ:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	0.0	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Control Del:	xxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	7.5	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	670	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	0.0	xxxxxx	0.0	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	10.4	xxxxxx	7.5	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxxx			10.4			xxxxxxx			xxxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

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Intersection #8 Jason & Parish  
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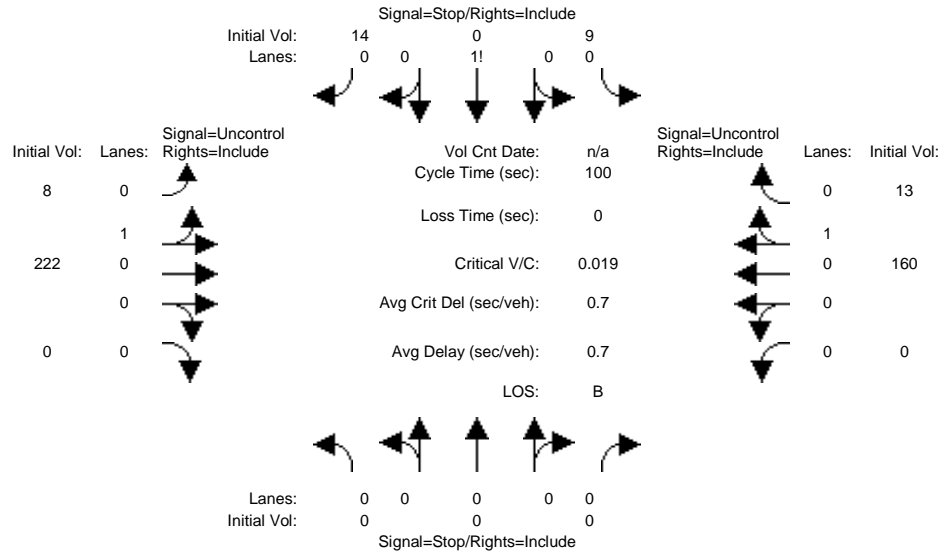
Base Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Background + Project AM

Intersection #8: Jason & Parish



Street Name: Jason Way Parish Ave  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:												
	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Base Vol:	0	0	0	9	0	14	8	222	0	0	160	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	9	0	14	8	222	0	0	160	13
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	0	0	0	11	0	16	9	261	0	0	188	15
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	11	0	16	9	261	0	0	188	15

Critical Gap Module:												
	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:												
	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Cnflct Vol:	xxxx	xxxx	xxxxx	476	476	196	204	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	551	491	851	1380	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	548	487	851	1380	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.02	0.00	0.02	0.01	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:												
	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	700	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	10.4	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxxx	xxxxxxx	xxxxxxx	10.4	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	
ApproachLOS:	*	*	*	B	B	B	*	*	*	*	*	*

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

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Intersection #8 Jason & Parish  
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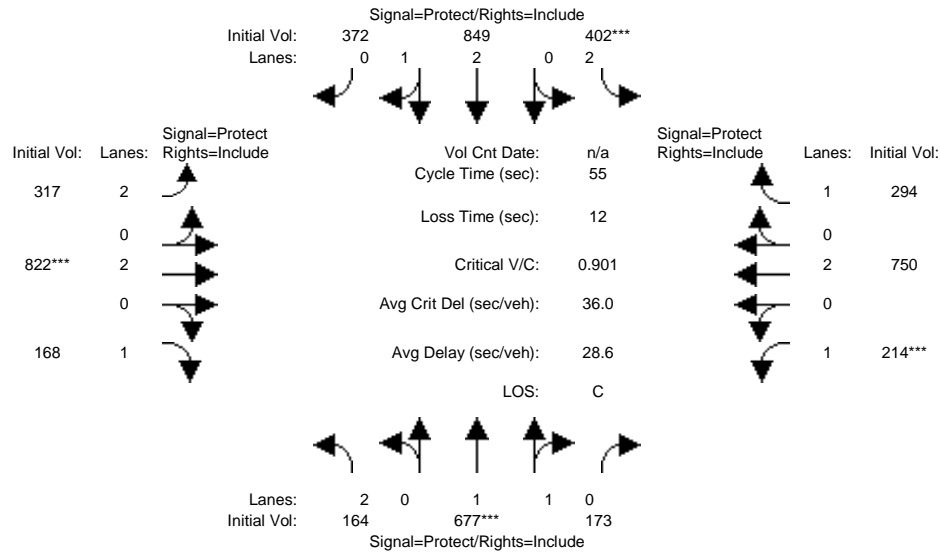
Base Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Cumulative AM

Intersection #1: Fremont & Thornton



Street Name:	Fremont Blvd						Thornton Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	4	10	10	4	10	10	4	10	10	4	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:	Fremont Blvd NB			Fremont Blvd SB			Thornton Ave EB			Thornton Ave WB		
Base Vol:	164	677	173	402	849	372	317	822	168	214	750	294
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	164	677	173	402	849	372	317	822	168	214	750	294
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	164	677	173	402	849	372	317	822	168	214	750	294
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	164	677	173	402	849	372	317	822	168	214	750	294
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	164	677	173	402	849	372	317	822	168	214	750	294

Saturation Flow Module:	Fremont Blvd NB			Fremont Blvd SB			Thornton Ave EB			Thornton Ave WB		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.92	0.87	0.87	0.92	0.95	0.84	0.95	0.95	0.84
Lanes:	2.00	1.59	0.41	2.00	2.08	0.92	2.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	2786	712	3502	3439	1507	3502	3610	1596	1805	3610	1603

Capacity Analysis Module:	Fremont Blvd NB			Fremont Blvd SB			Thornton Ave EB			Thornton Ave WB		
Vol/Sat:	0.05	0.24	0.24	0.11	0.25	0.25	0.09	0.23	0.11	0.12	0.21	0.18
Crit Moves:	****			****			****			****		
Green Time:	5.0	14.8	14.8	7.0	16.9	16.9	6.4	13.9	13.9	7.2	14.7	14.7
Volume/Cap:	0.52	0.90	0.90	0.90	0.80	0.80	0.78	0.90	0.42	0.90	0.78	0.68
Delay/Veh:	25.4	30.9	30.9	44.6	20.8	20.8	32.6	31.7	17.9	56.7	22.6	22.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.4	30.9	30.9	44.6	20.8	20.8	32.6	31.7	17.9	56.7	22.6	22.6
LOS by Move:	C	C	C	D	C	C	C	C	B	E	C	C
HCM2k95thQ:	4	21	21	13	18	18	10	21	6	14	16	12

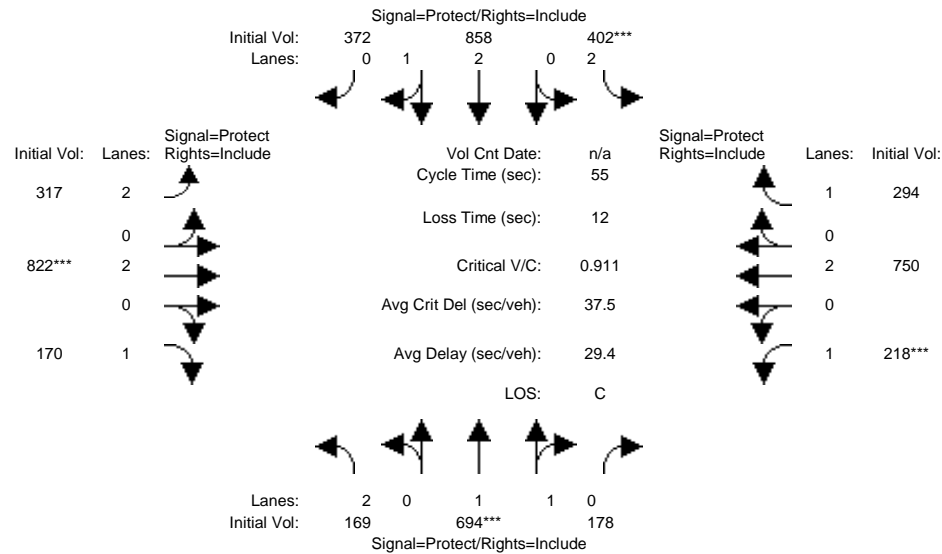
Note: Queue reported is the number of cars per lane.



Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Cumulative + Project AM

Intersection #1: Fremont & Thornton



Street Name:	Fremont Blvd						Thornton Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	4	10	10	4	10	10	4	10	10	4	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	169	694	178	402	858	372	317	822	170	218	750	294
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	169	694	178	402	858	372	317	822	170	218	750	294
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	169	694	178	402	858	372	317	822	170	218	750	294
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	169	694	178	402	858	372	317	822	170	218	750	294
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	169	694	178	402	858	372	317	822	170	218	750	294

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.92	0.87	0.87	0.92	0.95	0.84	0.95	0.95	0.84
Lanes:	2.00	1.59	0.41	2.00	2.09	0.91	2.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	2784	714	3502	3453	1497	3502	3610	1596	1805	3610	1603

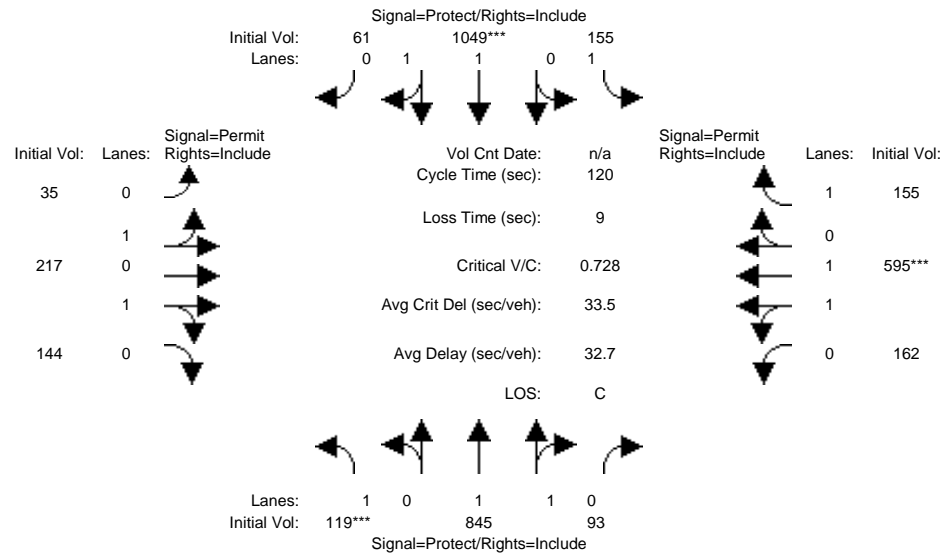
Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.05	0.25	0.25	0.11	0.25	0.25	0.09	0.23	0.11	0.12	0.21	0.18
Crit Moves:	****			****			****			****		
Green Time:	5.0	15.0	15.0	6.9	17.0	17.0	6.4	13.7	13.7	7.3	14.6	14.6
Volume/Cap:	0.53	0.91	0.91	0.91	0.80	0.80	0.78	0.91	0.43	0.91	0.78	0.69
Delay/Veh:	25.7	32.0	32.0	46.6	20.7	20.7	33.0	33.3	18.1	58.8	22.8	22.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.7	32.0	32.0	46.6	20.7	20.7	33.0	33.3	18.1	58.8	22.8	22.8
LOS by Move:	C	C	C	D	C	C	C	C	B	E	C	C
HCM2k95thQ:	5	22	22	14	18	18	10	21	6	14	16	12

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Cumulative AM

Intersection #2: Fremont & Peralta



Street Name:	Fremont Blvd						Peralta Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Min. Green:	4	6	6	4	6	6	4	4	4	4	4	4
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:												
Base Vol:	119	845	93	155	1049	61	35	217	144	162	595	155
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	119	845	93	155	1049	61	35	217	144	162	595	155
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	119	845	93	155	1049	61	35	217	144	162	595	155
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	119	845	93	155	1049	61	35	217	144	162	595	155
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	119	845	93	155	1049	61	35	217	144	162	595	155

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.74	0.74	0.74	0.67	0.67	0.84
Lanes:	1.00	1.80	0.20	1.00	1.89	0.11	0.18	1.09	0.73	0.43	1.57	1.00
Final Sat.:	1805	3203	353	1805	3384	197	249	1543	1024	545	2003	1598

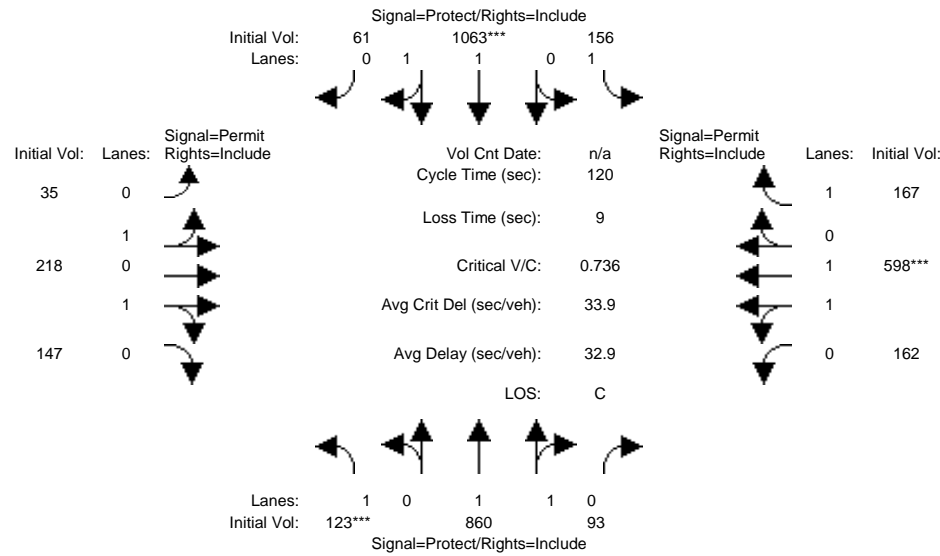
Capacity Analysis Module:												
Vol/Sat:	0.07	0.26	0.26	0.09	0.31	0.31	0.14	0.14	0.14	0.30	0.30	0.10
Crit Moves:	****				****					****		
Green Time:	10.9	46.8	46.8	15.2	51.1	51.1	49.0	49.0	49.0	49.0	49.0	49.0
Volume/Cap:	0.73	0.68	0.68	0.68	0.73	0.73	0.34	0.34	0.34	0.73	0.73	0.24
Delay/Veh:	68.3	31.7	31.7	57.9	30.4	30.4	24.6	24.6	24.6	32.5	32.5	23.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	68.3	31.7	31.7	57.9	30.4	30.4	24.6	24.6	24.6	32.5	32.5	23.4
LOS by Move:	E	C	C	E	C	C	C	C	C	C	C	C
HCM2k95thQ:	11	27	27	13	32	32	10	10	10	24	24	7

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Cumulative + Project AM

Intersection #2: Fremont & Peralta



Street Name:	Fremont Blvd						Peralta Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Min. Green:	4	6	6	4	6	6	4	4	4	4	4	4
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:												
Base Vol:	123	860	93	156	1063	61	35	218	147	162	598	167
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	123	860	93	156	1063	61	35	218	147	162	598	167
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	123	860	93	156	1063	61	35	218	147	162	598	167
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	123	860	93	156	1063	61	35	218	147	162	598	167
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	123	860	93	156	1063	61	35	218	147	162	598	167

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.74	0.74	0.74	0.67	0.67	0.84
Lanes:	1.00	1.80	0.20	1.00	1.89	0.11	0.17	1.09	0.74	0.43	1.57	1.00
Final Sat.:	1805	3209	347	1805	3387	194	246	1529	1031	542	1999	1598

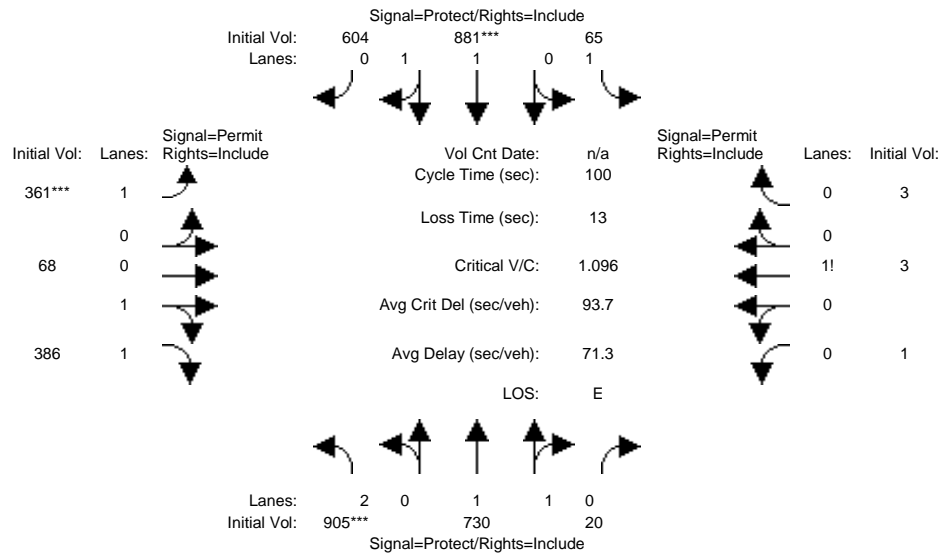
Capacity Analysis Module:												
Vol/Sat:	0.07	0.27	0.27	0.09	0.31	0.31	0.14	0.14	0.14	0.30	0.30	0.10
Crit Moves:	***				***						***	
Green Time:	11.1	47.1	47.1	15.2	51.1	51.1	48.7	48.7	48.7	48.7	48.7	48.7
Volume/Cap:	0.74	0.68	0.68	0.68	0.74	0.74	0.35	0.35	0.35	0.74	0.74	0.26
Delay/Veh:	68.7	31.7	31.7	58.4	30.7	30.7	24.9	24.9	24.9	33.0	33.0	23.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	68.7	31.7	31.7	58.4	30.7	30.7	24.9	24.9	24.9	33.0	33.0	23.8
LOS by Move:	E	C	C	E	C	C	C	C	C	C	C	C
HCM2k95thQ:	12	28	28	13	33	33	11	11	10	24	24	8

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Cumulative AM

Intersection #3: Fremont & Central



Street Name:	Fremont Blvd						Central Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:												
Base Vol:	905	730	20	65	881	604	361	68	386	1	3	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	905	730	20	65	881	604	361	68	386	1	3	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	905	730	20	65	881	604	361	68	386	1	3	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	905	730	20	65	881	604	361	68	386	1	3	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	905	730	20	65	881	604	361	68	386	1	3	3

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.89	0.87	0.75	0.87	0.83	0.92	0.93	0.92
Lanes:	2.00	1.95	0.05	1.00	1.18	0.82	1.00	0.29	1.71	0.14	0.43	0.43
Final Sat.:	3502	3500	96	1805	1993	1367	1425	476	2701	250	751	751

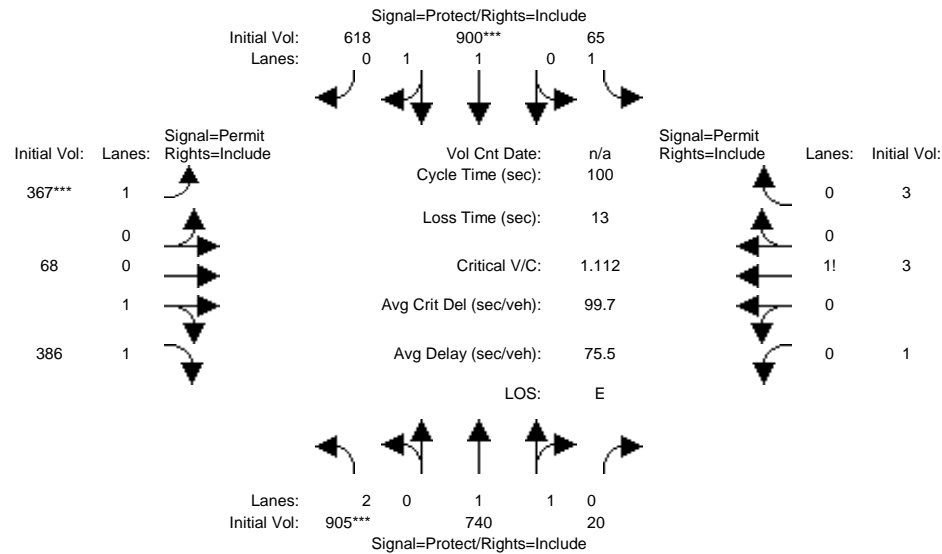
Capacity Analysis Module:												
Vol/Sat:	0.26	0.21	0.21	0.04	0.44	0.44	0.25	0.14	0.14	0.00	0.00	0.00
Crit Moves:	****				****		****					
Green Time:	23.6	54.5	54.5	9.4	40.3	40.3	23.1	23.1	23.1	23.1	23.1	23.1
Volume/Cap:	1.10	0.38	0.38	0.38	1.10	1.10	1.10	0.62	0.62	0.02	0.02	0.02
Delay/Veh:	99.1	13.2	13.2	44.0	85.0	85.0	116.3	36.1	36.1	29.7	29.7	29.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	99.1	13.2	13.2	44.0	85.0	85.0	116.3	36.1	36.1	29.7	29.7	29.7
LOS by Move:	F	B	B	D	F	F	F	D	D	C	C	C
HCM2k95thQ:	39	13	13	5	58	57	32	14	14	0	0	0

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Cumulative + Project AM

Intersection #3: Fremont & Central



Street Name:	Fremont Blvd						Central Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:												
Base Vol:	905	740	20	65	900	618	367	68	386	1	3	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	905	740	20	65	900	618	367	68	386	1	3	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	905	740	20	65	900	618	367	68	386	1	3	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	905	740	20	65	900	618	367	68	386	1	3	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	905	740	20	65	900	618	367	68	386	1	3	3

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.89	0.87	0.75	0.87	0.83	0.92	0.93	0.92
Lanes:	2.00	1.95	0.05	1.00	1.18	0.82	1.00	0.29	1.71	0.14	0.43	0.43
Final Sat.:	3502	3501	95	1805	1992	1368	1426	476	2701	250	751	751

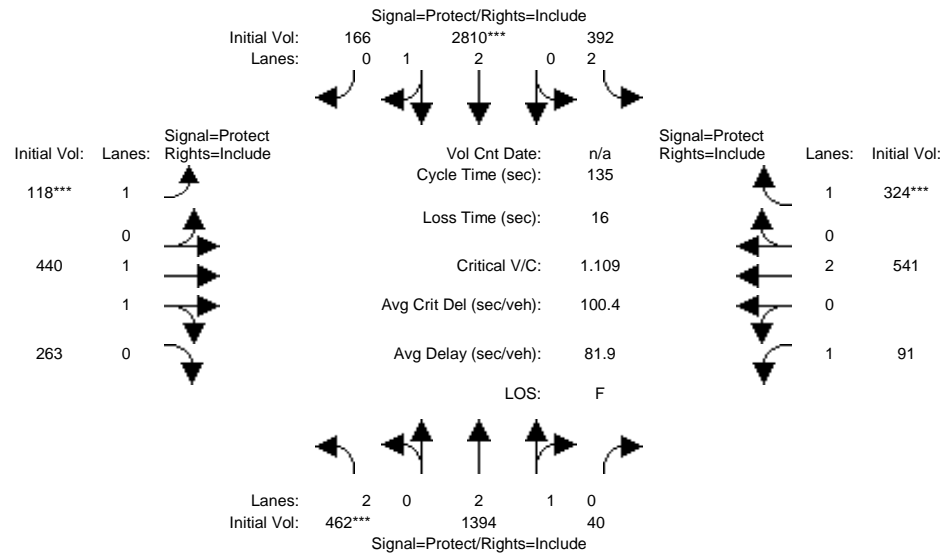
Capacity Analysis Module:												
Vol/Sat:	0.26	0.21	0.21	0.04	0.45	0.45	0.26	0.14	0.14	0.00	0.00	0.00
Crit Moves:	****				****		****					
Green Time:	23.2	54.6	54.6	9.3	40.6	40.6	23.1	23.1	23.1	23.1	23.1	23.1
Volume/Cap:	1.11	0.39	0.39	0.39	1.11	1.11	1.11	0.62	0.62	0.02	0.02	0.02
Delay/Veh:	105.4	13.2	13.2	44.2	91.0	91.0	121.7	36.1	36.1	29.7	29.7	29.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	105.4	13.2	13.2	44.2	91.0	91.0	121.7	36.1	36.1	29.7	29.7	29.7
LOS by Move:	F	B	B	D	F	F	F	D	D	C	C	C
HCM2k95thQ:	40	13	13	5	61	60	33	14	14	0	0	0

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Cumulative AM

Intersection #4: Paseo Padre & Peralta



Street Name:	Paseo Padre Pkwy						Peralta Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Min. Green:	4	10	10	4	10	10	4	10	10	4	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:

Base Vol:	462	1394	40	392	2810	166	118	440	263	91	541	324
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	462	1394	40	392	2810	166	118	440	263	91	541	324
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	462	1394	40	392	2810	166	118	440	263	91	541	324
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	462	1394	40	392	2810	166	118	440	263	91	541	324
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	462	1394	40	392	2810	166	118	440	263	91	541	324

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.91	0.92	0.90	0.90	0.95	0.90	0.89	0.95	0.95	0.85
Lanes:	2.00	2.92	0.08	2.00	2.83	0.17	1.00	1.25	0.75	1.00	2.00	1.00
Final Sat.:	3502	5022	144	3502	4858	287	1805	2130	1273	1805	3610	1608

Capacity Analysis Module:

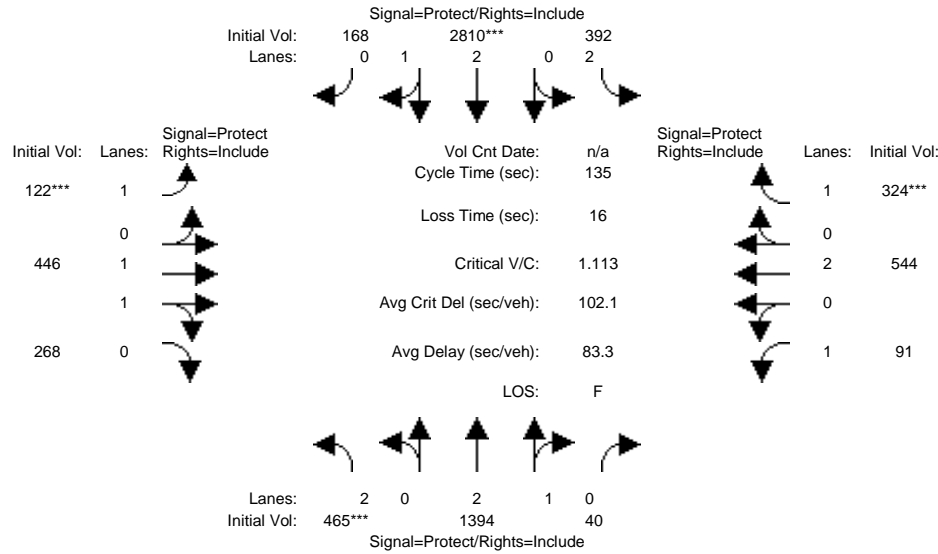
Vol/Sat:	0.13	0.28	0.28	0.11	0.58	0.58	0.07	0.21	0.21	0.05	0.15	0.20
Crit Moves:	****			****			****			****		
Green Time:	16.1	61.6	61.6	24.9	70.4	70.4	8.0	26.1	26.1	6.4	24.5	24.5
Volume/Cap:	1.11	0.61	0.61	0.61	1.11	1.11	1.11	1.07	1.07	1.07	0.82	1.11
Delay/Veh:	136.4	28.1	28.1	52.3	87.3	87.3	183.0	109	108.9	181.4	61.5	140.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	136.4	28.1	28.1	52.3	87.3	87.3	183.0	109	108.9	181.4	61.5	140.3
LOS by Move:	F	C	C	D	F	F	F	F	F	F	E	F
HCM2k95thQ:	28	28	28	16	93	93	17	37	37	14	24	35

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Cumulative + Project AM

Intersection #4: Paseo Padre & Peralta



Street Name:	Paseo Padre Pkwy						Peralta Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Min. Green:	4	10	10	4	10	10	4	10	10	4	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:

Base Vol:	465	1394	40	392	2810	168	122	446	268	91	544	324
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	465	1394	40	392	2810	168	122	446	268	91	544	324
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	465	1394	40	392	2810	168	122	446	268	91	544	324
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	465	1394	40	392	2810	168	122	446	268	91	544	324
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	465	1394	40	392	2810	168	122	446	268	91	544	324

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.91	0.92	0.90	0.90	0.95	0.90	0.89	0.95	0.95	0.85
Lanes:	2.00	2.92	0.08	2.00	2.83	0.17	1.00	1.25	0.75	1.00	2.00	1.00
Final Sat.:	3502	5022	144	3502	4855	290	1805	2126	1277	1805	3610	1608

Capacity Analysis Module:

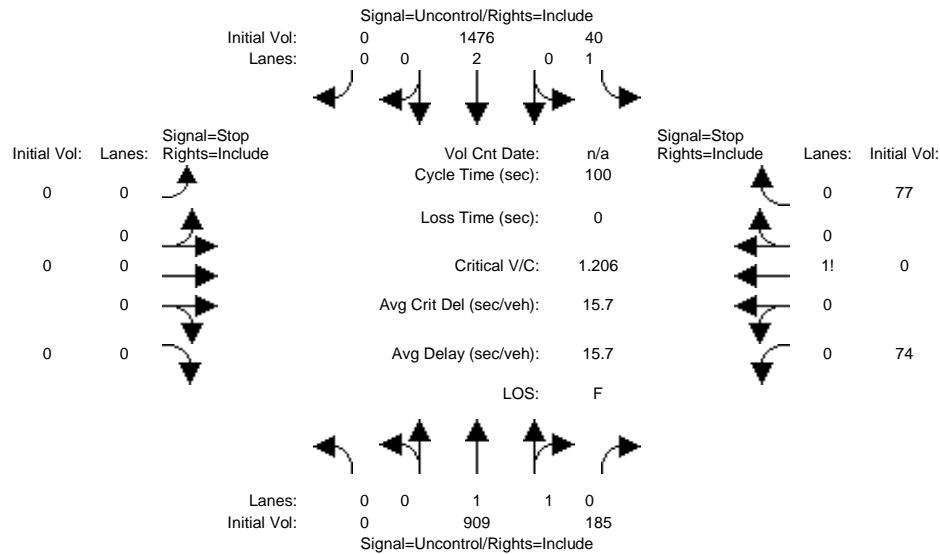
Vol/Sat:	0.13	0.28	0.28	0.11	0.58	0.58	0.07	0.21	0.21	0.05	0.15	0.20
Crit Moves:	****			****			****			****		
Green Time:	16.1	61.5	61.5	24.8	70.2	70.2	8.2	26.3	26.3	6.3	24.5	24.5
Volume/Cap:	1.11	0.61	0.61	0.61	1.11	1.11	1.11	1.08	1.08	1.08	0.83	1.11
Delay/Veh:	137.7	28.1	28.1	52.3	89.0	89.0	182.8	111	111.5	184.3	62.2	141.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	137.7	28.1	28.1	52.3	89.0	89.0	182.8	111	111.5	184.3	62.2	141.7
LOS by Move:	F	C	C	D	F	F	F	F	F	F	E	F
HCM2k95thQ:	28	28	28	16	93	93	17	38	38	14	24	35

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Cumulative AM

Intersection #5: Fremont & Parish



Street Name: Fremont Blvd Parish Ave  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:												
	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Base Vol:	0	909	185	40	1476	0	0	0	0	74	0	77
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	909	185	40	1476	0	0	0	0	74	0	77
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	909	185	40	1476	0	0	0	0	74	0	77
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	909	185	40	1476	0	0	0	0	74	0	77

Critical Gap Module:												
	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	6.5	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3

Capacity Module:												
	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Cnflct Vol:	xxxx	xxxx	xxxxx	1101	xxxx	xxxxx	xxxx	xxxx	xxxxx	1858	2565	554
Potent Cap.:	xxxx	xxxx	xxxxx	642	xxxx	xxxxx	xxxx	xxxx	xxxxx	67	27	481
Move Cap.:	xxxx	xxxx	xxxxx	638	xxxx	xxxxx	xxxx	xxxx	xxxxx	61	25	478
Volume/Cap:	xxxx	xxxx	xxxx	0.06	xxxx	xxxx	xxxx	xxxx	xxxx	1.21	0.00	0.16

Level Of Service Module:												
	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
2Way95thQ:	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	11.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	B	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	110	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.5	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	284	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	F	*
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx			284.1		
ApproachLOS:	*			*			*			F		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

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 Intersection #5 Fremont & Parish  
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 Base Volume Alternative: Peak Hour Warrant Met

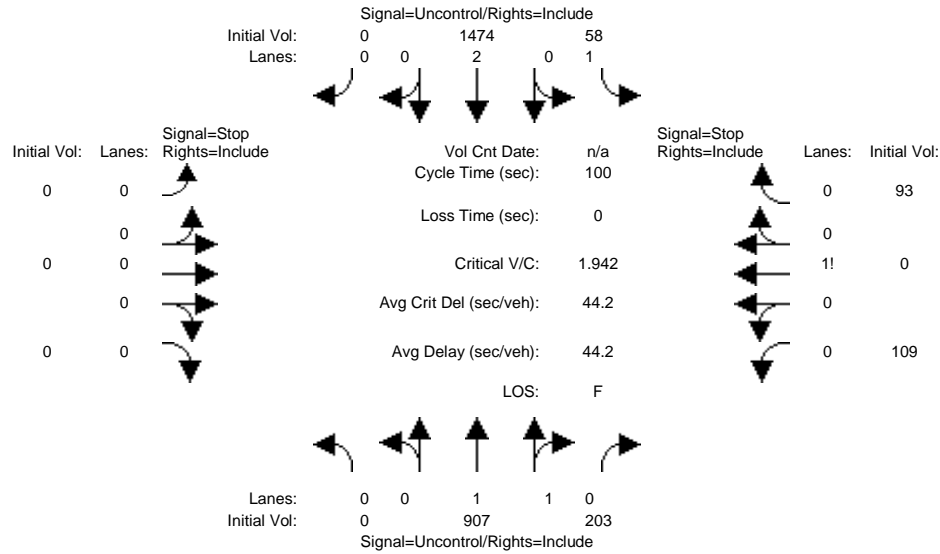
Level Of Service Computation Report												
	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R



Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Cumulative + Project AM

Intersection #5: Fremont & Parish



Street Name: Fremont Blvd Parish Ave  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	0	907	203	58	1474	0	0	0	0	109	0	93
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	907	203	58	1474	0	0	0	0	109	0	93
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	907	203	58	1474	0	0	0	0	109	0	93
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	907	203	58	1474	0	0	0	0	109	0	93

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	6.5	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	1117	xxxx	xxxxx	xxxx	xxxx	xxxxx	1900	2606	562
Potent Cap.:	xxxx	xxxx	xxxxx	633	xxxx	xxxxx	xxxx	xxxx	xxxxx	62	25	475
Move Cap.:	xxxx	xxxx	xxxxx	629	xxxx	xxxxx	xxxx	xxxx	xxxxx	56	23	473
Volume/Cap:	xxxx	xxxx	xxxx	0.09	xxxx	xxxx	xxxx	xxxx	xxxx	1.94	0.00	0.20

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	11.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	B	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT		LT - LTR - RT	LT - LTR - RT	LT - LTR - RT		LT - LTR - RT	LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	94	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	17.7	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	619	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	F	*
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx			619.0		
ApproachLOS:	*			*			*			F		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

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Intersection #5 Fremont & Parish  
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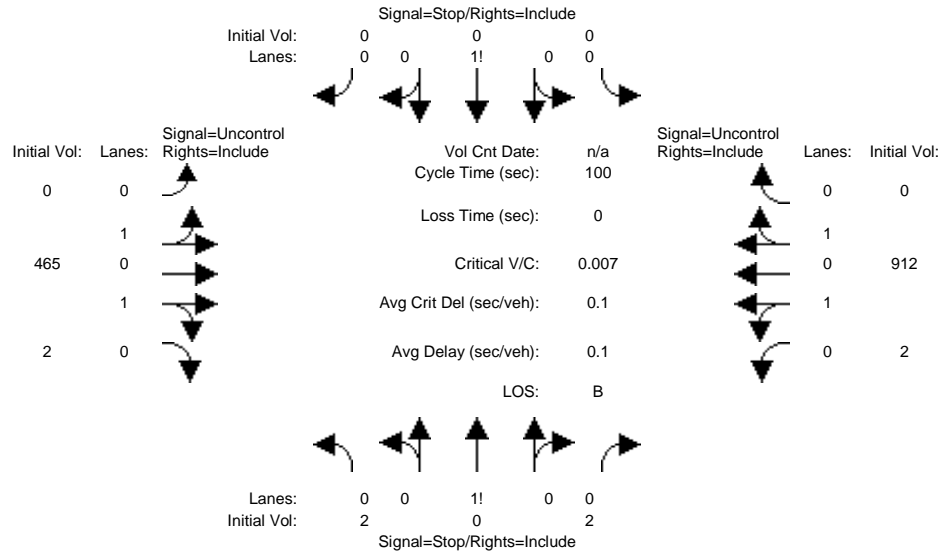
Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Cumulative AM

Intersection #6: Jason & Peralta



Street Name: Jason Way Peralta Blvd

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	2	0	2	0	0	0	0	465	2	2	912	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	0	2	0	0	0	0	465	2	2	912	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	0	2	0	0	0	0	465	2	2	912	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	2	0	2	0	0	0	0	465	2	2	912	0

Critical Gap Module:

Critical Gp:	6.8	6.5	6.9	7.5	6.5	6.9	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	926	1382	234	1149	1383	456	xxxx	xxxx	xxxxx	467	xxxx	xxxxx
Potent Cap.:	271	145	775	156	145	557	xxxx	xxxx	xxxxx	1105	xxxx	xxxxx
Move Cap.:	271	145	775	155	145	557	xxxx	xxxx	xxxxx	1105	xxxx	xxxxx
Volume/Cap:	0.01	0.00	0.00	0.00	0.00	0.00	xxxx	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxxx	xxxx	xxxxx	8.3	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	401	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	14.1	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx	8.3	xxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	A	*	*	A	*	*
ApproachDel:	14.1			xxxxxxx			xxxxxxx			xxxxxxx		
ApproachLOS:	B			*			*			*		*

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

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Intersection #6 Jason & Peralta

Base Volume Alternative: Peak Hour Warrant NOT Met

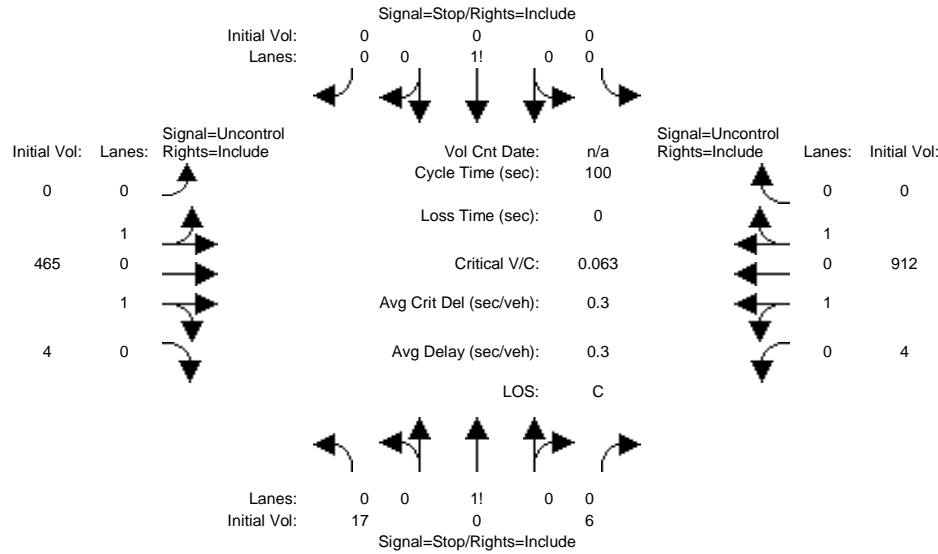
Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
 2000 HCM Unsignalized (Base Volume Alternative)  
 Cumulative + Project AM

Intersection #6: Jason & Peralta



Street Name: Jason Way Peralta Blvd  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	17	0	6	0	0	0	0	465	4	4	912	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	17	0	6	0	0	0	0	465	4	4	912	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	17	0	6	0	0	0	0	465	4	4	912	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	17	0	6	0	0	0	0	465	4	4	912	0

Critical Gap Module:

Critical Gp:	6.8	6.5	6.9	7.5	6.5	6.9	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflct Vol:	931	1387	235	1153	1389	456	xxxxx	xxxxx	xxxxx	469	xxxxx	xxxxx
Potent Cap.:	269	144	773	155	144	557	xxxxx	xxxxx	xxxxx	1103	xxxxx	xxxxx
Move Cap.:	269	144	773	153	143	557	xxxxx	xxxxx	xxxxx	1103	xxxxx	xxxxx
Volume/Cap:	0.06	0.00	0.01	0.00	0.00	0.00	xxxxx	xxxxx	xxxxx	0.00	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	8.3	xxxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT			
Shared Cap.:	xxxxx	324	xxxxx	xxxxx	0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	0.0	xxxxx	xxxxx
Shrd ConDel:	xxxxx	17.0	xxxxx	xxxxx	xxxxx	xxxxx	7.2	xxxxx	xxxxx	8.3	xxxxx	xxxxx
Shared LOS:	*	C	*	*	*	*	A	*	*	A	*	*
ApproachDel:	17.0			xxxxxxx			xxxxxxx			xxxxxxx		
ApproachLOS:	C			*			*			*		*

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

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Intersection #6 Jason & Peralta

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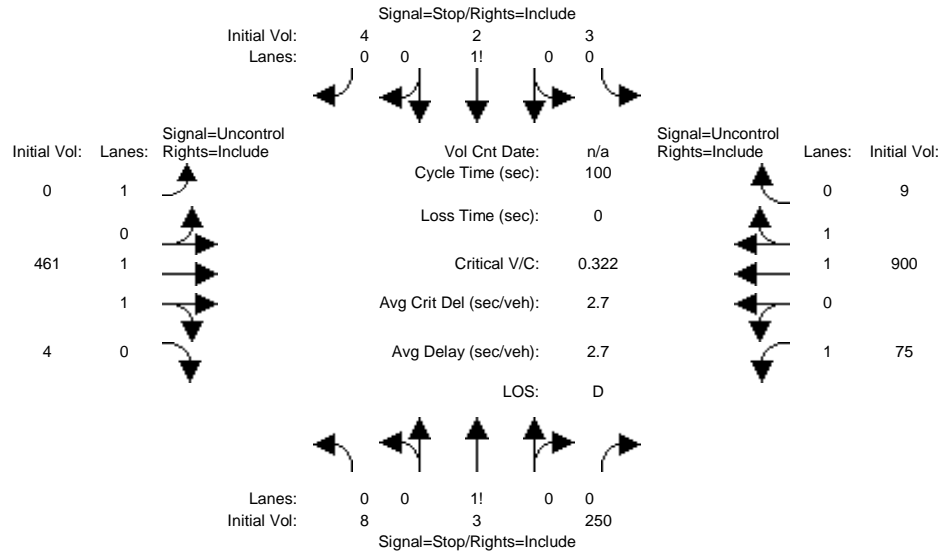
Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Cumulative AM

Intersection #7: Parish & Peralta



Street Name: Parish Ave Peralta Blvd  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	8	3	250	3	2	4	0	461	4	75	900	9
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	3	250	3	2	4	0	461	4	75	900	9
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	8	3	250	3	2	4	0	461	4	75	900	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	8	3	250	3	2	4	0	461	4	75	900	9

Critical Gap Module:

Critical Gp:	7.5	6.5	6.9	7.5	6.5	6.9	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflct Vol:	1064	1522	233	1287	1520	455	xxxxx	xxxxx	xxxxx	465	xxxxx	xxxxx
Potent Cap.:	180	120	776	124	120	558	xxxxx	xxxxx	xxxxx	1107	xxxxx	xxxxx
Move Cap.:	167	111	776	78	112	558	xxxxx	xxxxx	xxxxx	1107	xxxxx	xxxxx
Volume/Cap:	0.05	0.03	0.32	0.04	0.02	0.01	xxxxx	xxxxx	xxxxx	0.07	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.2	xxxxx	xxxxx
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	8.5	xxxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT			
Shared Cap.:	xxxxx	657	xxxxx	xxxxx	141	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	1.9	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	14.0	xxxxx	xxxxx	32.2	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	B	*	*	D	*	*	*	*	*	*	*
ApproachDel:		14.0			32.2		xxxxxxx			xxxxxxx		
ApproachLOS:		B			D			*			*	

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

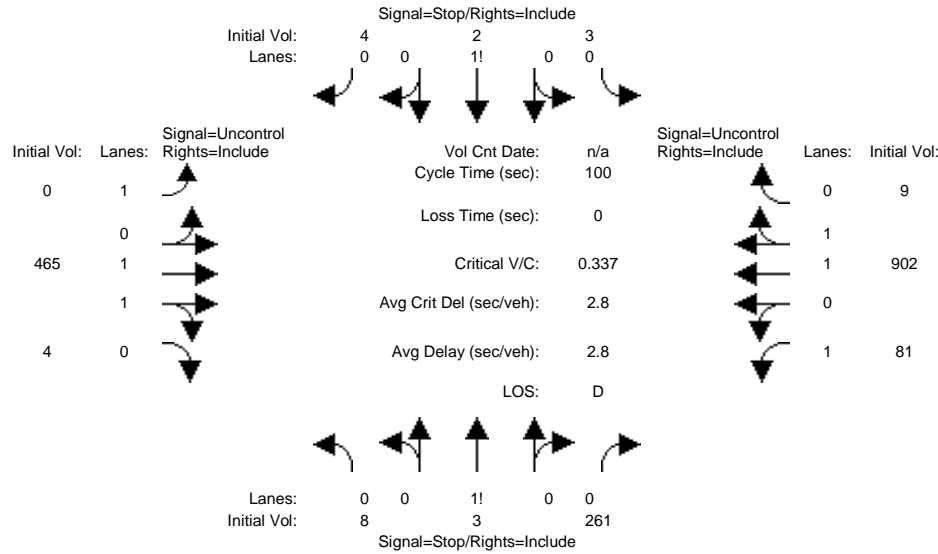
\*\*\*\*\*  
Intersection #7 Parish & Peralta  
\*\*\*\*\*  
Base Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Cumulative + Project AM

Intersection #7: Parish & Peralta



Street Name: Parish Ave Peralta Blvd  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	8	3	261	3	2	4	0	465	4	81	902	9
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	3	261	3	2	4	0	465	4	81	902	9
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	8	3	261	3	2	4	0	465	4	81	902	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	8	3	261	3	2	4	0	465	4	81	902	9

Critical Gap Module:

Critical Gp:	7.5	6.5	6.9	7.5	6.5	6.9	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	1081	1540	235	1303	1538	456	xxxx	xxxx	xxxxx	469	xxxx	xxxxx
Potent Cap.:	175	117	773	120	117	557	xxxx	xxxx	xxxxx	1103	xxxx	xxxxx
Move Cap.:	162	108	773	74	108	557	xxxx	xxxx	xxxxx	1103	xxxx	xxxxx
Volume/Cap:	0.05	0.03	0.34	0.04	0.02	0.01	xxxx	xxxx	xxxx	0.07	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT			
Shared Cap.:	xxxx	656	xxxxx	xxxx	136	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	2.0	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	14.3	xxxxx	xxxxx	33.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	D	*	*	*	*	*	*	*
ApproachDel:	14.3			33.4			xxxxxxx		xxxxxxx			
ApproachLOS:	B			D			*		*		*	

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

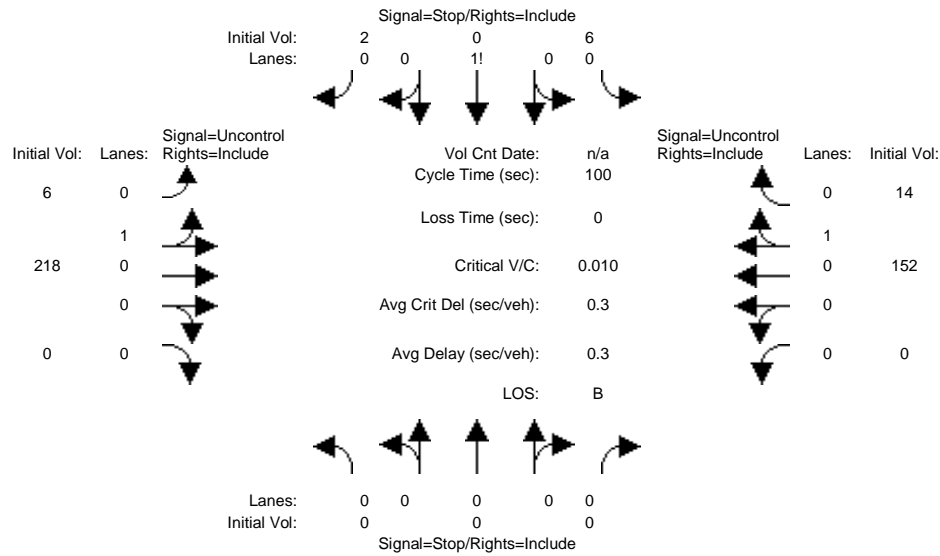
\*\*\*\*\*  
 Intersection #7 Parish & Peralta  
 \*\*\*\*\*  
 Base Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Cumulative AM

Intersection #8: Jason & Parish



Street Name: Jason Way Parish Ave  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	0	0	0	6	0	2	6	218	0	0	152	14
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	6	0	2	6	218	0	0	152	14
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	6	0	2	6	218	0	0	152	14
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	6	0	2	6	218	0	0	152	14

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	389	389	159	166	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	619	549	892	1424	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	617	547	892	1424	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.01	0.00	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	668	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.0	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	10.5	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxxx			10.5			xxxxxxx			xxxxxxx		
ApproachLOS:	*			B			*			*		*

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

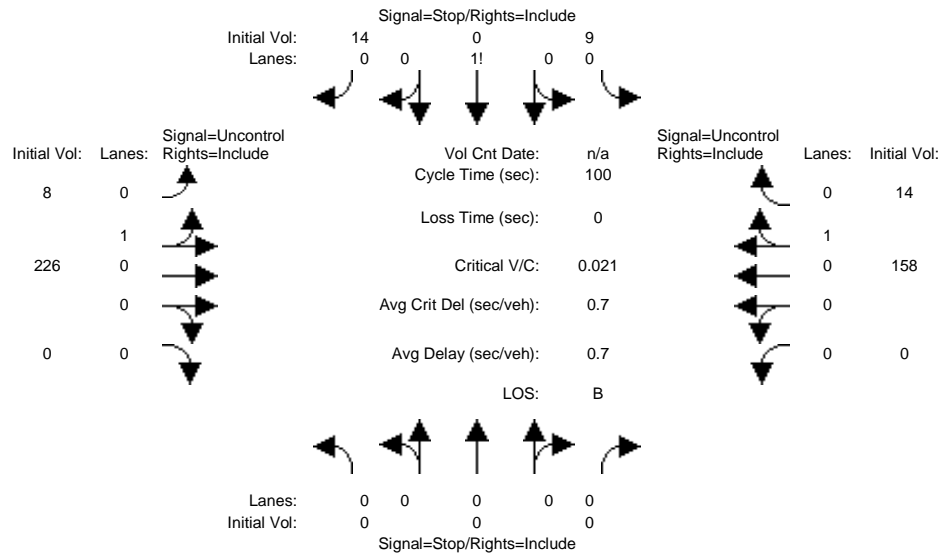
\*\*\*\*\*  
 Intersection #8 Jason & Parish  
 \*\*\*\*\*  
 Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Cumulative + Project AM

Intersection #8: Jason & Parish



Street Name: Jason Way Parish Ave  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	0	0	0	9	0	14	8	226	0	0	158	14
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	9	0	14	8	226	0	0	158	14
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
PHF Volume:	0	0	0	11	0	17	10	276	0	0	193	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	11	0	17	10	276	0	0	193	17

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
FollowUpTim:	xxxxx	xxxx	xxxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxxx	496	496	201	210	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Potent Cap.:	xxxx	xxxx	xxxxxx	537	478	845	1373	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Move Cap.:	xxxx	xxxx	xxxxxx	534	474	845	1373	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.02	0.00	0.02	0.01	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	0.0	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Control Del:	xxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	7.6	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	688	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	0.1	xxxxxx	0.0	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxxx	xxxxxx	10.5	xxxxxx	7.6	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxxx			10.5			xxxxxxx			xxxxxxx		
ApproachLOS:	*			B			*			*		*

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report  
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Intersection #8 Jason & Parish  
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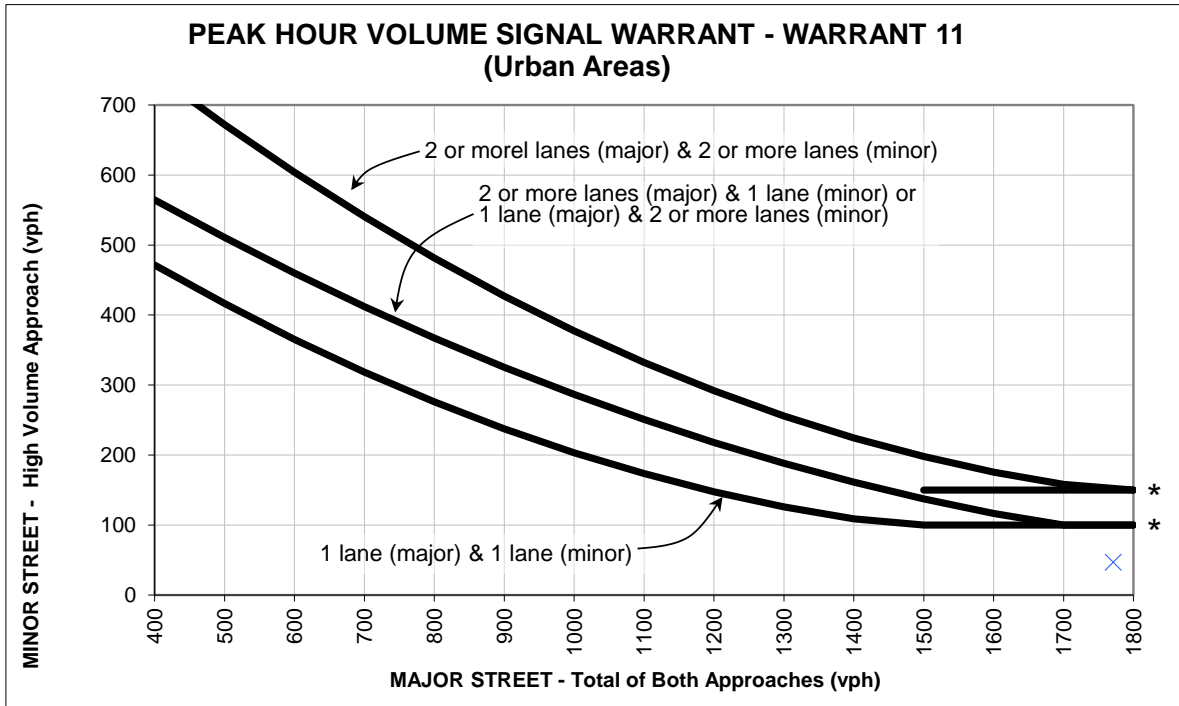
Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R

**Appendix C**  
**Traffic Signal Warrant Calculations**



**Fremont Blvd & Main Site Driveway** **Operations**



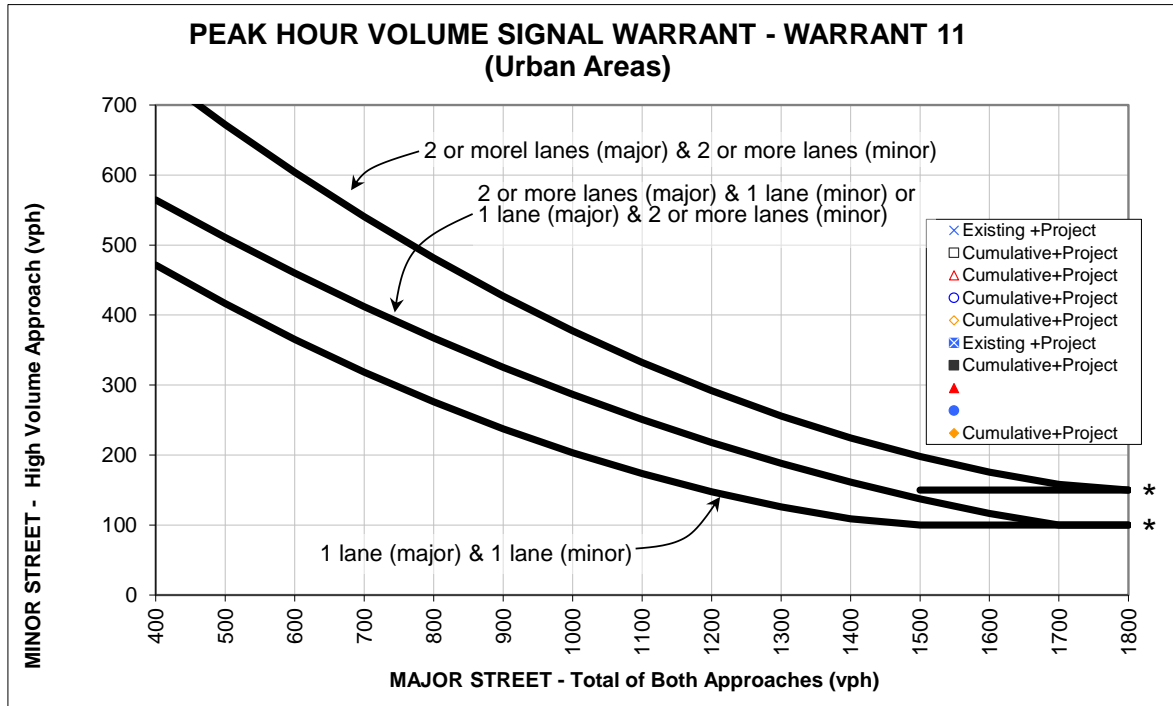
\* NOTE: 150 vph applies as the lower threshold volume for a minor street approach with 2 or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with 1 lane.

**WARRANT 11 - Peak Hour Volume**

		Approach Lanes		AM Peak Hour Volumes			
		2 or One More		Existing + Project	Cumulative+ Project		
Major Street - Both Approaches	Fremont Blvd		x	1771	2508		
Minor Street - Highest Approach	Main Driveway	x		47	47		
Warrant Met?				no	no		

		Approach Lanes		PM Peak Hour Volumes			
		2 or One More		Existing + Project	Cumulative+ Project		
Major Street - Both Approaches	Fremont Blvd		x	2083	2749		
Minor Street - Highest Approach	Main Driveway	x		41	41		
Warrant Met?				no	no		

**Fremont Blvd & Parish Ave** **Operations**



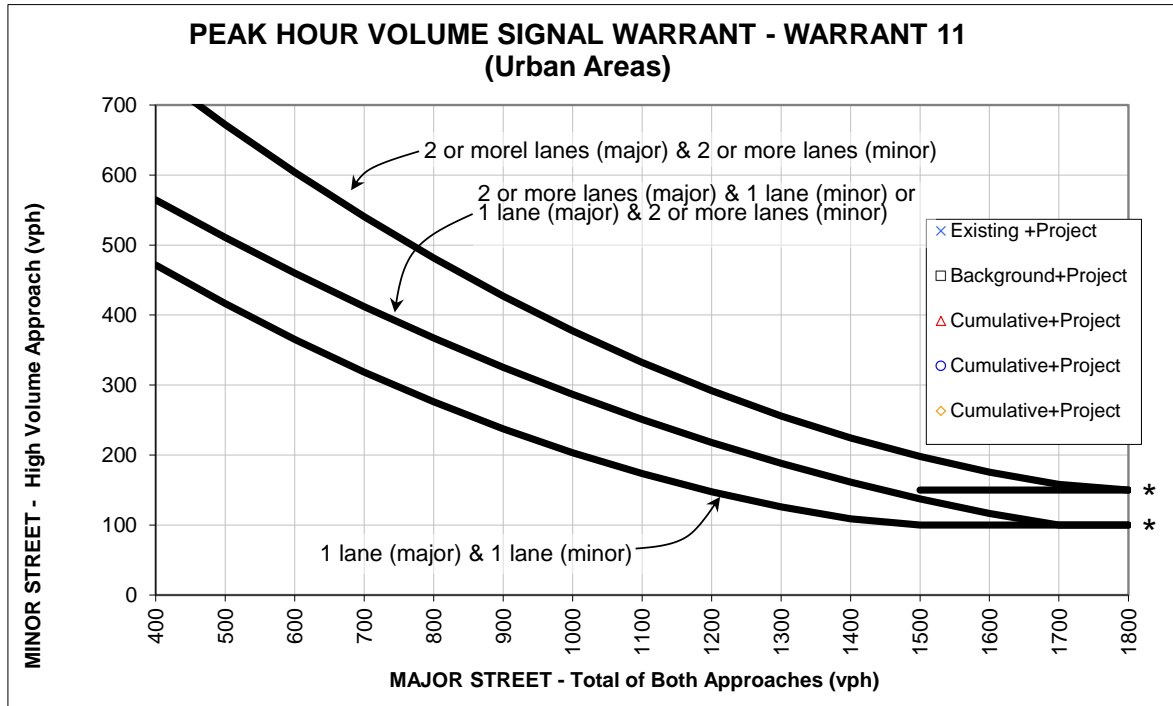
\* NOTE: 150 vph applies as the lower threshold volume for a minor street approach with 2 or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with 1 lane.

**WARRANT 11 - Peak Hour Volume**

		Approach Lanes		AM Peak Hour Volumes				
		2 or One More		Existing +Project	Cumulative+Project			
Major Street - Both Approaches	Fremont Blvd		x	1828	2637			
Minor Street - Highest Approach	Parish Ave	x		188	196			
Warrant Met?				yes	yes			

		Approach Lanes		PM Peak Hour Volumes				
		2 or One More		Existing +Project	Cumulative+Project			
Major Street - Both Approaches	Fremont Blvd		x	2186	2901			
Minor Street - Highest Approach	Parish Ave	x		70	74			
Warrant Met?				no	no			

**Fremont Blvd & Parish Ave** **TIA**



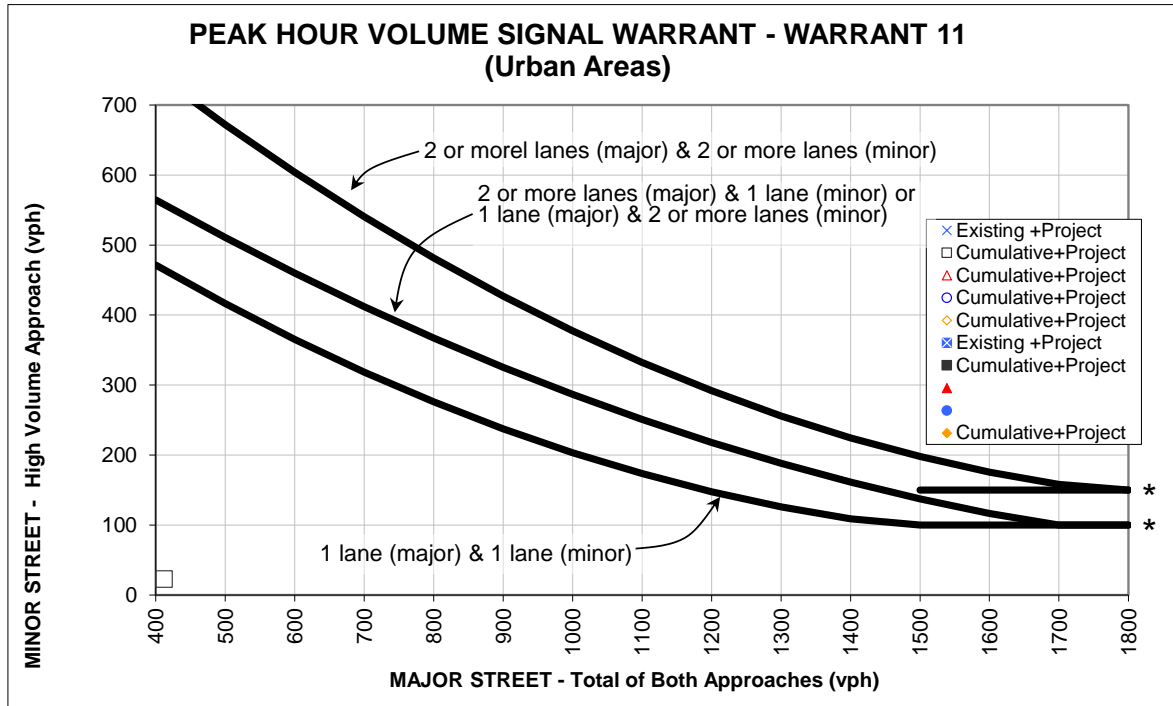
\* NOTE: 150 vph applies as the lower threshold volume for a minor street approach with 2 or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with 1 lane.

**WARRANT 11 - Peak Hour Volume**

		Approach Lanes		AM Peak Hour Volumes				
		2 or One More		Existing +Project	Background +Project	Cumulative+Project		
Major Street - Both Approaches	Fremont Blvd		x	1833	1887	2642		
Minor Street - Highest Approach	Parish Ave	x		191	203	202		
Warrant Met?				yes	yes	yes		

		Approach Lanes		PM Peak Hour Volumes				
		2 or One More						
Major Street - Both Approaches			x					
Minor Street - Highest Approach		x						
Warrant Met?								

**Jason Way & Parish Ave** **Operations**



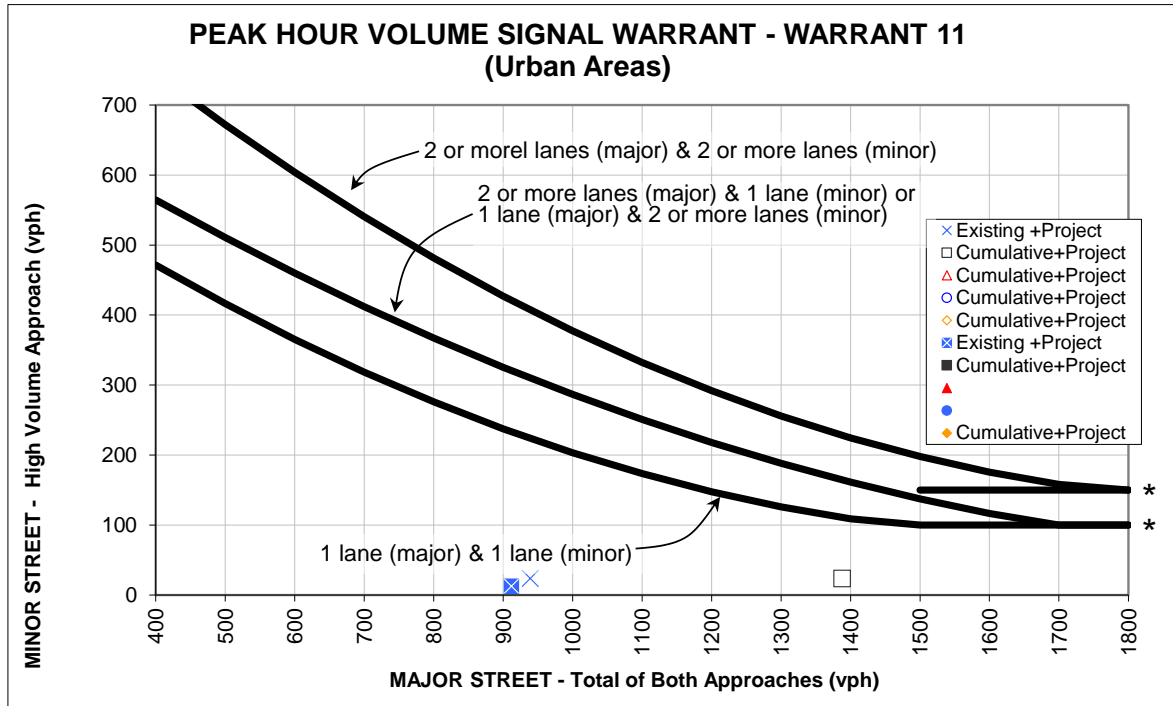
\* NOTE: 150 vph applies as the lower threshold volume for a minor street approach with 2 or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with 1 lane.

**WARRANT 11 - Peak Hour Volume**

		Approach Lanes		AM Peak Hour Volumes				
		2 or One More		Existing +Project	Cumulative+Project			
Major Street - Both Approaches	Parish Ave	x						
Minor Street - Highest Approach	Jason Way	x		23	23			
Warrant Met?				no	no			

		Approach Lanes		PM Peak Hour Volumes				
		2 or One More		Existing +Project	Cumulative+Project			
Major Street - Both Approaches	Parish Ave	x						
Minor Street - Highest Approach	Jason Way	x		22	22			
Warrant Met?				no	no			

**Jason Way & Peralta Blvd** **Operations**



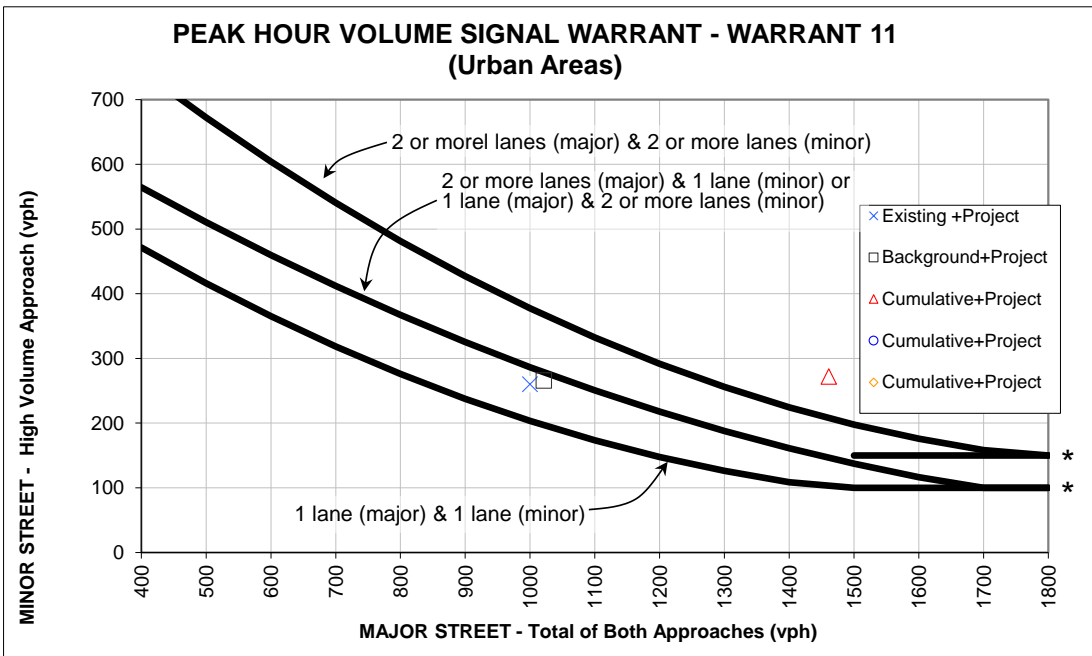
\* NOTE: 150 vph applies as the lower threshold volume for a minor street approach with 2 or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with 1 lane.

**WARRANT 11 - Peak Hour Volume**

		Approach Lanes		AM Peak Hour Volumes				
		2 or One More		Existing +Project	Cumulative+Project			
Major Street - Both Approaches	Peralta Blvd		x	939	1388			
Minor Street - Highest Approach	Jason Way	x		24	24			
Warrant Met?				no	no			

		Approach Lanes		PM Peak Hour Volumes				
		2 or One More		Existing +Project	Cumulative+Project			
Major Street - Both Approaches	Peralta Blvd		x	912	2147			
Minor Street - Highest Approach	Jason Way	x		13	13			
Warrant Met?				no	no			

**Parish Ave & Peralta Blvd** **TIA**



\* NOTE: 150 vph applies as the lower threshold volume for a minor street approach with 2 or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with 1 lane.

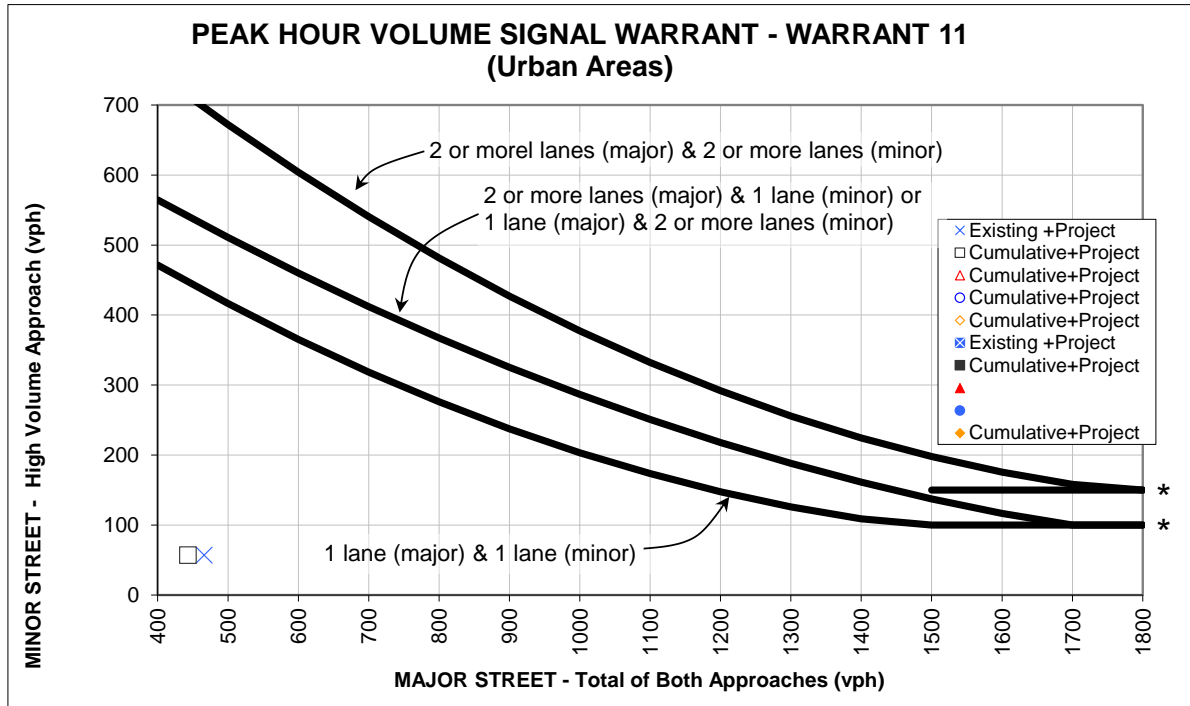
**WARRANT 11 - Peak Hour Volume**

		AM Peak Hour Volumes						
		Approach Lanes		Existing +Project	Background +Project	Cumulative+Project		
		2 or	One More					
Major Street - Both Approaches	Peralta Blvd		x	1000	1021	1461		
Minor Street - Highest Approach	Parish Ave	x		260	266	272		
Warrant Met?				no*	no*	no*		

		PM Peak Hour Volumes						
		Approach Lanes						
		2 or	One More					
Major Street - Both Approaches			x					
Minor Street - Highest Approach		x						
Warrant Met?								

\*the traffic volumes on the Parish Ave (minor street) approach are 95% right turns: 249, 255 and 261 right turns under the existing, background and cumulative scenarios, respectively. The total, combined stopped-time delay for all vehicles on the (south) Parish approach in the AM peak hour would be no greater than 2.8 hours under all three scenarios. This is less than the 4 hours of total delay required to meet the warrant.

**South Site Driveway & Parish Ave** **Operations**



\* NOTE: 150 vph applies as the lower threshold volume for a minor street approach with 2 or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with 1 lane.

**WARRANT 11 - Peak Hour Volume**

		Approach Lanes		AM Peak Hour Volumes				
		2 or One More		Existing +Project	Cumulative+Project			
Major Street - Both Approaches	Parish Ave	x		466	443			
Minor Street - Highest Approach	South Driveway	x		57	57			
Warrant Met?				no	no			

		Approach Lanes		PM Peak Hour Volumes				
		2 or One More		Existing +Project	Cumulative+Project			
Major Street - Both Approaches	Parish Ave	x		368	325			
Minor Street - Highest Approach	South Driveway	x		45	45			
Warrant Met?				no	no			

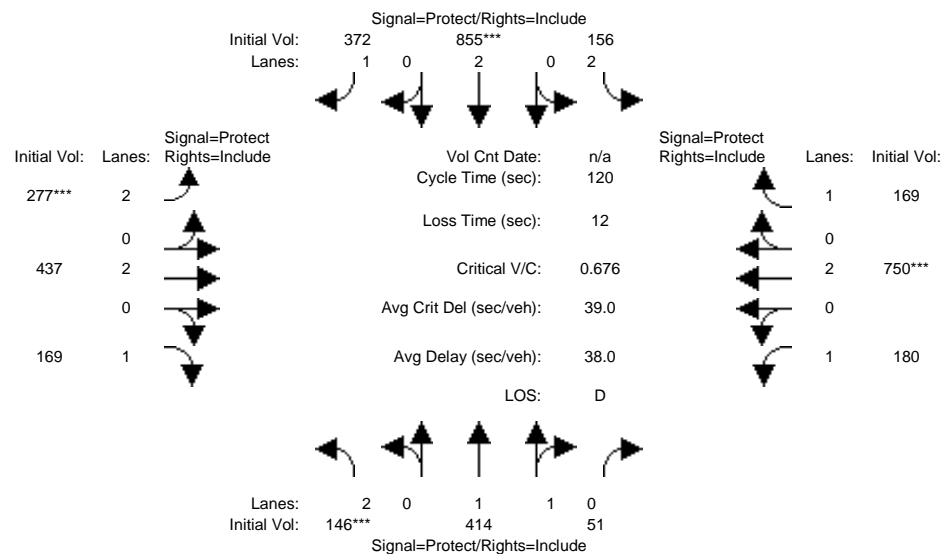
**Appendix D**  
**Project Variant**  
**LOS and Signal Warrant Calculations**



Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Existing + Project AM

Intersection #1: Fremont & Thornton



Street Name:	Fremont Blvd						Thornton Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	4	10	10	4	10	10	4	10	10	4	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:	Fremont NB			Fremont SB			Thornton EB			Thornton WB		
Base Vol:	146	414	51	156	855	372	277	437	169	180	750	169
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	146	414	51	156	855	372	277	437	169	180	750	169
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	157	445	55	168	919	400	298	470	182	194	806	182
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	157	445	55	168	919	400	298	470	182	194	806	182
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	157	445	55	168	919	400	298	470	182	194	806	182

Saturation Flow Module:	Fremont NB			Fremont SB			Thornton EB			Thornton WB		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.93	0.93	0.92	0.95	0.84	0.92	0.95	0.83	0.95	0.95	0.84
Lanes:	2.00	1.78	0.22	2.00	2.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	3162	390	3502	3610	1591	3502	3610	1569	1805	3610	1589

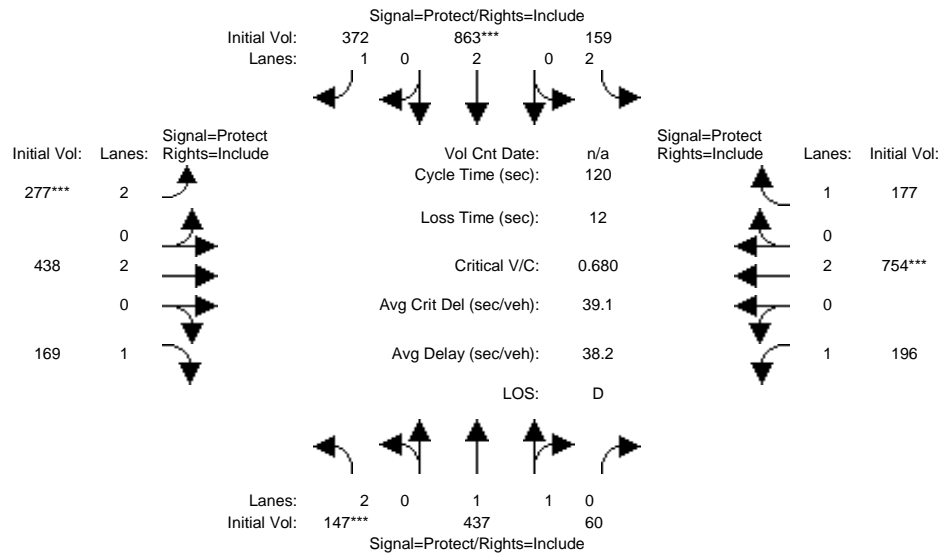
Capacity Analysis Module:	Fremont NB			Fremont SB			Thornton EB			Thornton WB		
Vol/Sat:	0.04	0.14	0.14	0.05	0.25	0.25	0.09	0.13	0.12	0.11	0.22	0.11
Crit Moves:	****			****			****			****		
Green Time:	8.0	39.7	39.7	13.5	45.2	45.2	15.1	30.0	30.0	24.8	39.7	39.7
Volume/Cap:	0.68	0.43	0.43	0.43	0.68	0.67	0.68	0.52	0.46	0.52	0.68	0.35
Delay/Veh:	62.4	31.5	31.5	50.4	32.6	34.0	54.2	39.3	39.0	43.7	36.2	30.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	62.4	31.5	31.5	50.4	32.6	34.0	54.2	39.3	39.0	43.7	36.2	30.7
LOS by Move:	E	C	C	D	C	C	D	D	D	D	D	C
HCM2k95thQ:	8	14	14	7	27	23	13	15	12	13	25	10

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Background + Project AM

Intersection #1: Fremont & Thornton



Street Name:	Fremont Blvd						Thornton Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	4	10	10	4	10	10	4	10	10	4	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:	Fremont Blvd NB			Fremont Blvd SB			Thornton Ave EB			Thornton Ave WB		
Base Vol:	147	437	60	159	863	372	277	438	169	196	754	177
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	147	437	60	159	863	372	277	438	169	196	754	177
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	158	470	65	171	928	400	298	471	182	211	811	190
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	158	470	65	171	928	400	298	471	182	211	811	190
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	158	470	65	171	928	400	298	471	182	211	811	190

Saturation Flow Module:	Fremont Blvd NB			Fremont Blvd SB			Thornton Ave EB			Thornton Ave WB		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.93	0.93	0.92	0.95	0.84	0.92	0.95	0.83	0.95	0.95	0.84
Lanes:	2.00	1.76	0.24	2.00	2.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	3117	428	3502	3610	1591	3502	3610	1569	1805	3610	1589

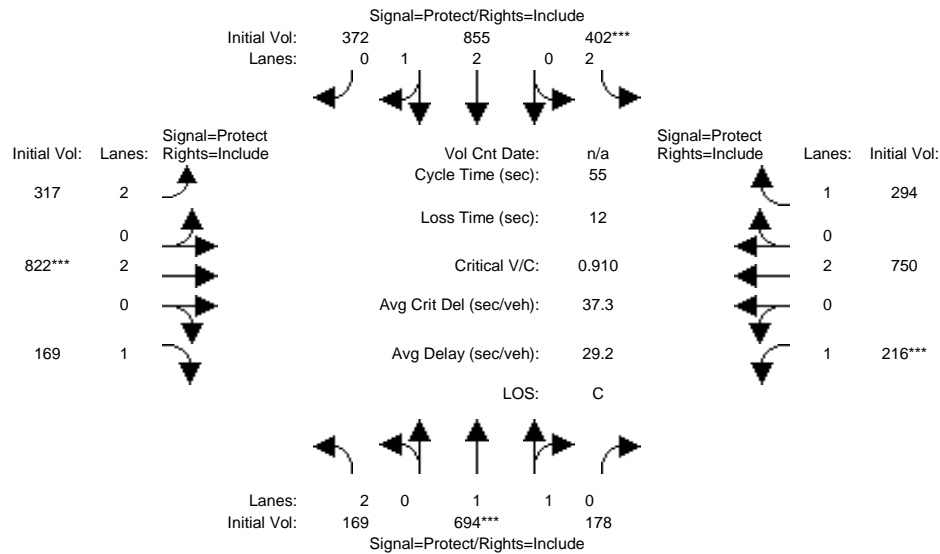
Capacity Analysis Module:	Fremont Blvd NB			Fremont Blvd SB			Thornton Ave EB			Thornton Ave WB		
Vol/Sat:	0.05	0.15	0.15	0.05	0.26	0.25	0.09	0.13	0.12	0.12	0.22	0.12
Crit Moves:	****			****			****			****		
Green Time:	8.0	40.3	40.3	13.0	45.4	45.4	15.0	28.8	28.8	25.8	39.6	39.6
Volume/Cap:	0.68	0.45	0.45	0.45	0.68	0.66	0.68	0.54	0.48	0.54	0.68	0.36
Delay/Veh:	62.7	31.4	31.4	51.0	32.6	33.8	54.5	40.5	40.1	43.4	36.3	31.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	62.7	31.4	31.4	51.0	32.6	33.8	54.5	40.5	40.1	43.4	36.3	31.0
LOS by Move:	E	C	C	D	C	C	D	D	D	D	D	C
HCM2k95thQ:	8	15	15	7	27	23	13	16	12	14	25	10

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Cumulative + Project AM

Intersection #1: Fremont & Thornton



Street Name:	Fremont Blvd						Thornton Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	4	10	10	4	10	10	4	10	10	4	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:												
Base Vol:	169	694	178	402	855	372	317	822	169	216	750	294
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	169	694	178	402	855	372	317	822	169	216	750	294
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	169	694	178	402	855	372	317	822	169	216	750	294
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	169	694	178	402	855	372	317	822	169	216	750	294
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	169	694	178	402	855	372	317	822	169	216	750	294

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.92	0.87	0.87	0.92	0.95	0.84	0.95	0.95	0.84
Lanes:	2.00	1.59	0.41	2.00	2.09	0.91	2.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	2784	714	3502	3450	1501	3502	3610	1596	1805	3610	1603

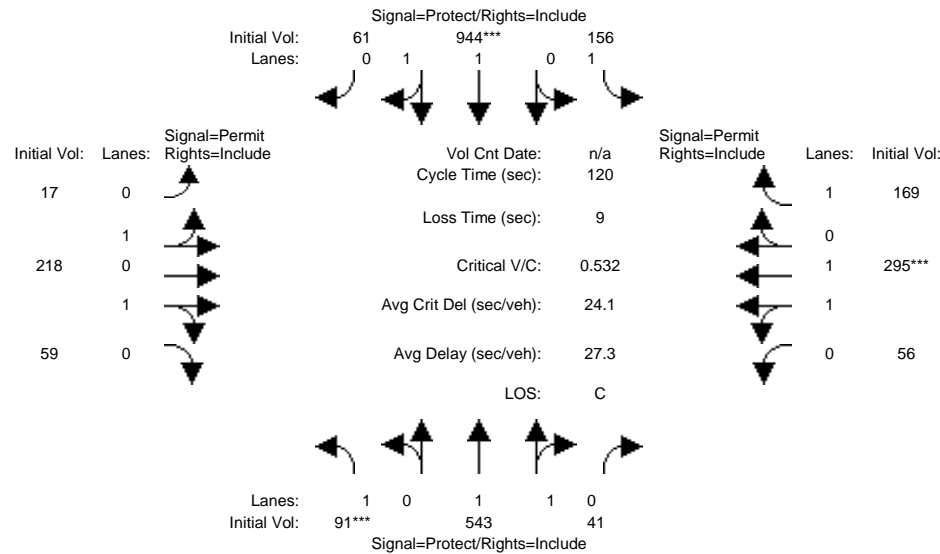
Capacity Analysis Module:												
Vol/Sat:	0.05	0.25	0.25	0.11	0.25	0.25	0.09	0.23	0.11	0.12	0.21	0.18
Crit Moves:	****			****			****			****		
Green Time:	5.0	15.1	15.1	6.9	17.0	17.0	6.4	13.8	13.8	7.2	14.6	14.6
Volume/Cap:	0.53	0.91	0.91	0.91	0.80	0.80	0.78	0.91	0.42	0.91	0.78	0.69
Delay/Veh:	25.6	31.8	31.8	46.4	20.6	20.6	33.1	33.1	18.0	58.7	22.9	22.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.6	31.8	31.8	46.4	20.6	20.6	33.1	33.1	18.0	58.7	22.9	22.9
LOS by Move:	C	C	C	D	C	C	C	C	B	E	C	C
HCM2k95thQ:	5	22	22	14	18	18	10	21	6	14	16	12

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Existing + Project AM

Intersection #2: Fremont & Peralta



Street Name:	Fremont Blvd						Peralta Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Min. Green:	4	6	6	4	6	6	4	4	4	4	4	4
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:

Base Vol:	91	543	41	156	944	61	17	218	59	56	295	169
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	91	543	41	156	944	61	17	218	59	56	295	169
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	99	590	45	170	1026	66	18	237	64	61	321	184
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	99	590	45	170	1026	66	18	237	64	61	321	184
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	99	590	45	170	1026	66	18	237	64	61	321	184

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.85	0.85	0.84	0.76	0.76	0.84
Lanes:	1.00	1.86	0.14	1.00	1.88	0.12	0.12	1.48	0.40	0.32	1.68	1.00
Final Sat.:	1805	3323	251	1805	3360	217	186	2382	645	461	2427	1588

Capacity Analysis Module:

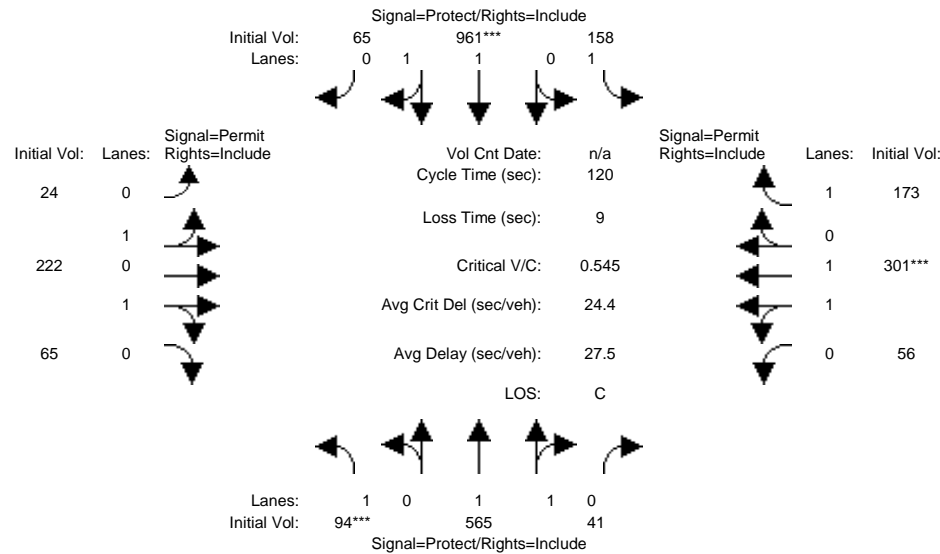
Vol/Sat:	0.05	0.18	0.18	0.09	0.31	0.31	0.10	0.10	0.10	0.13	0.13	0.12
Crit Moves:	****				****					****		
Green Time:	12.4	53.1	53.1	28.1	68.8	68.8	29.8	29.8	29.8	29.8	29.8	29.8
Volume/Cap:	0.53	0.40	0.40	0.40	0.53	0.53	0.40	0.40	0.40	0.53	0.53	0.47
Delay/Veh:	54.0	22.8	22.8	39.5	16.0	16.0	38.0	38.0	38.0	39.8	39.8	39.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.0	22.8	22.8	39.5	16.0	16.0	38.0	38.0	38.0	39.8	39.8	39.2
LOS by Move:	D	C	C	D	B	B	D	D	D	D	D	D
HCM2k95thQ:	8	15	15	11	23	23	10	10	10	13	13	12

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Background + Project AM

Intersection #2: Fremont & Peralta



Street Name:	Fremont Blvd						Peralta Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Min. Green:	4	6	6	4	6	6	4	4	4	4	4	4
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:

Base Vol:	94	565	41	158	961	65	24	222	65	56	301	173
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	94	565	41	158	961	65	24	222	65	56	301	173
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	102	614	45	172	1045	71	26	241	71	61	327	188
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	102	614	45	172	1045	71	26	241	71	61	327	188
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	102	614	45	172	1045	71	26	241	71	61	327	188

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.83	0.83	0.83	0.75	0.75	0.84
Lanes:	1.00	1.86	0.14	1.00	1.87	0.13	0.15	1.43	0.42	0.31	1.69	1.00
Final Sat.:	1805	3332	242	1805	3351	227	243	2250	659	448	2407	1588

Capacity Analysis Module:

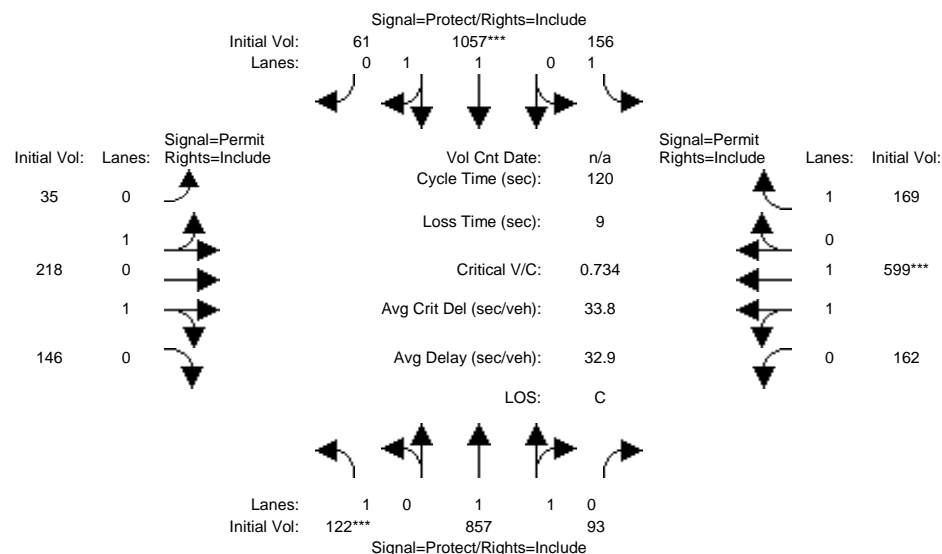
Vol/Sat:	0.06	0.18	0.18	0.10	0.31	0.31	0.11	0.11	0.11	0.14	0.14	0.12
Crit Moves:	***			***						***		
Green Time:	12.5	53.5	53.5	27.6	68.6	68.6	29.9	29.9	29.9	29.9	29.9	29.9
Volume/Cap:	0.55	0.41	0.41	0.41	0.55	0.55	0.43	0.43	0.43	0.55	0.55	0.47
Delay/Veh:	54.4	22.8	22.8	40.0	16.3	16.3	38.3	38.3	38.3	40.0	40.0	39.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.4	22.8	22.8	40.0	16.3	16.3	38.3	38.3	38.3	40.0	40.0	39.3
LOS by Move:	D	C	C	D	B	B	D	D	D	D	D	D
HCM2k95thQ:	9	16	16	11	24	24	11	11	11	13	13	12

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Cumulative + Project AM

Intersection #2: Fremont & Peralta



Street Name:	Fremont Blvd						Peralta Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Min. Green:	4	6	6	4	6	6	4	4	4	4	4	4
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:

Base Vol:	122	857	93	156	1057	61	35	218	146	162	599	169
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	122	857	93	156	1057	61	35	218	146	162	599	169
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	122	857	93	156	1057	61	35	218	146	162	599	169
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	122	857	93	156	1057	61	35	218	146	162	599	169
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	122	857	93	156	1057	61	35	218	146	162	599	169

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.74	0.74	0.74	0.67	0.67	0.84
Lanes:	1.00	1.80	0.20	1.00	1.89	0.11	0.18	1.09	0.73	0.43	1.57	1.00
Final Sat.:	1805	3208	348	1805	3386	195	246	1535	1028	542	2003	1598

Capacity Analysis Module:

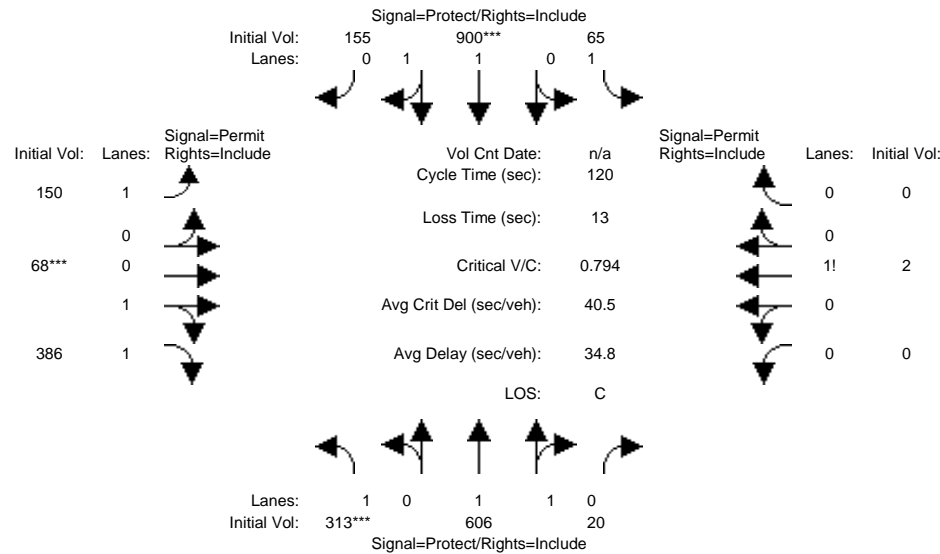
Vol/Sat:	0.07	0.27	0.27	0.09	0.31	0.31	0.14	0.14	0.14	0.30	0.30	0.11
Crit Moves:	***			***						***		
Green Time:	11.1	46.9	46.9	15.2	51.0	51.0	48.9	48.9	48.9	48.9	48.9	48.9
Volume/Cap:	0.73	0.68	0.68	0.68	0.73	0.73	0.35	0.35	0.35	0.73	0.73	0.26
Delay/Veh:	68.6	31.8	31.8	58.4	30.7	30.7	24.7	24.7	24.7	32.8	32.8	23.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	68.6	31.8	31.8	58.4	30.7	30.7	24.7	24.7	24.7	32.8	32.8	23.8
LOS by Move:	E	C	C	E	C	C	C	C	C	C	C	C
HCM2k95thQ:	12	28	28	13	32	32	10	10	10	24	24	8

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Existing + Project AM

Intersection #3: Fremont & Central



Street Name:	Fremont Blvd						Central Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:

Base Vol:	313	606	20	65	900	155	150	68	386	0	2	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	313	606	20	65	900	155	150	68	386	0	2	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	360	697	23	75	1034	178	172	78	444	0	2	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	360	697	23	75	1034	178	172	78	444	0	2	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	360	697	23	75	1034	178	172	78	444	0	2	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.93	0.92	0.75	0.87	0.82	1.00	1.00	1.00
Lanes:	1.00	1.94	0.06	1.00	1.70	0.30	1.00	0.29	1.71	0.00	1.00	0.00
Final Sat.:	1805	3477	115	1805	3009	518	1430	473	2687	0	1900	0

Capacity Analysis Module:

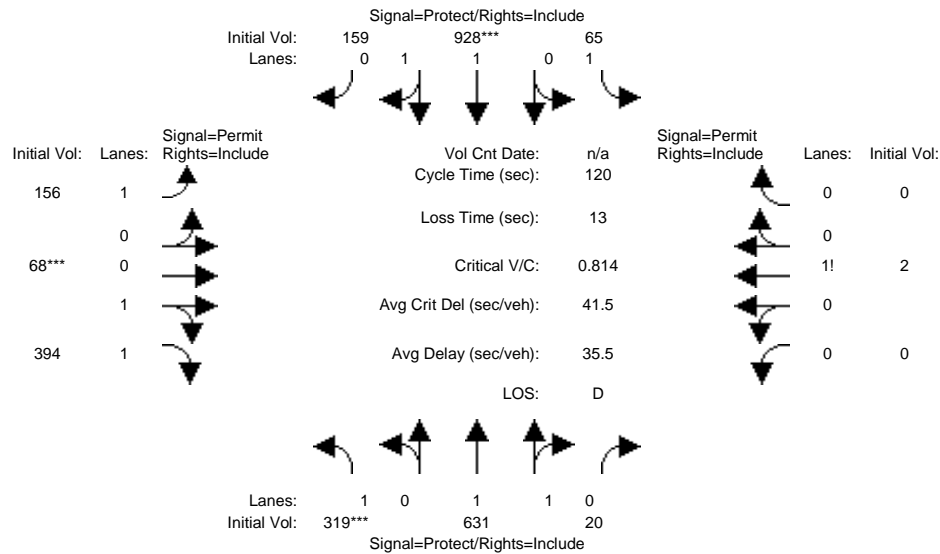
Vol/Sat:	0.20	0.20	0.20	0.04	0.34	0.34	0.12	0.17	0.17	0.00	0.00	0.00
Crit Moves:	****				****			****				
Green Time:	30.1	68.0	68.0	14.1	51.9	51.9	24.9	24.9	24.9	0.0	24.9	0.0
Volume/Cap:	0.79	0.35	0.35	0.35	0.79	0.79	0.58	0.79	0.79	0.00	0.01	0.00
Delay/Veh:	51.4	14.2	14.2	49.8	32.4	32.4	45.7	51.7	51.7	0.0	37.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.4	14.2	14.2	49.8	32.4	32.4	45.7	51.7	51.7	0.0	37.7	0.0
LOS by Move:	D	B	B	D	C	C	D	D	D	A	D	A
HCM2k95thQ:	25	14	14	6	36	36	12	21	20	0	0	0

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Background + Project AM

Intersection #3: Fremont & Central



Street Name:	Fremont Blvd						Central Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:

Base Vol:	319	631	20	65	928	159	156	68	394	0	2	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	319	631	20	65	928	159	156	68	394	0	2	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	367	725	23	75	1067	183	179	78	453	0	2	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	367	725	23	75	1067	183	179	78	453	0	2	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	367	725	23	75	1067	183	179	78	453	0	2	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.93	0.92	0.75	0.87	0.82	1.00	1.00	1.00
Lanes:	1.00	1.94	0.06	1.00	1.71	0.29	1.00	0.28	1.72	0.00	1.00	0.00
Final Sat.:	1805	3482	110	1805	3011	516	1430	464	2691	0	1900	0

Capacity Analysis Module:

Vol/Sat:	0.20	0.21	0.21	0.04	0.35	0.35	0.13	0.17	0.17	0.00	0.00	0.00
Crit Moves:	****				****			****				
Green Time:	30.0	68.6	68.6	13.6	52.2	52.2	24.8	24.8	24.8	0.0	24.8	0.0
Volume/Cap:	0.81	0.36	0.36	0.36	0.81	0.81	0.61	0.81	0.81	0.00	0.01	0.00
Delay/Veh:	53.3	14.0	14.0	50.3	33.1	33.1	46.7	53.1	53.1	0.0	37.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	53.3	14.0	14.0	50.3	33.1	33.1	46.7	53.1	53.1	0.0	37.8	0.0
LOS by Move:	D	B	B	D	C	C	D	D	D	A	D	A
HCM2k95thQ:	26	15	15	6	38	38	13	22	21	0	0	0

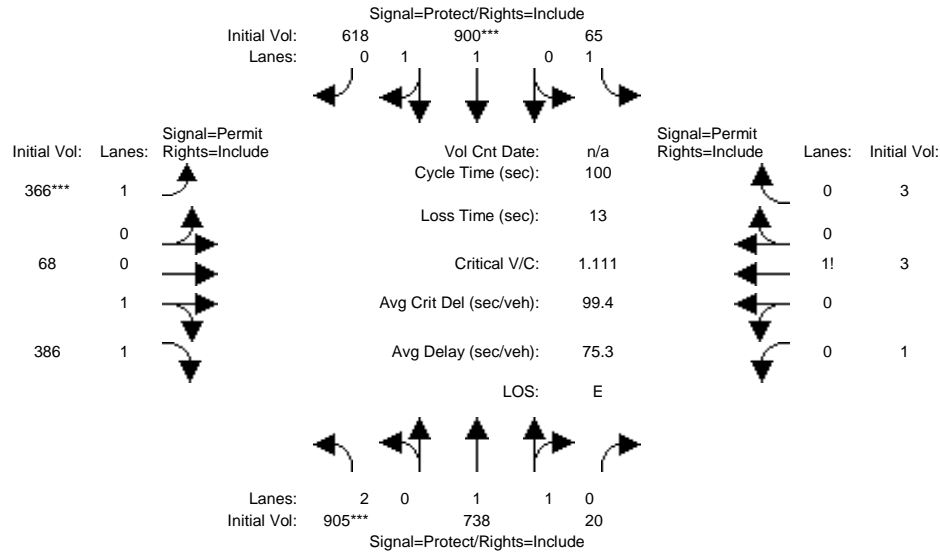
Note: Queue reported is the number of cars per lane.



Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Cumulative + Project AM

Intersection #3: Fremont & Central



Street Name:	Fremont Blvd						Central Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	905	738	20	65	900	618	366	68	386	1	3	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	905	738	20	65	900	618	366	68	386	1	3	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	905	738	20	65	900	618	366	68	386	1	3	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	905	738	20	65	900	618	366	68	386	1	3	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	905	738	20	65	900	618	366	68	386	1	3	3

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.89	0.87	0.75	0.87	0.83	0.92	0.93	0.92
Lanes:	2.00	1.95	0.05	1.00	1.18	0.82	1.00	0.29	1.71	0.14	0.43	0.43
Final Sat.:	3502	3501	95	1805	1992	1368	1425	476	2701	250	751	751

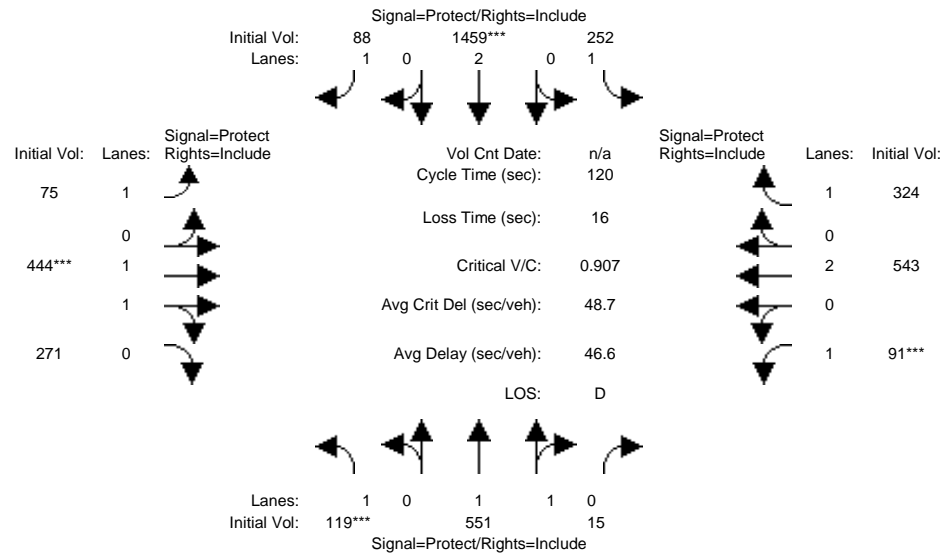
Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.26	0.21	0.21	0.04	0.45	0.45	0.26	0.14	0.14	0.00	0.00	0.00
Crit Moves:	****			****			****					
Green Time:	23.3	54.6	54.6	9.3	40.6	40.6	23.1	23.1	23.1	23.1	23.1	23.1
Volume/Cap:	1.11	0.39	0.39	0.39	1.11	1.11	1.11	0.62	0.62	0.02	0.02	0.02
Delay/Veh:	105.1	13.2	13.2	44.1	90.6	90.6	121.5	36.1	36.1	29.7	29.7	29.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	105.1	13.2	13.2	44.1	90.6	90.6	121.5	36.1	36.1	29.7	29.7	29.7
LOS by Move:	F	B	B	D	F	F	F	D	D	C	C	C
HCM2k95thQ:	40	13	13	5	61	60	33	14	14	0	0	0

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Existing + Project AM

Intersection #4: Paseo Padre & Peralta



Street Name:	Paseo Padre Pkwy						Peralta Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	4	10	10	4	10	10	4	10	10	4	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:

Base Vol:	119	551	15	252	1459	88	75	444	271	91	543	324
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	119	551	15	252	1459	88	75	444	271	91	543	324
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	128	592	16	271	1569	95	81	477	291	98	584	348
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	128	592	16	271	1569	95	81	477	291	98	584	348
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	128	592	16	271	1569	95	81	477	291	98	584	348

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.95	0.83	0.95	0.90	0.89	0.95	0.95	0.85
Lanes:	1.00	1.95	0.05	1.00	2.00	1.00	1.00	1.24	0.76	1.00	2.00	1.00
Final Sat.:	1805	3500	95	1805	3610	1586	1805	2110	1288	1805	3610	1607

Capacity Analysis Module:

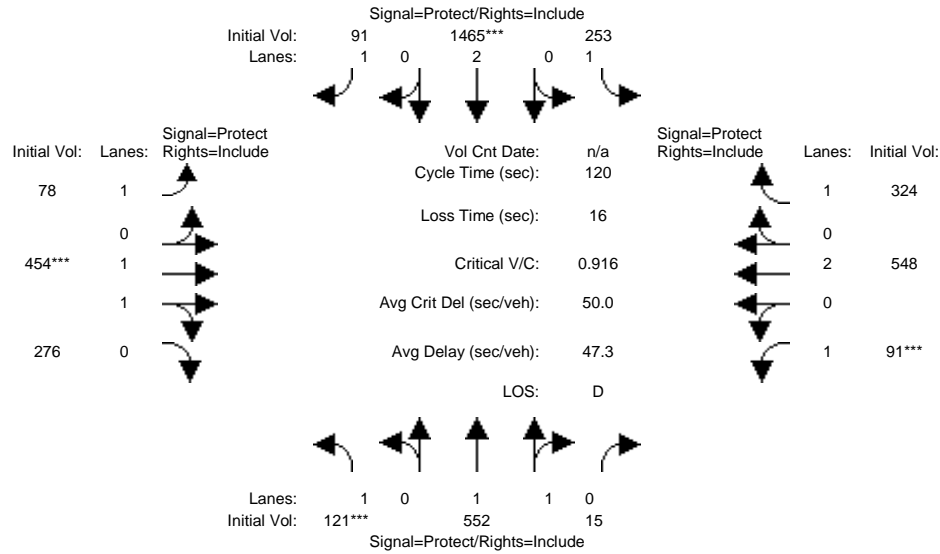
Vol/Sat:	0.07	0.17	0.17	0.15	0.43	0.06	0.04	0.23	0.23	0.05	0.16	0.22
Crit Moves:	****			****			****			****		
Green Time:	9.4	35.4	35.4	31.4	57.5	57.5	6.3	29.9	29.9	7.2	30.8	30.8
Volume/Cap:	0.91	0.57	0.57	0.57	0.91	0.12	0.85	0.91	0.91	0.91	0.63	0.85
Delay/Veh:	103.7	36.6	36.6	40.2	36.1	17.4	102.9	57.0	57.0	114.1	41.0	57.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	103.7	36.6	36.6	40.2	36.1	17.4	102.9	57.0	57.0	114.1	41.0	57.2
LOS by Move:	F	D	D	D	D	B	F	E	E	F	D	E
HCM2k95thQ:	14	19	19	17	51	4	10	31	31	12	20	26

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Background + Project AM

Intersection #4: Paseo Padre & Peralta



Street Name:	Paseo Padre Pkwy						Peralta Blvd					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	4	10	10	4	10	10	4	10	10	4	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:												
Base Vol:	121	552	15	253	1465	91	78	454	276	91	548	324
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	121	552	15	253	1465	91	78	454	276	91	548	324
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	130	594	16	272	1575	98	84	488	297	98	589	348
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	130	594	16	272	1575	98	84	488	297	98	589	348
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	130	594	16	272	1575	98	84	488	297	98	589	348

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.95	0.83	0.95	0.90	0.89	0.95	0.95	0.85
Lanes:	1.00	1.95	0.05	1.00	2.00	1.00	1.00	1.24	0.76	1.00	2.00	1.00
Final Sat.:	1805	3500	95	1805	3610	1586	1805	2113	1285	1805	3610	1607

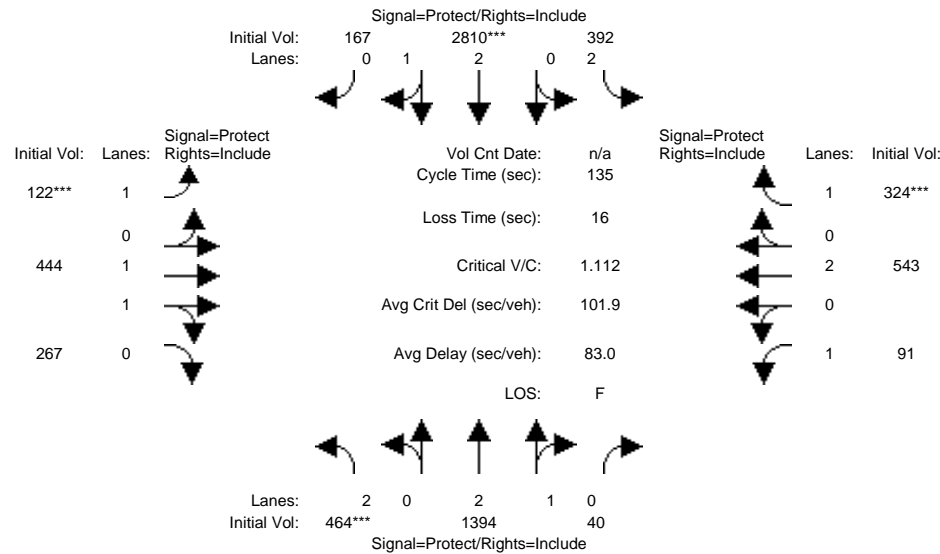
Capacity Analysis Module:												
Vol/Sat:	0.07	0.17	0.17	0.15	0.44	0.06	0.05	0.23	0.23	0.05	0.16	0.22
Crit Moves:	****			****			****			****		
Green Time:	9.4	35.3	35.3	31.4	57.2	57.2	6.6	30.3	30.3	7.1	30.8	30.8
Volume/Cap:	0.92	0.58	0.58	0.58	0.92	0.13	0.85	0.92	0.92	0.92	0.64	0.85
Delay/Veh:	105.8	36.8	36.8	40.3	37.3	17.6	101.4	58.0	58.0	117.0	41.1	57.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	105.8	36.8	36.8	40.3	37.3	17.6	101.4	58.0	58.0	117.0	41.1	57.2
LOS by Move:	F	D	D	D	D	B	F	E	E	F	D	E
HCM2k95thQ:	14	19	19	17	51	4	10	32	32	12	20	26

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
Cumulative + Project AM

Intersection #4: Paseo Padre & Peralta



Street Name:	Paseo Padre Pkwy						Peralta Blvd					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	4	10	10	4	10	10	4	10	10	4	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:												
Base Vol:	464	1394	40	392	2810	167	122	444	267	91	543	324
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	464	1394	40	392	2810	167	122	444	267	91	543	324
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	464	1394	40	392	2810	167	122	444	267	91	543	324
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	464	1394	40	392	2810	167	122	444	267	91	543	324
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	464	1394	40	392	2810	167	122	444	267	91	543	324

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.91	0.92	0.90	0.90	0.95	0.90	0.89	0.95	0.95	0.85
Lanes:	2.00	2.92	0.08	2.00	2.83	0.17	1.00	1.25	0.75	1.00	2.00	1.00
Final Sat.:	3502	5022	144	3502	4857	289	1805	2125	1278	1805	3610	1608

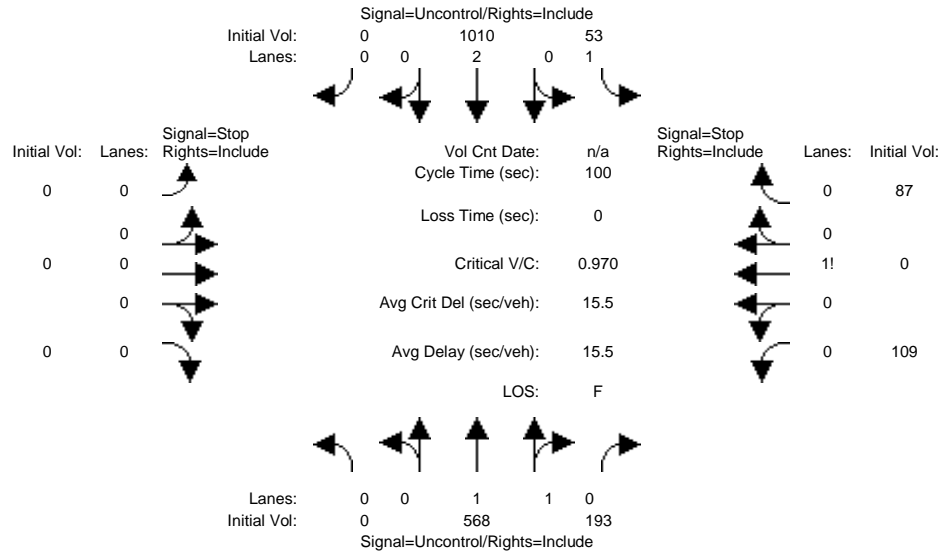
Capacity Analysis Module:												
Vol/Sat:	0.13	0.28	0.28	0.11	0.58	0.58	0.07	0.21	0.21	0.05	0.15	0.20
Crit Moves:	****			****			****			****		
Green Time:	16.1	61.5	61.5	24.8	70.2	70.2	8.2	26.3	26.3	6.4	24.5	24.5
Volume/Cap:	1.11	0.61	0.61	0.61	1.11	1.11	1.11	1.07	1.07	1.07	0.83	1.11
Delay/Veh:	137.5	28.2	28.2	52.3	88.8	88.8	182.6	110	110.1	182.9	62.0	141.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	137.5	28.2	28.2	52.3	88.8	88.8	182.6	110	110.1	182.9	62.0	141.5
LOS by Move:	F	C	C	D	F	F	F	F	F	F	E	F
HCM2k95thQ:	28	28	28	16	93	93	17	38	38	14	24	35

Note: Queue reported is the number of cars per lane.

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Existing + Project AM

Intersection #5: Fremont & Parish



Street Name: Fremont Blvd Parish Ave  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:												
Base Vol:	0	568	193	53	1010	0	0	0	0	109	0	87
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	568	193	53	1010	0	0	0	0	109	0	87
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	0	611	208	57	1086	0	0	0	0	117	0	94
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	611	208	57	1086	0	0	0	0	117	0	94

Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	6.5	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3

Capacity Module:												
Cnflct Vol:	xxxx	xxxx	xxxxx	825	xxxx	xxxxx	xxxx	xxxx	xxxxx	1410	1922	416
Potent Cap.:	xxxx	xxxx	xxxxx	814	xxxx	xxxxx	xxxx	xxxx	xxxxx	132	68	591
Move Cap.:	xxxx	xxxx	xxxxx	809	xxxx	xxxxx	xxxx	xxxx	xxxxx	121	63	588
Volume/Cap:	xxxx	xxxx	xxxx	0.07	xxxx	xxxx	xxxx	xxxx	xxxx	0.97	0.00	0.16

Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	9.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	187	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.5	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	157	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	F	*
ApproachDel:	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	156.6	xxxxxxx	xxxxxxx
ApproachLOS:	*	*	*	*	*	*	*	*	*	F	*	*

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

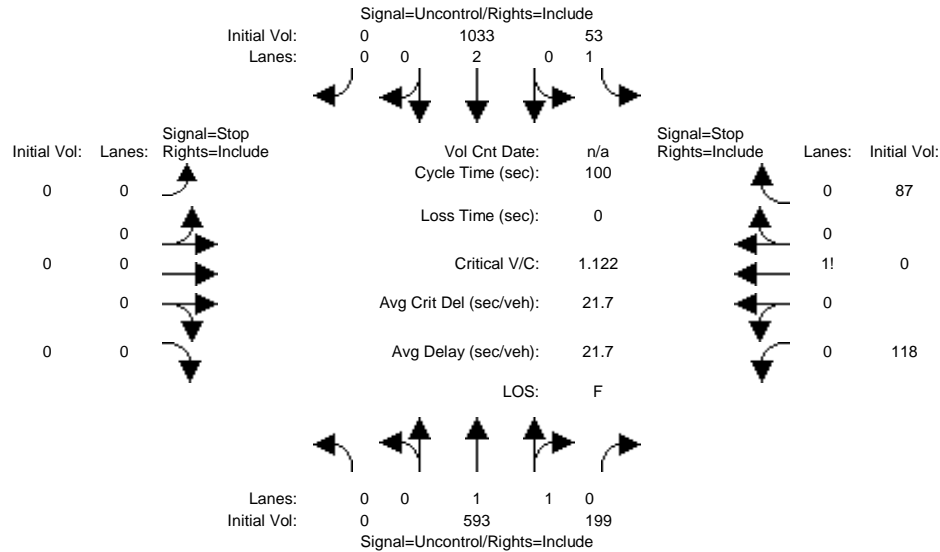
\*\*\*\*\*  
Intersection #5 Fremont & Parish  
\*\*\*\*\*  
Base Volume Alternative: Peak Hour Warrant Met

Level Of Service Module:											
Approach:	North Bound	South Bound	East Bound	West Bound							
Movement:	L - T - R	L - T - R	L - T - R	L - T - R							

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Background + Project AM

Intersection #5: Fremont & Parish



Street Name: Fremont Blvd Parish Ave  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:												
Base Vol:	0	593	199	53	1033	0	0	0	0	118	0	87
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	593	199	53	1033	0	0	0	0	118	0	87
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	0	638	214	57	1111	0	0	0	0	127	0	94
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	638	214	57	1111	0	0	0	0	127	0	94

Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	6.5	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3

Capacity Module:												
Cnflct Vol:	xxxx	xxxx	xxxxx	859	xxxx	xxxxx	xxxx	xxxx	xxxxx	1452	1976	433
Potent Cap.:	xxxx	xxxx	xxxxx	791	xxxx	xxxxx	xxxx	xxxx	xxxxx	124	63	577
Move Cap.:	xxxx	xxxx	xxxxx	786	xxxx	xxxxx	xxxx	xxxx	xxxxx	113	58	573
Volume/Cap:	xxxx	xxxx	xxxx	0.07	xxxx	xxxx	xxxx	xxxx	xxxx	1.12	0.00	0.16

Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	9.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	172	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	12.6	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	218	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	F	*
ApproachDel:	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	217.5	xxxxxxx	xxxxxxx
ApproachLOS:	*	*	*	*	*	*	*	*	*	F	*	*

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

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Intersection #5 Fremont & Parish  
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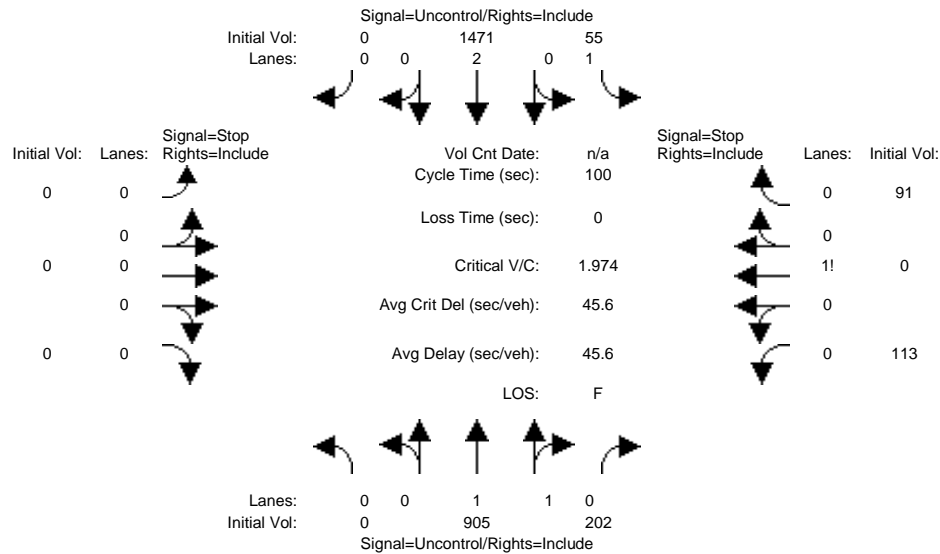
Base Volume Alternative: Peak Hour Warrant Met

Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Cumulative + Project AM

Intersection #5: Fremont & Parish



Street Name: Fremont Blvd Parish Ave
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table with 12 columns representing volume modules for different approaches and movements. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Table with 12 columns representing critical gap modules. Rows include Critical Gp and FollowUpTim.

Table with 12 columns representing capacity modules. Rows include Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table with 12 columns representing level of service modules. Rows include 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

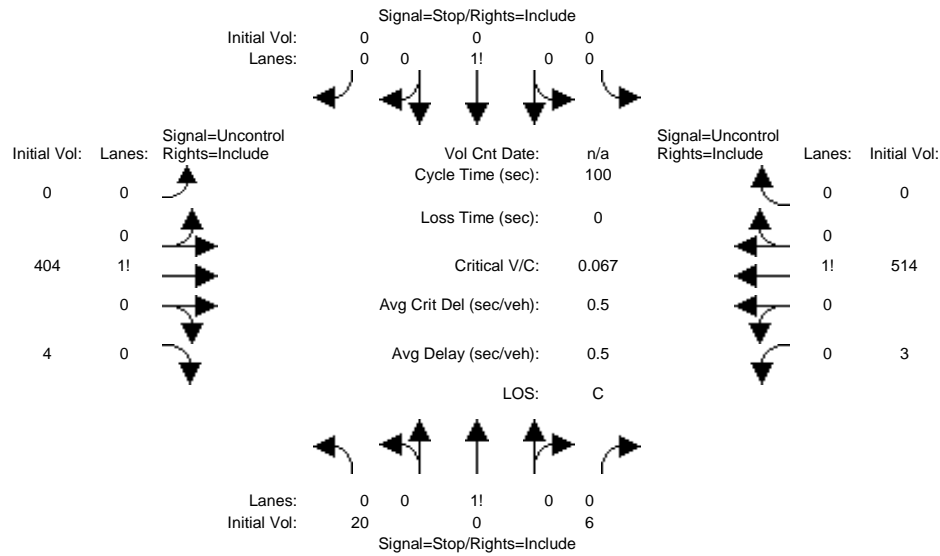
\*\*\*\*\*
Intersection #5 Fremont & Parish
\*\*\*\*\*
Base Volume Alternative: Peak Hour Warrant Met

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Existing + Project AM

Intersection #6: Jason & Peralta



Street Name: Jason Way Peralta Blvd  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	20	0	6	0	0	0	0	404	4	3	514	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	0	6	0	0	0	0	404	4	3	514	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	20	0	6	0	0	0	0	404	4	3	514	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	20	0	6	0	0	0	0	404	4	3	514	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	926	926	406	929	928	514	xxxx	xxxx	xxxxx	408	xxxx	xxxxx
Potent Cap.:	301	271	649	250	270	564	xxxx	xxxx	xxxxx	1162	xxxx	xxxxx
Move Cap.:	300	270	649	247	269	564	xxxx	xxxx	xxxxx	1162	xxxx	xxxxx
Volume/Cap:	0.07	0.00	0.01	0.00	0.00	0.00	xxxx	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	343	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	16.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx
Shared LOS:	*	C	*	*	*	*	*	*	*	A	*	*
ApproachDel:	16.4			xxxxxxx			xxxxxxx		xxxxxxx		xxxxxxx	
ApproachLOS:	C			*			*		*		*	

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

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Intersection #6 Jason & Peralta  
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Base Volume Alternative: Peak Hour Warrant NOT Met

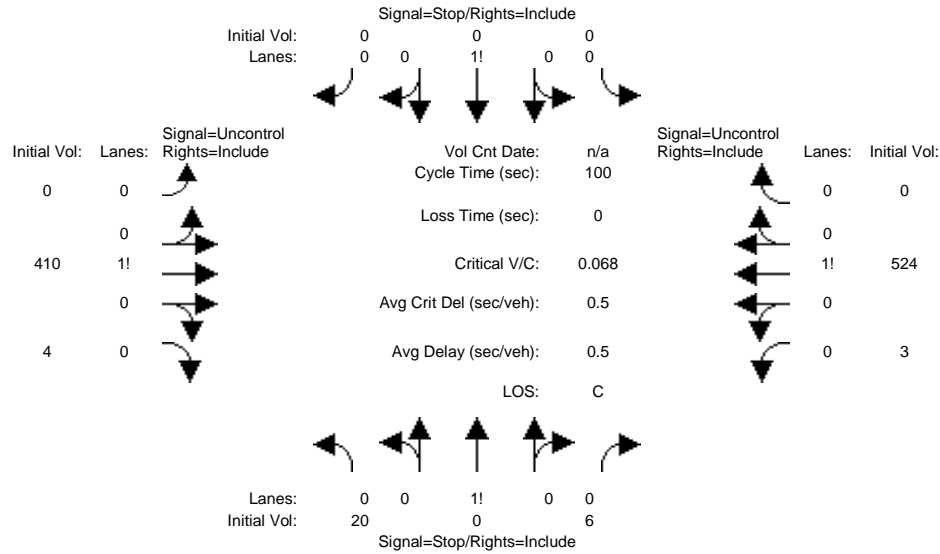
Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R



Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Background + Project AM

Intersection #6: Jason & Peralta



Street Name: Jason Way Peralta Blvd  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	20	0	6	0	0	0	0	410	4	3	524	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	0	6	0	0	0	0	410	4	3	524	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	20	0	6	0	0	0	0	410	4	3	524	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	20	0	6	0	0	0	0	410	4	3	524	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxxx	xxxx	xxxxxx	2.2	xxxx	xxxxxx

Capacity Module:

Cnflct Vol:	942	942	412	945	944	524	xxxx	xxxx	xxxxx	414	xxxx	xxxxxx
Potent Cap.:	294	265	644	244	264	557	xxxx	xxxx	xxxxxx	1156	xxxx	xxxxxx
Move Cap.:	294	264	644	241	264	557	xxxx	xxxx	xxxxxx	1156	xxxx	xxxxxx
Volume/Cap:	0.07	0.00	0.01	0.00	0.00	0.00	xxxx	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxxx	xxxx	xxxxx	8.1	xxxx	xxxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	336	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxxx
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxxx	xxxx	xxxxx	0.0	xxxx	xxxxxx
Shrd ConDel:	xxxxx	16.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxxx	xxxx	xxxxx	8.1	xxxx	xxxxxx
Shared LOS:	*	C	*	*	*	*	*	*	*	A	*	*
ApproachDel:	16.6			xxxxxxx			xxxxxxx		xxxxxxx	xxxxxxx		
ApproachLOS:	C			*			*		*	*		*

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

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Intersection #6 Jason & Peralta  
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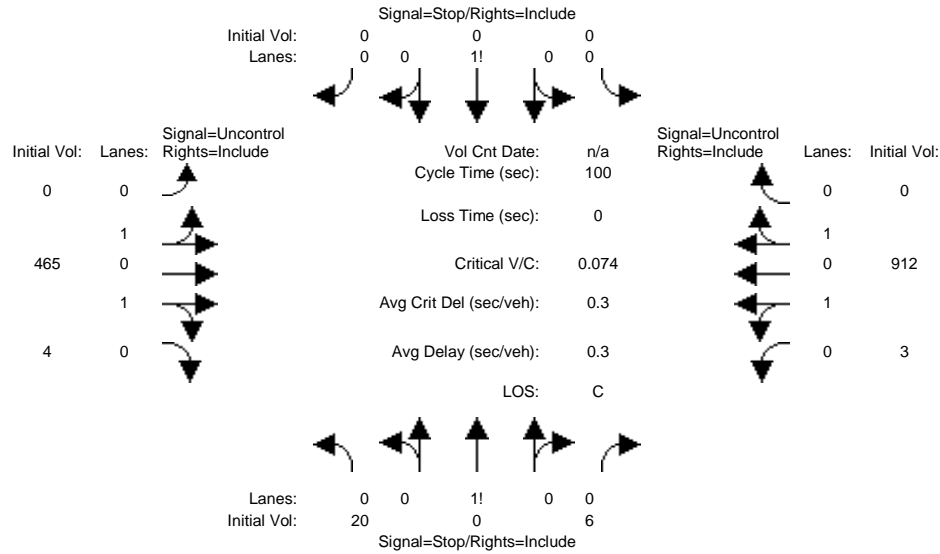
Base Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Cumulative + Project AM

Intersection #6: Jason & Peralta



Street Name: Jason Way Peralta Blvd  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	20	0	6	0	0	0	0	465	4	3	912	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	0	6	0	0	0	0	465	4	3	912	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	20	0	6	0	0	0	0	465	4	3	912	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	20	0	6	0	0	0	0	465	4	3	912	0

Critical Gap Module:

Critical Gp:	6.8	6.5	6.9	7.5	6.5	6.9	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflct Vol:	929	1385	235	1151	1387	456	xxxxx	xxxxx	xxxxx	469	xxxxx	xxxxx
Potent Cap.:	270	145	773	156	144	557	xxxxx	xxxxx	xxxxx	1103	xxxxx	xxxxx
Move Cap.:	270	144	773	154	144	557	xxxxx	xxxxx	xxxxx	1103	xxxxx	xxxxx
Volume/Cap:	0.07	0.00	0.01	0.00	0.00	0.00	xxxxx	xxxxx	xxxxx	0.00	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	8.3	xxxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT			
Shared Cap.:	xxxxx	317	xxxxx	xxxxx	0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	0.0	xxxxx	xxxxx
Shrd ConDel:	xxxxx	17.4	xxxxx	xxxxx	xxxxx	xxxxx	7.2	xxxxx	xxxxx	8.3	xxxxx	xxxxx
Shared LOS:	*	C	*	*	*	*	A	*	*	A	*	*
ApproachDel:	17.4			xxxxxxx			xxxxxxx			xxxxxxx		
ApproachLOS:	C			*			*			*		*

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

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Intersection #6 Jason & Peralta

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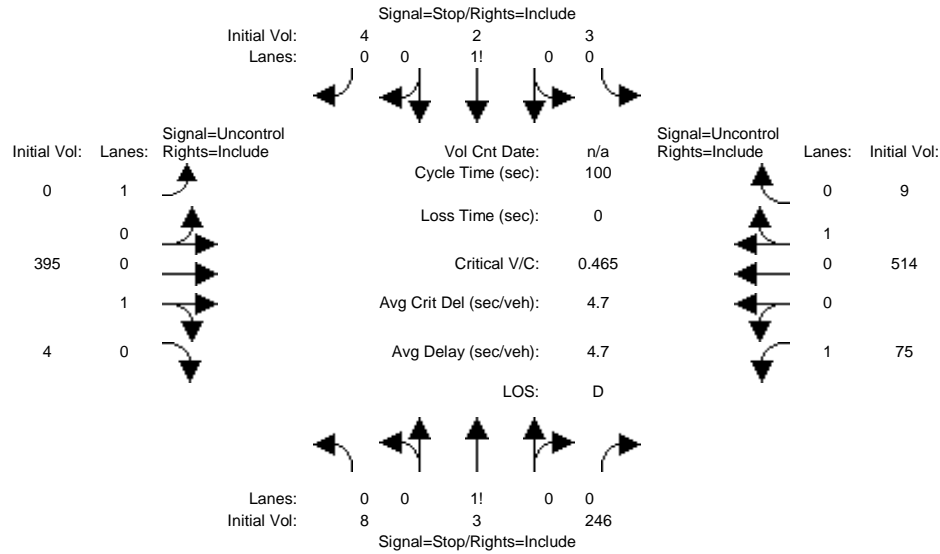
Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Existing + Project AM

Intersection #7: Parish & Peralta



Street Name: Parish Ave Peralta Blvd  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	8	3	246	3	2	4	0	395	4	75	514	9
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	3	246	3	2	4	0	395	4	75	514	9
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	9	3	283	3	2	5	0	454	5	86	591	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	9	3	283	3	2	5	0	454	5	86	591	10

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	1228	1230	456	1368	1227	596	xxxx	xxxx	xxxxx	459	xxxx	xxxxx
Potent Cap.:	156	179	608	125	180	507	xxxx	xxxx	xxxxx	1113	xxxx	xxxxx
Move Cap.:	144	165	608	62	166	507	xxxx	xxxx	xxxxx	1113	xxxx	xxxxx
Volume/Cap:	0.06	0.02	0.46	0.06	0.01	0.01	xxxx	xxxx	xxxx	0.08	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT			
Shared Cap.:	xxxx	538	xxxxx	xxxx	132	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	3.3	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	19.6	xxxxx	xxxxx	34.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	D	*	*	*	*	*	*	*
ApproachDel:		19.6			34.6		xxxxxxx		xxxxxxx			
ApproachLOS:		C			D			*		*		*

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

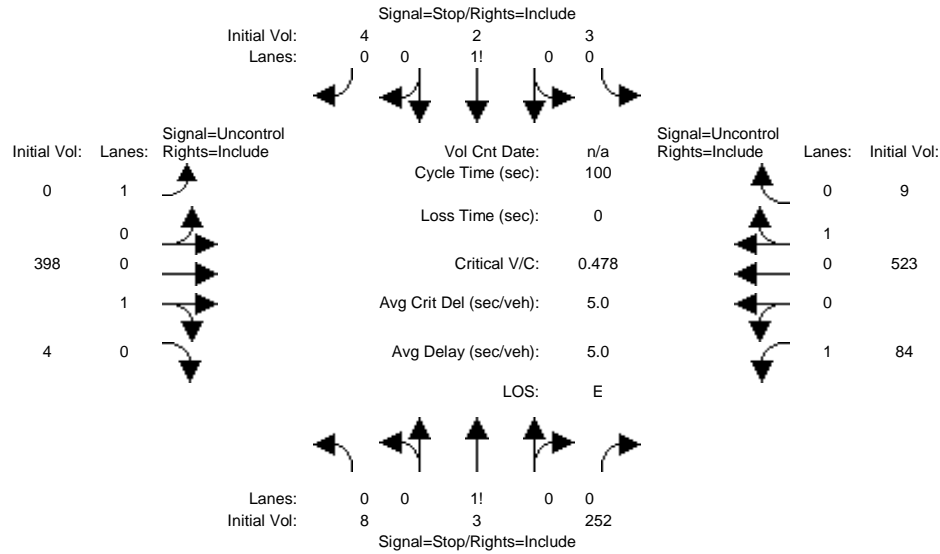
\*\*\*\*\*  
 Intersection #7 Parish & Peralta  
 \*\*\*\*\*  
 Base Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Background + Project AM

Intersection #7: Parish & Peralta



Street Name: Parish Ave Peralta Blvd  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	8	3	252	3	2	4	0	398	4	84	523	9
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	3	252	3	2	4	0	398	4	84	523	9
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	9	3	290	3	2	5	0	457	5	97	601	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	9	3	290	3	2	5	0	457	5	97	601	10

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	1263	1264	460	1406	1261	606	xxxx	xxxx	xxxxx	462	xxxx	xxxxx
Potent Cap.:	148	171	606	118	172	500	xxxx	xxxx	xxxxx	1110	xxxx	xxxxx
Move Cap.:	135	156	606	56	157	500	xxxx	xxxx	xxxxx	1110	xxxx	xxxxx
Volume/Cap:	0.07	0.02	0.48	0.06	0.01	0.01	xxxx	xxxx	xxxx	0.09	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT			
Shared Cap.:	xxxx	532	xxxxx	xxxx	122	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	3.5	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	20.3	xxxxx	xxxxx	37.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	E	*	*	*	*	*	*	*
ApproachDel:	20.3			37.3			xxxxxxx		xxxxxxx			
ApproachLOS:	C			E			*		*		*	

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

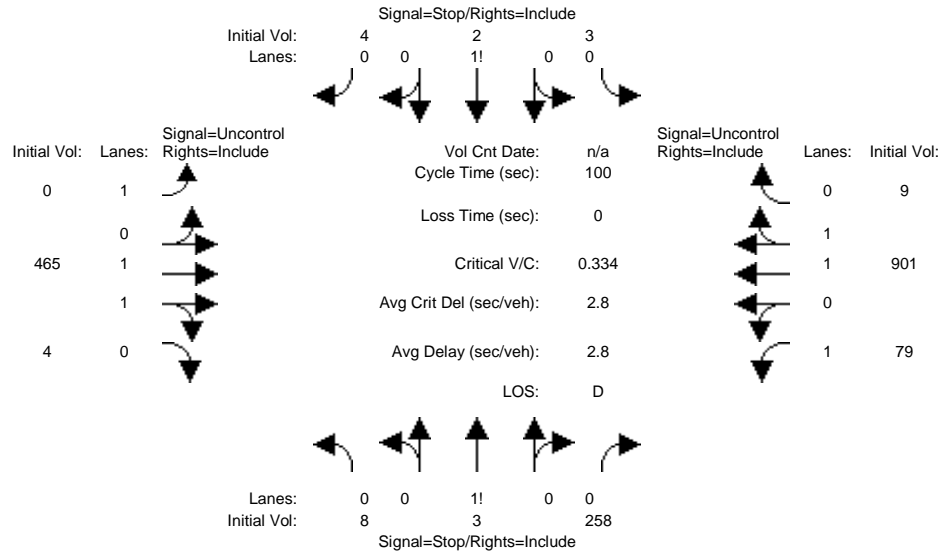
\*\*\*\*\*  
 Intersection #7 Parish & Peralta  
 \*\*\*\*\*  
 Base Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Cumulative + Project AM

Intersection #7: Parish & Peralta



Street Name: Parish Ave Peralta Blvd  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	8	3	258	3	2	4	0	465	4	79	901	9
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	3	258	3	2	4	0	465	4	79	901	9
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	8	3	258	3	2	4	0	465	4	79	901	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	8	3	258	3	2	4	0	465	4	79	901	9

Critical Gap Module:

Critical Gp:	7.5	6.5	6.9	7.5	6.5	6.9	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	1077	1535	235	1298	1533	455	xxxx	xxxx	xxxxx	469	xxxx	xxxxx
Potent Cap.:	176	117	773	121	118	558	xxxx	xxxx	xxxxx	1103	xxxx	xxxxx
Move Cap.:	163	109	773	75	109	558	xxxx	xxxx	xxxxx	1103	xxxx	xxxxx
Volume/Cap:	0.05	0.03	0.33	0.04	0.02	0.01	xxxx	xxxx	xxxx	0.07	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT			
Shared Cap.:	xxxx	656	xxxxx	xxxx	137	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	2.0	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	14.3	xxxxx	xxxxx	33.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	D	*	*	*	*	*	*	*
ApproachDel:	14.3			33.1			xxxxxxx		xxxxxxx			
ApproachLOS:	B			D			*		*		*	

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

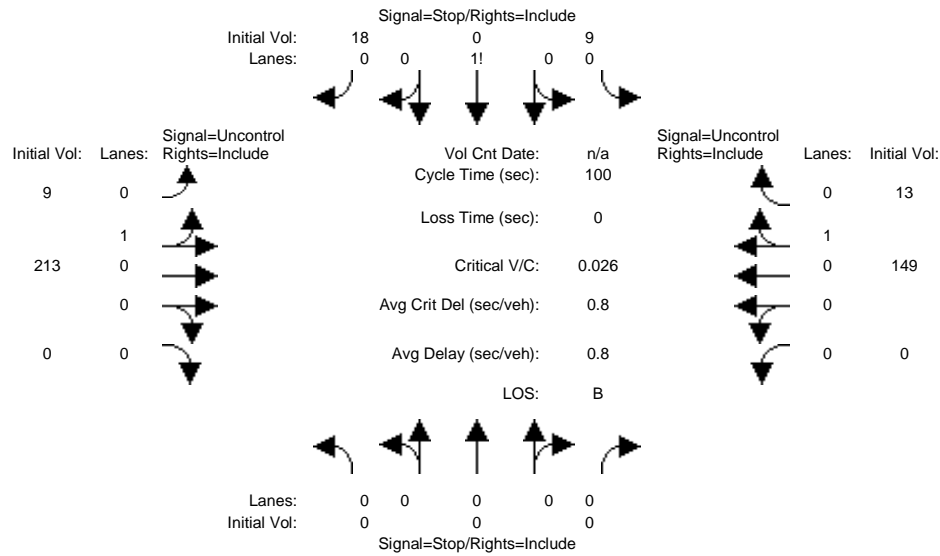
\*\*\*\*\*  
 Intersection #7 Parish & Peralta  
 \*\*\*\*\*  
 Base Volume Alternative: Peak Hour Warrant NOT Met

Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Existing + Project AM

Intersection #8: Jason & Parish



Street Name: Jason Way Parish Ave

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	0	0	0	9	0	18	9	213	0	0	149	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	9	0	18	9	213	0	0	149	13
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
PHF Volume:	0	0	0	11	0	22	11	260	0	0	182	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	11	0	22	11	260	0	0	182	16

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
FollowUpTim:	xxxxx	xxxx	xxxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxxx	471	471	190	198	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Potent Cap.:	xxxx	xxxx	xxxxxx	555	494	857	1387	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Move Cap.:	xxxx	xxxx	xxxxxx	551	490	857	1387	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.02	0.00	0.03	0.01	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	0.0	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Control Del:	xxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	7.6	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	723	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	0.1	xxxxxx	0.0	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxxx	xxxxxx	10.2	xxxxxx	7.6	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxxx			10.2			xxxxxxx			xxxxxxx		
ApproachLOS:	*			B			*			*		*

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

\*\*\*\*\*  
 Intersection #8 Jason & Parish  
 \*\*\*\*\*  
 Base Volume Alternative: Peak Hour Warrant NOT Met

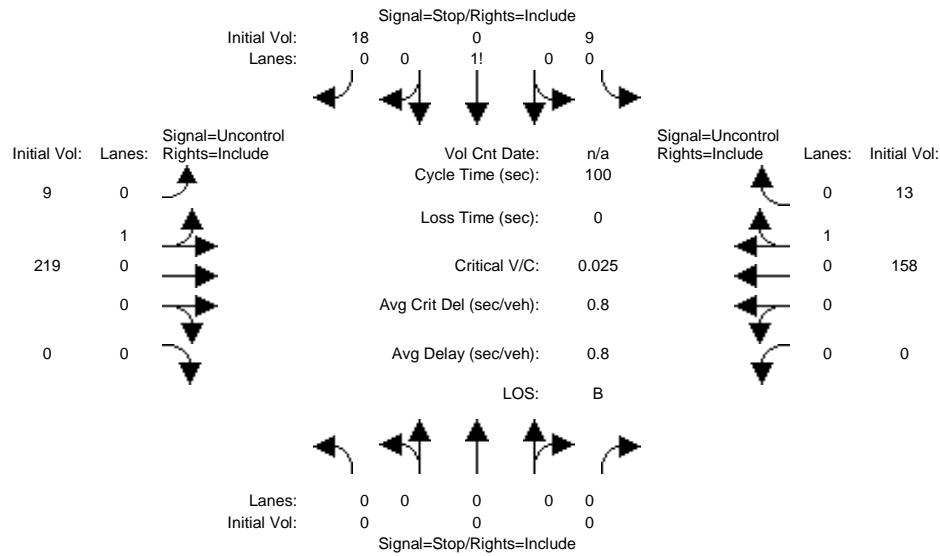
Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Background + Project AM

Intersection #8: Jason & Parish



Street Name: Jason Way Parish Ave  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	0	0	0	9	0	18	9	219	0	0	158	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	9	0	18	9	219	0	0	158	13
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	0	0	0	11	0	21	11	258	0	0	186	15
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	11	0	21	11	258	0	0	186	15

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
FollowUpTim:	xxxxx	xxxx	xxxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxxx	472	472	194	201	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Potent Cap.:	xxxx	xxxx	xxxxxx	554	493	853	1383	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Move Cap.:	xxxx	xxxx	xxxxxx	551	489	853	1383	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.02	0.00	0.02	0.01	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	0.0	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Control Del:	xxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	7.6	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	721	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	0.1	xxxxxx	0.0	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxxx	xxxxxx	10.2	xxxxxx	7.6	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxxx			10.2			xxxxxxx			xxxxxxx		
ApproachLOS:	*			B			*			*		*

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

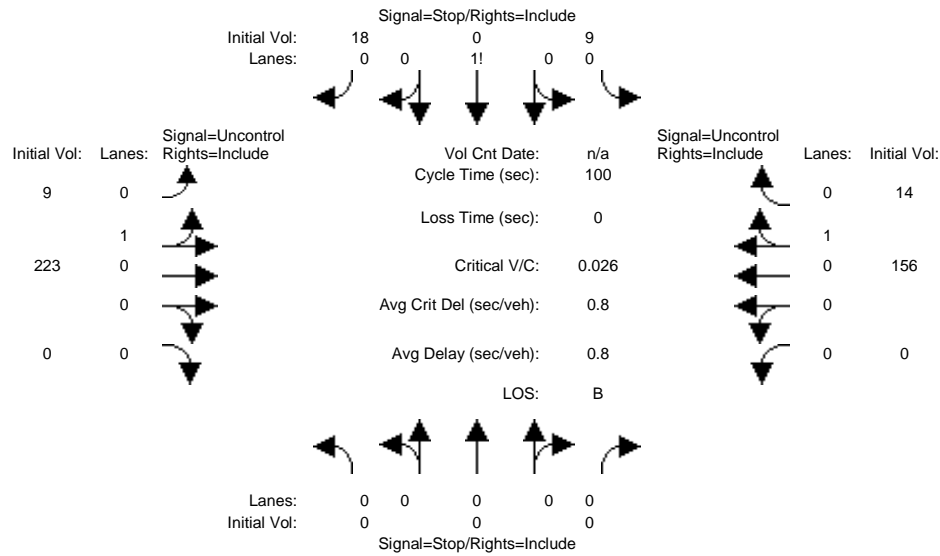
\*\*\*\*\*  
 Intersection #8 Jason & Parish  
 \*\*\*\*\*  
 Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R

Silicon Sage Mixed-Use Project

Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
Cumulative + Project AM

Intersection #8: Jason & Parish



Street Name: Jason Way Parish Ave  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:

Base Vol:	0	0	0	9	0	18	9	223	0	0	156	14
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	9	0	18	9	223	0	0	156	14
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
PHF Volume:	0	0	0	11	0	22	11	272	0	0	190	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	11	0	22	11	272	0	0	190	17

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	493	493	199	207	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	539	480	847	1376	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	536	476	847	1376	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.02	0.00	0.03	0.01	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	710	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	10.3	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxxx			10.3			xxxxxxx			xxxxxxx		
ApproachLOS:	*			B			*			*		*

Note: Queue reported is the number of cars per lane.

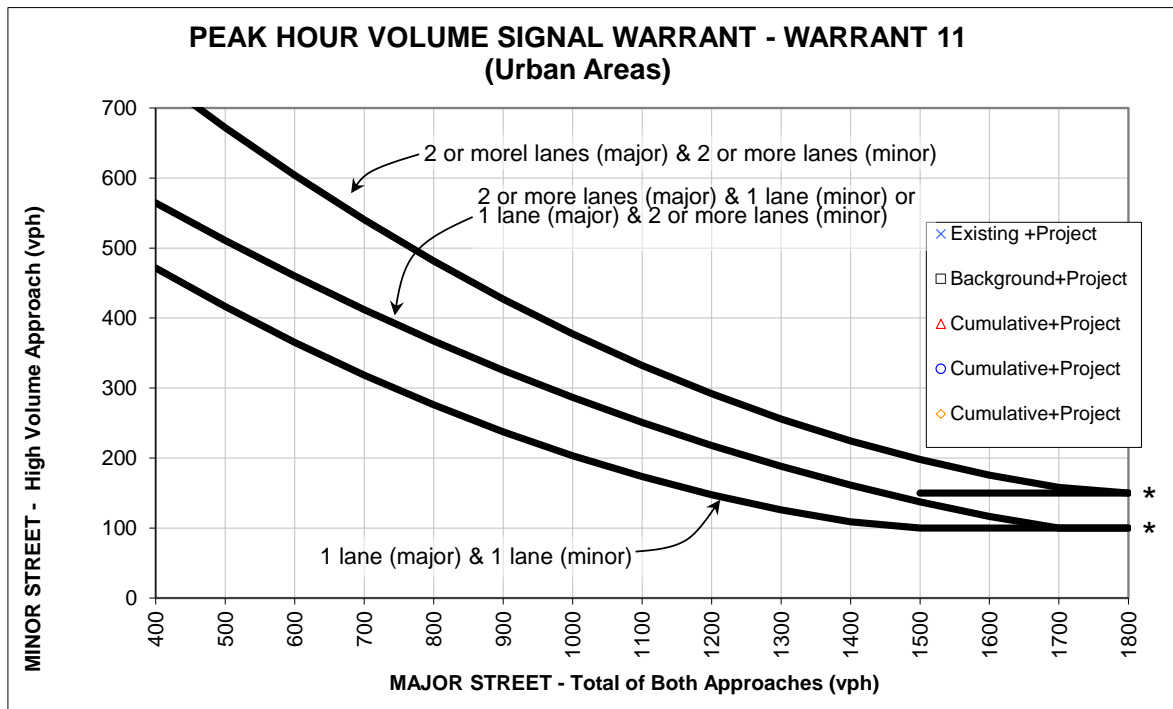
Peak Hour Delay Signal Warrant Report

\*\*\*\*\*  
 Intersection #8 Jason & Parish  
 \*\*\*\*\*  
 Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R



**Fremont Blvd & Parish Ave** **TIA**



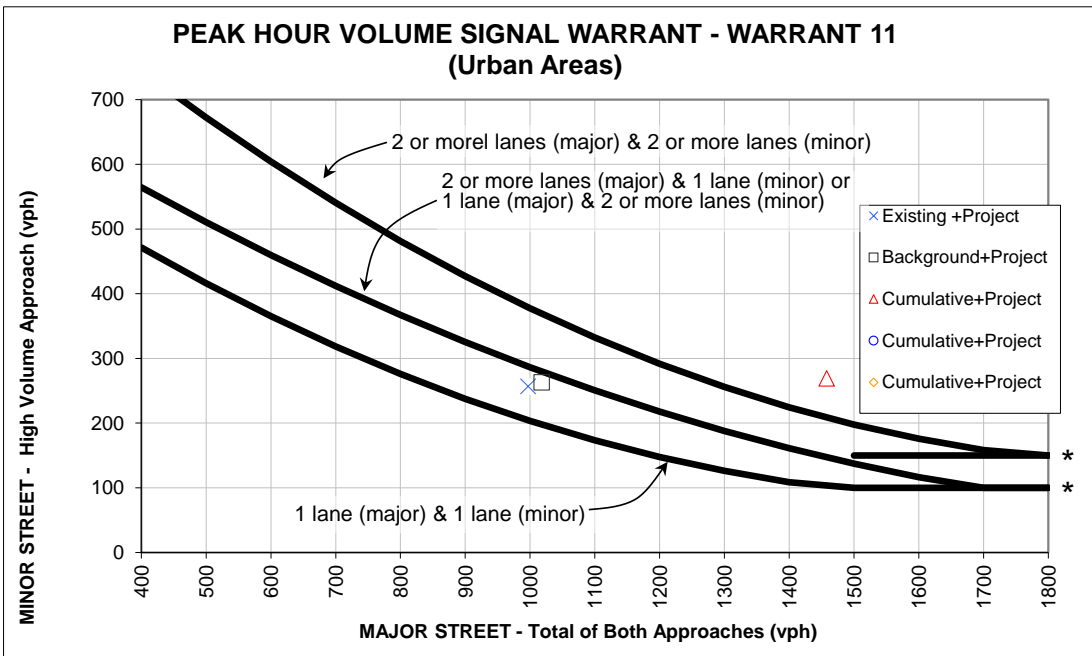
\* NOTE: 150 vph applies as the lower threshold volume for a minor street approach with 2 or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with 1 lane.

**WARRANT 11 - Peak Hour Volume**

		Approach Lanes		AM Peak Hour Volumes				
		2 or One More		Existing +Project	Background +Project	Cumulative+Project		
Major Street - Both Approaches	Fremont Blvd		x	1824	1878	2633		
Minor Street - Highest Approach	Parish Ave	x		193	205	204		
Warrant Met?				yes	yes	yes		

		Approach Lanes		PM Peak Hour Volumes				
		2 or One More						
Major Street - Both Approaches			x					
Minor Street - Highest Approach		x						
Warrant Met?								

**Parish Ave & Peralta Blvd** **TIA**



\* NOTE: 150 vph applies as the lower threshold volume for a minor street approach with 2 or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with 1 lane.

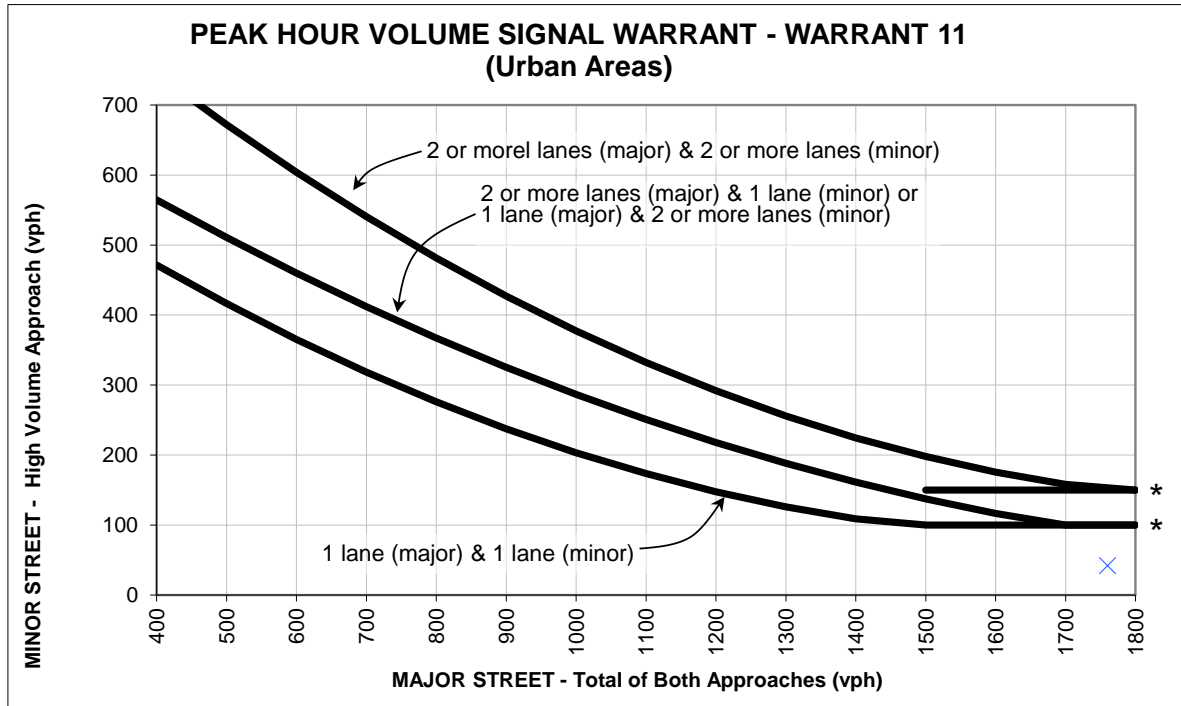
**WARRANT 11 - Peak Hour Volume**

		AM Peak Hour Volumes						
		Approach Lanes		Existing +Project	Background +Project	Cumulative+Project		
		2 or	One More					
Major Street - Both Approaches	Peralta Blvd		x	997	1018	1458		
Minor Street - Highest Approach	Parish Ave	x		257	263	269		
Warrant Met?				no*	no*	no*		

		PM Peak Hour Volumes						
		Approach Lanes						
		2 or	One More					
Major Street - Both Approaches			x					
Minor Street - Highest Approach		x						
Warrant Met?								

\*the traffic volumes on the Parish Ave (minor street) approach are 95% right turns: 249, 255 and 261 right turns under the existing, background and cumulative scenarios, respectively. The total, combined stopped-time delay for all vehicles on the (south) Parish approach in the AM peak hour would be no greater than 2.8 hours under all three scenarios. This is less than the 4 hours of total delay required to meet the warrant.

**Fremont Blvd & Main Site Driveway** **Operations**



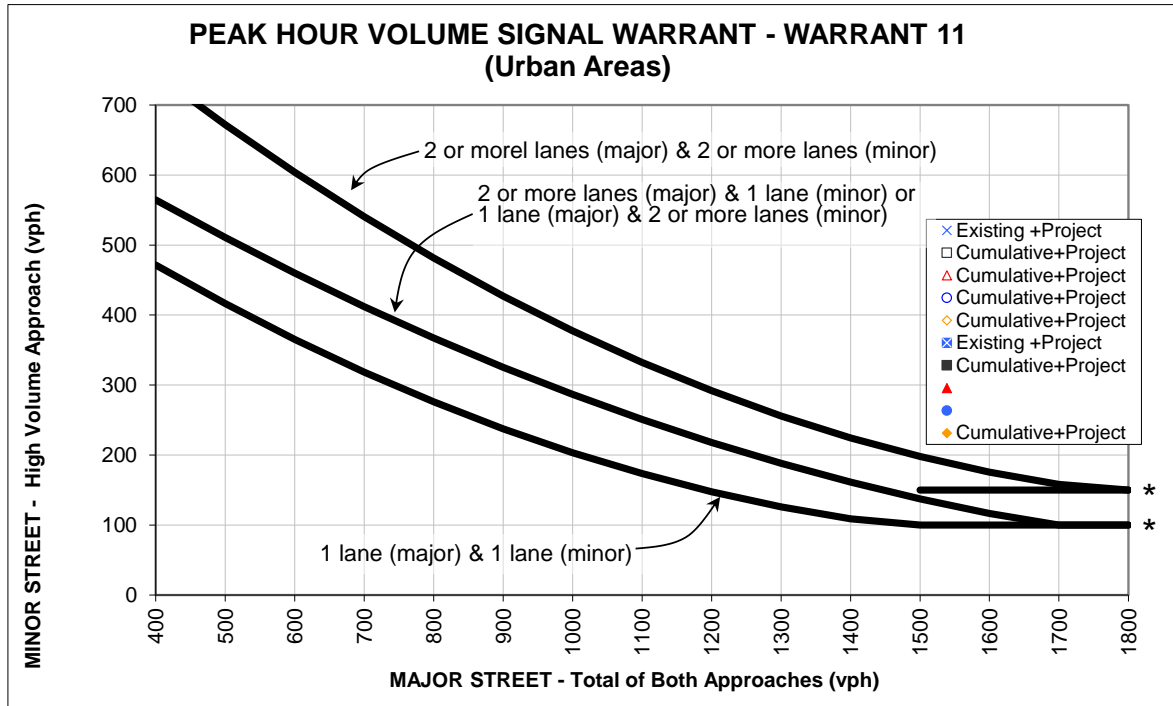
\* NOTE: 150 vph applies as the lower threshold volume for a minor street approach with 2 or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with 1 lane.

**WARRANT 11 - Peak Hour Volume**

		Approach Lanes		AM Peak Hour Volumes			
		2 or One More		Existing + Project	Cumulative + Project		
Major Street - Both Approaches	Fremont Blvd		x	1760	2497		
Minor Street - Highest Approach	Main Driveway	x		42	42		
Warrant Met?				no	no		

		Approach Lanes		PM Peak Hour Volumes			
		2 or One More		Existing + Project	Cumulative + Project		
Major Street - Both Approaches	Fremont Blvd		x	2076	2742		
Minor Street - Highest Approach	Main Driveway	x		36	36		
Warrant Met?				no	no		

**Fremont Blvd & Parish Ave** **Operations**



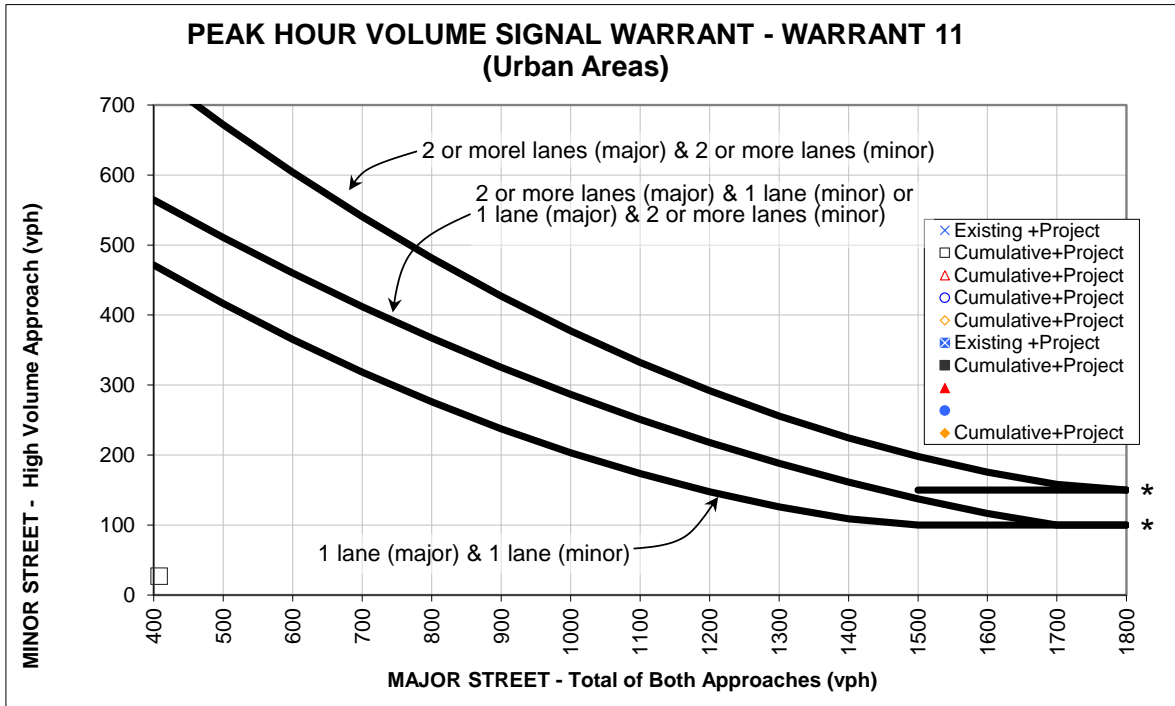
\* NOTE: 150 vph applies as the lower threshold volume for a minor street approach with 2 or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with 1 lane.

**WARRANT 11 - Peak Hour Volume**

		Approach Lanes		AM Peak Hour Volumes				
		2 or One More		Existing +Project	Cumulative+Project			
Major Street - Both Approaches	Fremont Blvd		x	1819	2628			
Minor Street - Highest Approach	Parish Ave	x		190	198			
Warrant Met?				yes	yes			

		Approach Lanes		PM Peak Hour Volumes				
		2 or One More		Existing +Project	Cumulative+Project			
Major Street - Both Approaches	Fremont Blvd		x	2182	2897			
Minor Street - Highest Approach	Parish Ave	x		68	72			
Warrant Met?				no	no			

**Jason Way & Parish Ave** **Operations**



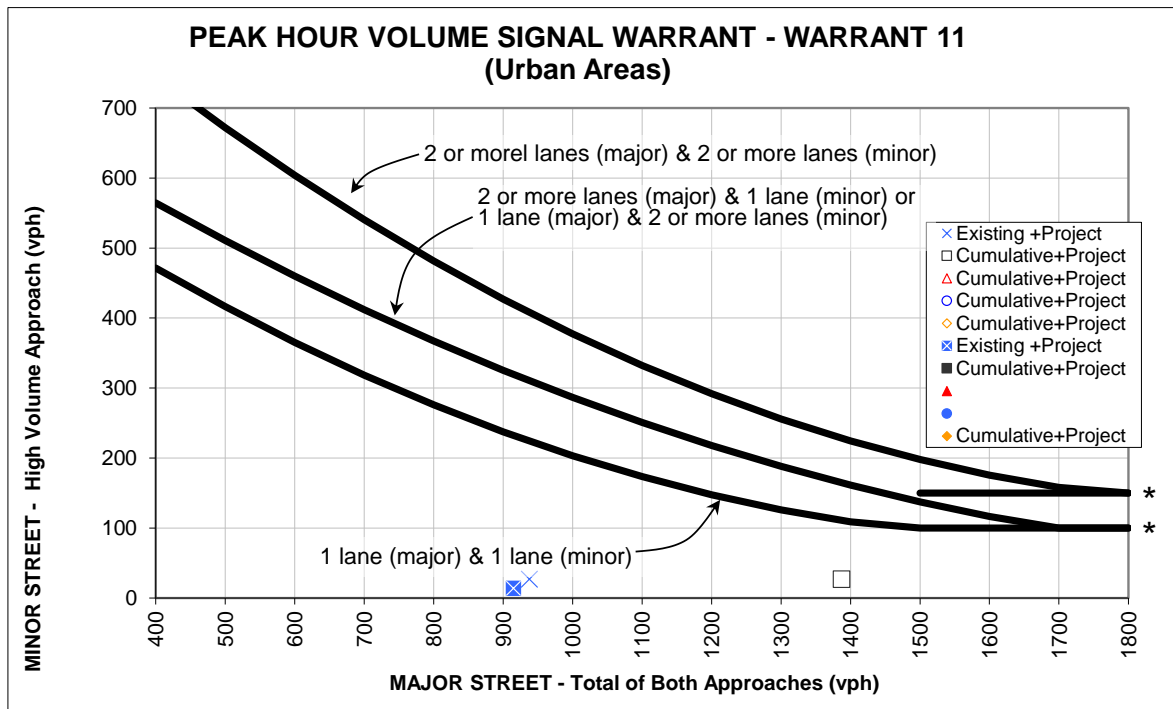
\* NOTE: 150 vph applies as the lower threshold volume for a minor street approach with 2 or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with 1 lane.

**WARRANT 11 - Peak Hour Volume**

				AM Peak Hour Volumes						
				Approach Lanes		Existing +Project	Cumulative+Project			
				2 or	One More					
Major Street - Both Approaches	Parish Ave	x				390	408			
Minor Street - Highest Approach	Jason Way	x				27	27			
Warrant Met?						no	no			

				PM Peak Hour Volumes						
				Approach Lanes		Existing +Project	Cumulative+Project			
				2 or	One More					
Major Street - Both Approaches	Parish Ave	x				282	294			
Minor Street - Highest Approach	Jason Way	x				23	23			
Warrant Met?						no	no			

**Jason Way & Peralta Blvd** **Operations**



\* NOTE: 150 vph applies as the lower threshold volume for a minor street approach with 2 or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with 1 lane.

**WARRANT 11 - Peak Hour Volume**

		Approach Lanes		AM Peak Hour Volumes				
		2 or One More		Existing +Project	Cumulative+Project			
Major Street - Both Approaches	Peralta Blvd		x	938	1387			
Minor Street - Highest Approach	Jason Way	x		27	27			
Warrant Met?				no	no			

		Approach Lanes		PM Peak Hour Volumes				
		2 or One More		Existing +Project	Cumulative+Project			
Major Street - Both Approaches	Peralta Blvd		x	915	2150			
Minor Street - Highest Approach	Jason Way	x		14	14			
Warrant Met?				no	no			