APPENDIX G

TRANSPORTATION IMPACT ANALYSIS

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Hexagon Transportation Consultants, Inc.

San Bruno Recreation and Aquatics Center

Transportation Impact Analysis

Prepared for:

Group 4 Architecture, Research + Planning, Inc.

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Executive Summary

This study was conducted for the purpose of satisfying the requirements of the California Environmental Quality Act (CEQA) and identifying the potential transportation impacts related to the proposed recreation and aquatics center in San Bruno, California. The project is located on the south side of Crystal Springs Road and is bounded by City Park Way at the southeastern side of the property (see Figure 1). The project would demolish the existing San Bruno Veterans Memorial Recreation Center and San Bruno Park Pool and construct a new recreation center with a gymnasium, aquatic center, meeting rooms, and auditorium. Four existing parking lots are provided for the new center. Access to the parking lots would be provided via driveways located on City Park Way, Santa Lucia Avenue/an alleyway, and Crystal Springs Road.

The potential impacts of the project were evaluated in accordance with the standards set forth by the City of San Bruno and the City/County Association of Governments (C/CAG) of San Mateo County. The C/CAG administers the San Mateo County Congestion Management Program (CMP). Given that the project is estimated to generate fewer than 100 peak hour vehicle trips, an analysis in accordance with C/CAG's CMP guidelines is not required. The traffic study includes an analysis of AM and PM peak hour traffic conditions for 2 signalized intersections and 5 unsignalized intersections in the vicinity of the project site. The study also includes an analysis of site access and on-site circulation, as well as potential impacts to transit, bicycle, and pedestrian facilities.

Based on trip generation rates recommended by the Institute of Transportation Engineers, as well as applying the appropriate trip reductions and existing site trip credits, it is estimated that the proposed project would generate 490 net new daily vehicle trips, with 30 net new trips (20 inbound and 10 outbound) occurring during the AM peak hour and 39 net new trips (18 inbound and 21 outbound) occurring during the PM peak hour.

Project Level of Service Analyses

Table ES-1 summarizes the results of the peak-hour intersection level of service analysis for the study intersections under the following conditions: Existing (Chapter 2), Cumulative (Chapter 3), and Existing plus Project and Cumulative plus Project (Chapter 4). Hexagon increased the existing counts by 5% as a conservative factor to account for the increase in traffic during the spring/summer months versus the winter months, when the existing counts were conducted.

The results of the intersection level of service analysis show that, for all scenarios studied, all the study intersections would continue to operate at LOS D or better during both the AM and PM peak hours of traffic, except the Oak Avenue/City Park Way and Crystal Springs Road intersection (see Table ES-1). The project would add more than 10 trips to a stop-controlled movement, and the intersection would meet the peak hour signal warrant. Therefore, the project would create a significant impact at this intersection.

The San Bruno Walk ‘n Bike Plan recommends a mini-roundabout at the intersection to simplify the intersection control and calm traffic. However, the plan also noted that the mini-roundabout should be further studied to determine the feasibility of a mini-roundabout at this location given the relatively large number of school children and activity. The AM and PM peak-hour intersection volumes warrant signalization under existing, cumulative, and project conditions. Therefore, Hexagon recommends that the City conduct further analysis and feasibility assessment to determine whether a traffic signal should be implemented at the Crystal Springs Road and City Park Way intersection.

Other Transportation Issues

The proposed site plan shows adequate site access and on-site circulation, and the project would not have an adverse effect on the existing transit services, pedestrian facilities, or bicycle facilities in the study area. Hexagon provides the following recommendations and enhancements for the project:

1. Bicycle parking should be provided.
2. Proposed pedestrian sidewalks along the project on City Park Way should be extended southward to connect to the existing sidewalks that end just north of Portola Way.
3. Better speed signs and pedestrian crossing signs should be installed on City Park Way in front of the project site to raise driver awareness of the pedestrian crossings.

Table ES-1
Intersection Level of Service Summary

					Existing					Cumulative				
					No Project		with Project			No Project		with Project		
Study Number	Intersection	Peak Hour	Count Date	Traffic Control	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Incr. in Crit. Delay	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Incr. in Avg. Delay
1	Cunningham Way & Crystal Springs Road	AM	01/23/19	Signal	26.2	C	26.8	C	0.0	29.5	C	30.5	C	0.0
		PM	01/23/19		27.7	C	27.0	C	0.0	28.1	C	28.3	C	0.0
2	Donner Avenue & Crystal Springs Road	AM	01/23/19	AWSC[1]	20.7	C	21.3	C	--	20.8	C	21.3	C	--
		PM	01/23/19		15.9	C	16.2	C	--	17.0	C	17.4	C	--
3	Oak Avenue & Crystal Springs Road	AM	01/23/19	AWSC[1]	**73.0**	**F**	**79.8**	**F**	--	**73.4**	**F**	**80.0**	**F**	--
		PM	01/23/19		31.5	D	34.9	D	--	36.9	E	**43.8**	**E**	--
4	Cyrpess Avenue & Crystal Springs Road	AM	01/23/19	AWSC[1]	15.0	B	15.2	C	--	15.4	B	15.2	C	--
		PM	01/23/19		13.1	B	13.2	B	--	13.4	B	13.6	B	--
5	El Camino Real & Crystal Springs Road	AM	01/23/19	Signal	21.9	C	22.6	C	0.1	22.1	C	22.7	C	0.1
		PM	01/23/19		21.5	C	21.6	C	0.1	22.1	C	22.3	C	0.1
6	De Soto Way & Santa Lucia Avenue (North)	AM	01/23/19	AWSC[1]	10.0	A	10.1	A	--	10.0	A	10.1	A	--
		PM	01/23/19		8.7	A	8.8	A	--	8.9	A	8.9	A	--
7	De Soto Way & Santa Lucia Avenue (Sorth)	AM	01/23/19	TWSC[2]	9.5	A	9.6	A	--	9.5	A	9.6	A	--
		PM	01/23/19		8.3	A	8.4	A	--	8.3	A	8.4	A	--

Note:
AWSC = All-Way Stop Control
TWSC = Two-Way Stop Control
[1] Average delay for an all-way stop controlled intersection is reported for the entire intersection.
[2] Average delay for the two-way stop controlled intersection is reported by the Synchro output delay and LOS
Bold indicates a substandard level of service.

1.
Introduction

This report presents the results of the Transportation Impact Analysis (TIA) for the proposed recreation and aquatics center in San Bruno, California. The project is located on the south side of Crystal Springs Road and is bounded by City Park Way at the southeastern side of the property (see Figure 1). The project would demolish the existing San Bruno Veterans Memorial Recreation Center and San Bruno Park Pool and construct a new recreation center with a gymnasium, aquatic center, meeting rooms, and auditorium. Three existing parking lots are provided for the new center. Access to the parking lots would be provided via driveways located on City Park Way, Santa Lucia Avenue/an alleyway, and Crystal Springs Road. The project proposes to reconfigure the existing parking lot adjacent to the recreation center building.

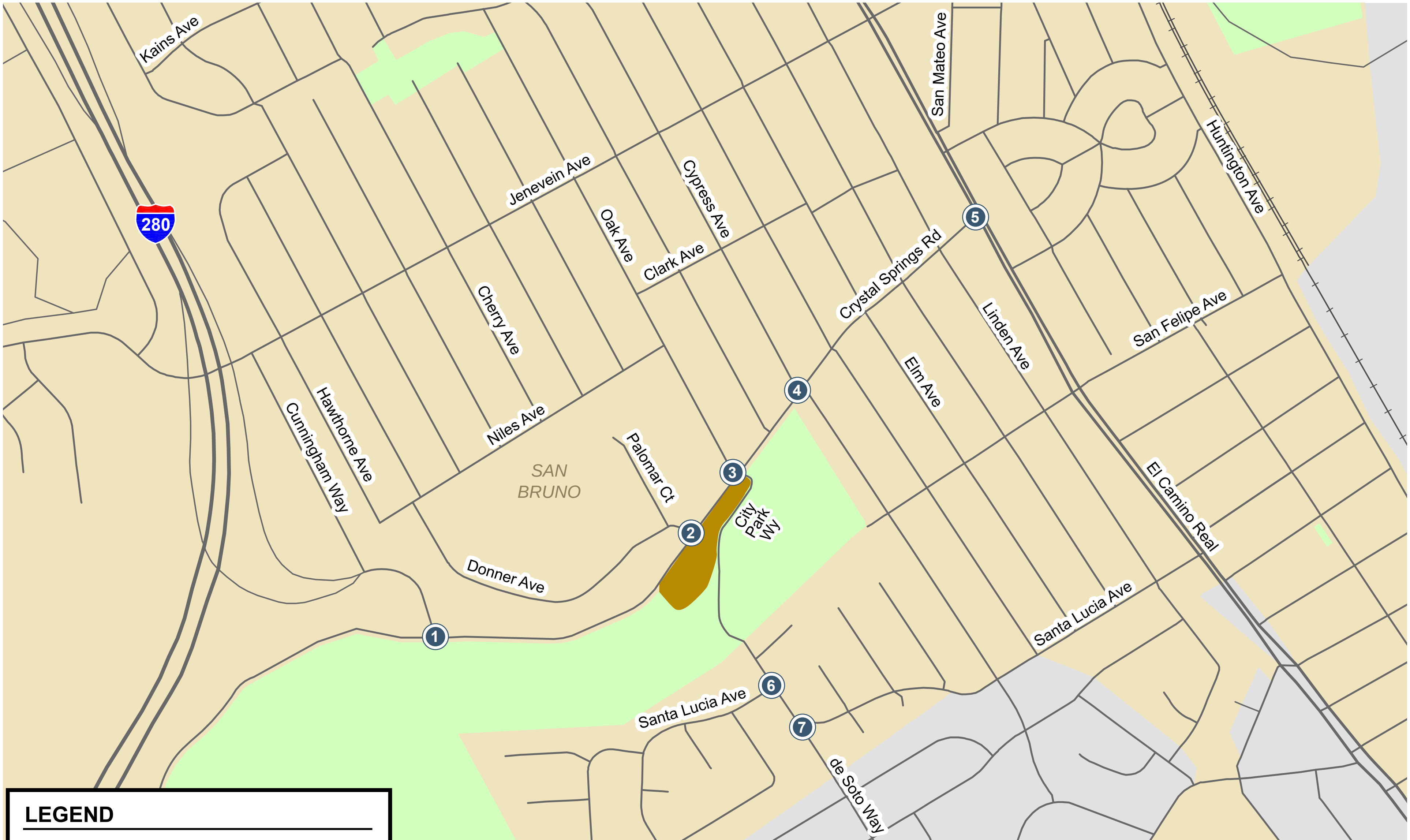
Scope of Study

This study was conducted for the purpose of identifying the potential traffic impacts related to the proposed development. The potential impacts of the project were evaluated in accordance with the standards set forth by the City of San Bruno and the City/County Association of Governments (C/CAG) of San Mateo County. The C/CAG administers the San Mateo County Congestion Management Program (CMP). Given that the project is estimated to generate fewer than 100 peak hour vehicle trips, an analysis in accordance with C/CAG's CMP guidelines is not be required. The traffic study includes an analysis of AM and PM peak hour traffic conditions for two signalized intersections and five unsignalized intersections in the vicinity of the project site. The study also includes an analysis of site access and on-site circulation, vehicle queuing, as well as potential impacts to transit, bicycle, and pedestrian facilities.

Study Intersections

1. Cunningham Way & Crystal Springs Road
2. Donner Avenue & Crystal Springs Road*
3. Oak Avenue & Crystal Springs Road*
4. Cypress Avenue & Crystal Springs Road*
5. El Camino Real & Crystal Springs Road
6. De Soto Way & Santa Lucia Avenue* (north)
7. De Soto Way & Santa Lucia Avenue* (south)

* Denotes an unsignalized intersection



LEGEND

= Site Location

= Study Intersection

Figure 1
Site Location and Study Intersections

HEXAGON

NORTH
Not to Scale

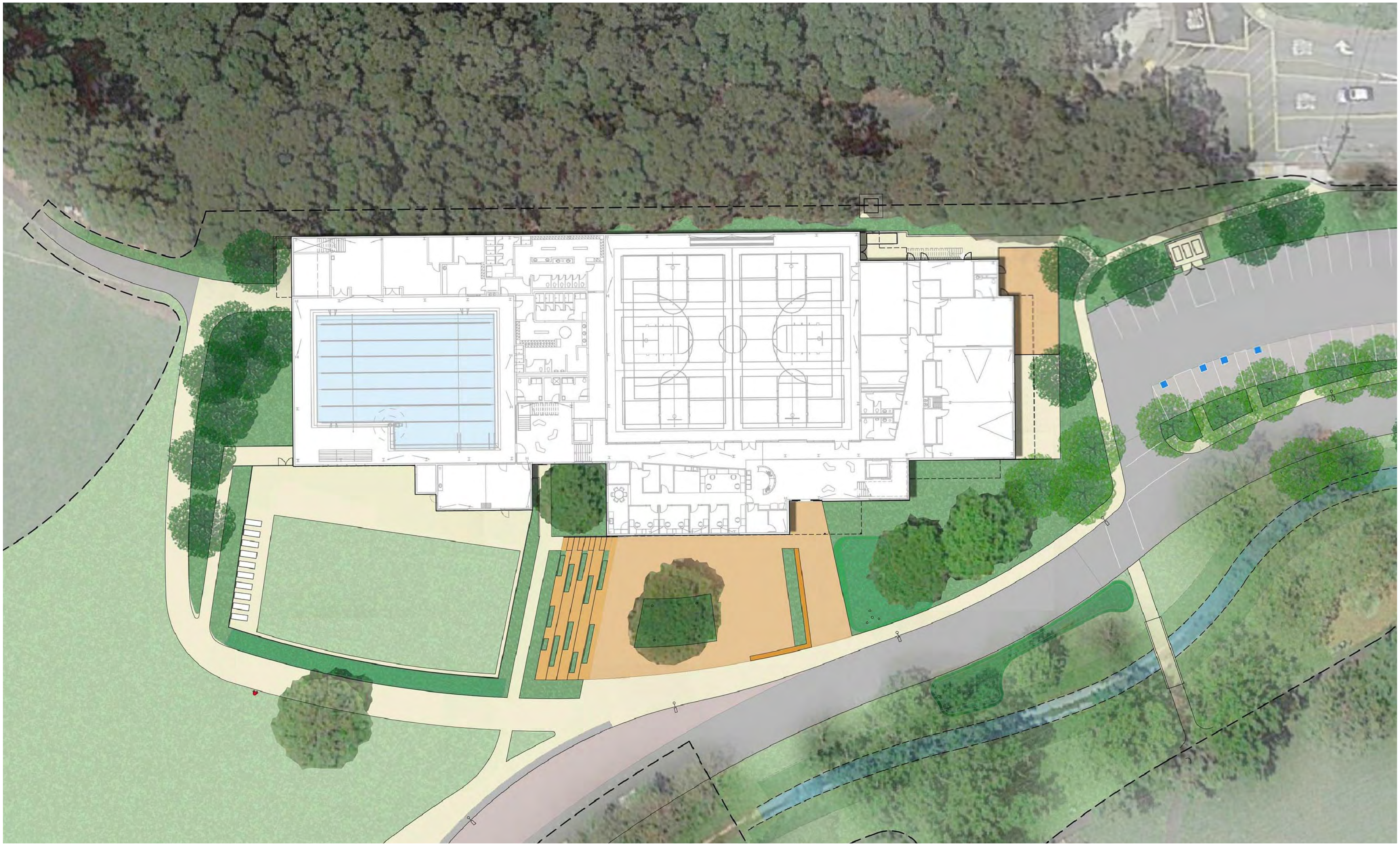


Figure 2
Project Site Plan

NORTH
Not to Scale

Traffic conditions at the study intersections were analyzed for both the weekday AM and PM peak hours of adjacent street traffic. The AM peak hour typically occurs between 7:00 AM and 9:00 AM and the PM peak hour between 4:00 PM and 6:00 PM on a regular weekday. These are the peak commute hours during which most traffic congestion occurs on the roadways.

Traffic conditions were evaluated for the following scenarios:

Scenario 1: *Existing Conditions.* Existing traffic volumes at the study intersections were obtained from traffic counts conducted in on January 23, 2019. Assuming that park usage would be higher in the spring and summer seasons, the counts were increased by 5% as a conservative factor. The study intersections were evaluated with a level of service analysis using Synchro software in accordance with the *2010 Highway Capacity Manual* methodology.

Scenario 2: *Cumulative Conditions.* Cumulative traffic volumes reflect traffic added by projected volumes from approved but not yet completed and/or occupied developments in the project area. The approved project trips and/or approved project information were obtained from the City of San Bruno. The approved project information is included in Appendix C.

Scenario 3: *Existing plus Project Conditions.* Existing traffic volumes with the project were estimated by adding to existing traffic volumes the additional traffic generated by the project. Existing plus project conditions were evaluated relative to existing conditions in order to determine the effects the project would have on the existing roadway network.

Scenario 4: *Cumulative plus Project Conditions.* Cumulative traffic volumes with the project (hereafter called project traffic volumes) were estimated by adding to cumulative traffic volumes the additional traffic generated by the project. Cumulative plus project conditions were evaluated relative to cumulative conditions in order to determine potential 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 recent traffic counts, the City of San Bruno, previous traffic studies, and field observations. The following data were collected from these sources:

- existing traffic volumes
- existing lane configurations
- signal timing and phasing
- approved and pending projects

Traffic counts were conducted in the winter season. Park usage is assumed to be higher in the spring and summer seasons. Hexagon checked the counts against the counts supplied by the City of San Bruno done in March of 2018. Although the counts showed similar volumes, Hexagon increased the counts by 5% as a conservative factor.

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

There are two signalized study intersections in the vicinity of the project site. Level of service at signalized intersections was evaluated based on the *2010 Highway Capacity Manual* (HCM) level of service methodology using Synchro software. This method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. The correlation between average control delay and level of service at signalized intersections is shown in Table 1.

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

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	Up to 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lenghts, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurences. This is considered to be the limit of acceptable delay.	55.1 to 80.0
F	Operation with delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.	Greater than 80.0

Source: Transportation Research Board, *2010 Highway Capacity Manual* , (Washington, D.C., 2010).

Unsignalized Intersections

Level of service analysis at unsignalized intersections is generally used to determine the need for modification in the type of intersection control (i.e., all-way stop or signalization). As part of the evaluation, traffic volumes, delays and traffic signal warrants are evaluated to determine if the existing intersection control is appropriate.

There are five unsignalized study intersections in the vicinity of the project site. Level of service at unsignalized intersections was based on the *2010 Highway Capacity Manual* (2010 HCM) method using the Synchro software. This method is applicable for both two-way and all-way stop-controlled intersections. Synchro evaluates unsignalized intersections on the basis of average stopped delay for all-way stop controlled intersections, and the worst approach delay at the intersection for two-way stop-controlled intersections. The correlation between average control delay and LOS for unsignalized intersections is shown in Table 2.

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

Level of Service	Description	Average Control 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, 2010 *Highway Capacity Manual* (Washington, D.C., 2010).		

Traffic Signal Warrant Analysis

The level of service calculations at the unsignalized intersections is supplemented with an assessment of the need for installation of a traffic signal, known as a signal warrant analysis. The need for signalization of unsignalized intersections in an urban or suburban context is typically assessed based on the Peak Hour Volume Warrant (Warrant 3) described in the *California Manual on Uniform Traffic Control Devices for Streets and Highways* (CA MUTCD), Part 4, Highway Traffic Signals. This method makes no evaluation of intersection level of service, but simply provides an indication whether vehicular peak hour volumes are, or would be, sufficiently high to justify installation of a traffic signal.
The decision to install a traffic signal should not be based purely on the warrants alone. Instead, the decision should be considered when one or more of the warrants are met, which triggers further feasibility analysis. Engineering judgment should be exercised to determine how a traffic signal could affect collision rates and traffic conditions at the subject intersection, as well as at adjacent intersections. Other options besides a traffic signal should also be considered, such as all-way stop control, new or enhanced signage, or roadway geometry changes; these measures may be more appropriate than a new traffic signal.

City of San Bruno Intersection Level of Service Standards

The City of San Bruno General Plan specifies certain intersections at which a level of service standard (LOS D) must be maintained during AM and PM peak periods. The relevant General Plan polices are listed below:

- Policy T-B: Maintain acceptable levels of service for vehicular movement along the city's street network. Acceptable level of service could vary based on characteristics of the area under consideration.
- Policy T-6: Maintain LOS standards for intersections for AM and PM peak periods as shown in Figure 4-2.

The City does not have a general LOS standard that applies to all intersections, and none of the study intersections are included in General Plan Figure 4-2. However, LOS significance criteria have been developed to ensure that study intersection LOS would remain consistent with General Plan Policy T-B with implementation of the proposed project.California Department of Transportation (Caltrans) Intersection Level of Service Standard

The intersection of El Camino Real and Crystal Springs Road is within the jurisdiction of Caltrans. Therefore, that study intersection is subject to Caltrans' standards. According to Caltrans' *Guide for the Preparation of Traffic Impact Studies*, Caltrans seeks to maintain a target LOS at the transition between LOS C and LOS D on State highway facilities but acknowledges that this may not always be feasible. In instances where an existing State highway facility is operating worse than the appropriate target LOS, the existing measure of effectiveness (i.e., vehicle delay at intersections and v/c ratio at the ramps) should be maintained. Thus, LOS D is considered the appropriate target LOS for this State Route intersection.

Significant Impact Criteria

Signalized Intersections

Significance criteria are used to establish what constitutes an impact. In order to be consistent with the General Plan Policy T-B, a significant impact on intersection operations would occur if for either peak hour

1. The level of service at the intersection degrades from an acceptable level (LOS D or better) under existing conditions to an unacceptable level under existing plus project conditions, or
2. The level of service at the intersection is an unacceptable level (LOS E or F) under existing conditions, and the addition of project trips would cause the critical-movement delay at the intersection to increase by four (4) or more seconds.

Unsignalized Intersections

In order to be consistent with the General Plan Policy T-B, an unsignalized intersection would have a significant impact if the following would occur:

1. The intersection or a stop-controlled approach degrades from an acceptable LOS D to an unacceptable LOS E or F or is already operating below LOS D, and
2. The project would add ten (10) or more vehicle trips to the critical movement of the intersection or stop-controlled approach during the peak hour, and
3. The intersection meets the California Manual on Uniform Traffic Control Devices (MUTCD) peak hour volume traffic signal warrant after project completion.

Report Organization

The remainder of this report is divided into five chapters. Chapter 2 describes the existing roadway network, transit services, and pedestrian and bicycle facilities, as well as a signal warrant analysis. Chapter 3 presents the intersection operations in the study area under the cumulative scenario conditions, including the approved projects in the City of San Bruno. Chapter 4 describes the methods used to estimate the project traffic on the roadway network and presents the intersection operations under existing plus project and cumulative plus project conditions. Chapter 5 provides an evaluation of other transportation-related issues, including potential project impacts on bicycle, pedestrian, and transit facilities, as well as site access, and on-site circulation.

2.
Existing Conditions

This chapter describes the existing conditions for transportation facilities in the vicinity of the site, including the roadway network, transit service, pedestrian and bicycle facilities.

Existing Roadway Network

Regional access to the project site is provided via I-280. Local access to the site is provided via Crystal Springs Road and El Camino Real. These roadways are described below.

I-280 is a north/south freeway west of the project site that extends from San Francisco through San Mateo and Santa Clara Counties. In San Bruno, I-280 is eight lanes wide. Regional access to the project site is provided via an exit at Crystal Springs Road.

El Camino Real (SR 82) is a six-lane north-south arterial with a raised center median within the project area. El Camino Real extends northward to San Francisco where it changes designation to Mission Street and San Jose Avenue, and southward through San Jose. El Camino Real provides access to the project via Crystal Springs Road.

Crystal Springs Road is a two-lane east/west arterial street that extends east from El Camino Real to Cunningham Way. On-street parking is permitted along Crystal Springs Road. The project site is accessed by the intersection at Crystal Springs Road and City Park Way.

City Park Way is a two lane north/south street from Portola Way to Crystal Springs Road. Parking lots are provided off City Park Way to access the current recreation center. The project site is directly accessed by City Park Way.

Existing Pedestrian and Bicycle Facilities

Pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections. In the vicinity of the project site, sidewalks exist along both sides of Crystal Springs Road east of Donner Avenue, De Soto Way, and Donner Avenue, providing pedestrian access to and from the project site. Marked crosswalks with pedestrian signal heads and push buttons are provided on all approaches at the signalized intersection of El Camino Real and Crystal Springs Road. A marked crosswalk with pedestrian signal head and push buttons are provided on the east approach at the signalized intersection of Crystal Springs Road and Cunningham Way. At the unsignalized study intersections, marked crosswalks are provided along most stop-controlled approaches. Sidewalk connections are missing on City Park Way beginning just north of Portola Way. On the east side of the street, a sidewalk connection does not begin again until the City Park Way and Crystal Springs Road intersection. On the west side of the street, sidewalks are provided from the current swimming pool facility to the current staff parking lot. There is also a pedestrian path through the park from the San Bruno Senior Center to the existing recreation center. Although some sidewalk and crosswalk connections are missing, the overall network of sidewalks and crosswalks in the study area has adequate connectivity and provides pedestrians with safe routes from the surrounding neighborhoods to the recreation center.

Existing Bicycle Facilities

In the vicinity of the project, there are no bike lanes provided on any of the streets (see Figure 3). The nearest bike lanes are provided along Sneath Lane which runs east/west along the Golden Gate National Cemetery. Although the Class II bike lanes along Sneath Lane are the only bicycle lanes that currently exist in San Bruno, the City plans to improve the on-street bicycle network. In July of 2016, the City Council adopted the Walk ‘n Bike Plan. This Plan outlines specific improvements to ensure that walking and biking are safe, comfortable, and convenient. The Plan also calls for many support programs and initiatives to encourage more walking and cycling throughout the city. Despite the lack of specific bicycle facilities, the streets near the recreation center generally are local residential streets that are conducive to bicycling due to low speeds and volume.

Existing Transit Service

Existing transit service to the study area is provided by the San Mateo County Transit District (SamTrans), BART, and Caltrain (See Figure 4).

SamTrans Bus Service

The study area is served directly by one local route and one express route. The transit routes that run through the study area are listed in Table 3, including their route description and commute hour headways. The nearest bus stops are located on Crystal Springs Road at the San Bruno Senior Center and the intersection of Crystal Springs Road and El Camino Real. Both locations are within walking distance of the project site.

Caltrain Service

The San Bruno Caltrain Station is located 1.6 miles northeast of the project site. The station can be accessed by SamTrans Bus routes 141 and ECR. Caltrain provides frequent passenger train service between San Jose and San Francisco seven days a week. During commute hours, Caltrain provides extended service to Morgan Hill and Gilroy. Trains that stop at the San Bruno Station operate at approximately 30-minute headways in both directions during the commute hours, with somewhat less frequent service midday. Service operates between about 5:40 AM and 11:45 PM in the northbound direction and between 5:15 AM and 12:30 AM in the southbound direction. Bicycles are permitted on Caltrain. There are bicycle racks and bicycle lockers available at the San Bruno Station. The project site is within short distance of the Caltrain station, and project’s residents and workers could easily walk or ride bikes to the station.

Figure 3
Existing Bicycle Facilities

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NORTH
Not to Scale

Figure 4
Existing Transit Services

Table 3
Existing Bus Routes

Bus Route	Route Description	Headway [1]
Operated by SamTrans		
Local Route 141	Palmetto Avenue/Manor Drive to SFO AirTrain Station	30 - 40 min
Route ECR	Daly City BART Station to Palo Alto Transit Center	10 - 15 min

Notes:
[1] Approximate headways during peak commute periods.

BART Service

Bay Area Rapid Transit (BART) operates regional rail service in the Bay Area, connecting between San Francisco International Airport and Millbrae Intermodal Station to the south, San Francisco to the north, and cities in the East Bay. The nearest BART station is the San Bruno Station, located approximately 2.0 miles from the project on Huntington Avenue east of the El Camino Real and Sneath Lane intersection and just north of I-380. The BART station can be accessed by both SamTrans Local Route 141 and Route ECR. BART trains operate on 15-minute headways during peak hours and 20-minute headways during off-peak hours.

Existing Intersection Lane Configurations and Traffic Volumes

The existing lane configurations at the study intersections were determined by observations in the field and are shown on Figure 5. Existing traffic volumes at the intersections were obtained from peak hour counts collected on January 23rd of 2019. Assuming that park usage would be higher in the spring and summer seasons, the counts were increased by 5% as a conservative factor. A tube count was collected on City Park Way for one week beginning January 23rd of 2019. The existing peak-hour intersection volumes are shown on Figure 6. Intersection turning-movement counts conducted for this analysis are presented in Appendix A. The volume summary sheets with the increased existing counts are presented in Appendix B.

The Crystal Springs Road and El Camino Real intersection has a driveway on the west side of the intersection. However, the eastbound approach lanes only have one right-turn lane and one left-turn lane (see Figure 5). Eastbound vehicles do not have a lane that allows them to go straight into the driveway. The existing volume counts showed that one car during the PM peak hour went straight into the driveway from the eastbound approach. Because the lane configurations do not show a through lane, Hexagon added the one (1) through vehicle to the left turn lane. The PM peak hour also showed three (3) vehicles coming out of the driveway. The driveway is not a part of the intersection as it is unsignalized; therefore, the vehicles were not included in the intersection analysis.

The tube count on City Park Way between Crystal Springs Road and Portola Way showed that, on average, the mid-week AM peak hour was from 7:00 to 8:00 AM, and the mid-week PM peak hour was from 3:00 to 4:00 PM. The AM peak hour correlates to the normal commute hour, but the PM peak hour corresponds with school traffic and not during the commute period. The mid-week average for the AM peak hour had 552 vehicles (276 vehicles northbound and 276 vehicles southbound). The PM peak hour had an average of 591 vehicles (287 vehicles northbound and 303 vehicles southbound). The highest PM peak commute hour was from 5:00 to 6:00 PM with a total average of 548 vehicles (255 vehicles northbound and 293 vehicles southbound).

Volumes on the weekend were much lower than during the weekdays. The peak volume on Saturday and Sunday was about 350 vehicles per hour compared to about 550-600 vehicles during peak hours on weekdays.

Existing Intersection Levels of Service

The results of the intersection level of service analysis show that all of the signalized and unsignalized study intersections currently operate at LOS D or better, except the Oak Avenue/City Park Way and Crystal Springs intersection during the AM peak hour of traffic (see Table 4). The intersection level of service calculation sheets are provided in Appendix D.

Table 4
Existing Intersection Levels of Service

Study Number	Intersection	Count Date	Traffic Control	Peak Hour	Existing Conditions Avg. Delay (sec.)	Existing Conditions LOS
1	Cunningham Way & Crystal Springs Road	01/23/19	Signal	AM	26.2	C
		01/23/19		PM	27.7	C
2	Donner Avenue & Crystal Springs Road	01/23/19	AWSC[1]	AM	20.7	C
		01/23/19		PM	15.9	C
3	Oak Avenue & Crystal Springs Road	01/23/19	AWSC[1]	AM	**73.0**	**F**
		01/23/19		PM	31.5	D
4	Cyrpess Avenue & Crystal Springs Road	01/23/19	AWSC[1]	AM	15.0	B
		01/23/19		PM	13.1	B
5	El Camino Real & Crystal Springs Road	01/23/19	Signal	AM	21.9	C
		01/23/19		PM	21.5	C
6	De Soto Way & Santa Lucia Avenue (North)	01/23/19	AWSC[1]	AM	10.0	A
		01/23/19		PM	8.7	A
7	De Soto Way & Santa Lucia Avenue (Sorth)	01/23/19	TWSC[2]	AM	9.5	A
		01/23/19		PM	8.3	A

Notes:

AWSC = All-Way Stop Control

TWSC = Two-Way Stop Control

1 Average delay for an all-way stop controlled intersection is reported for the entire intersection.

2 Average delay for the two-way stop controlled intersection is reported by the Synchro output delay and LOS

Bold indicates a substandard level of service.

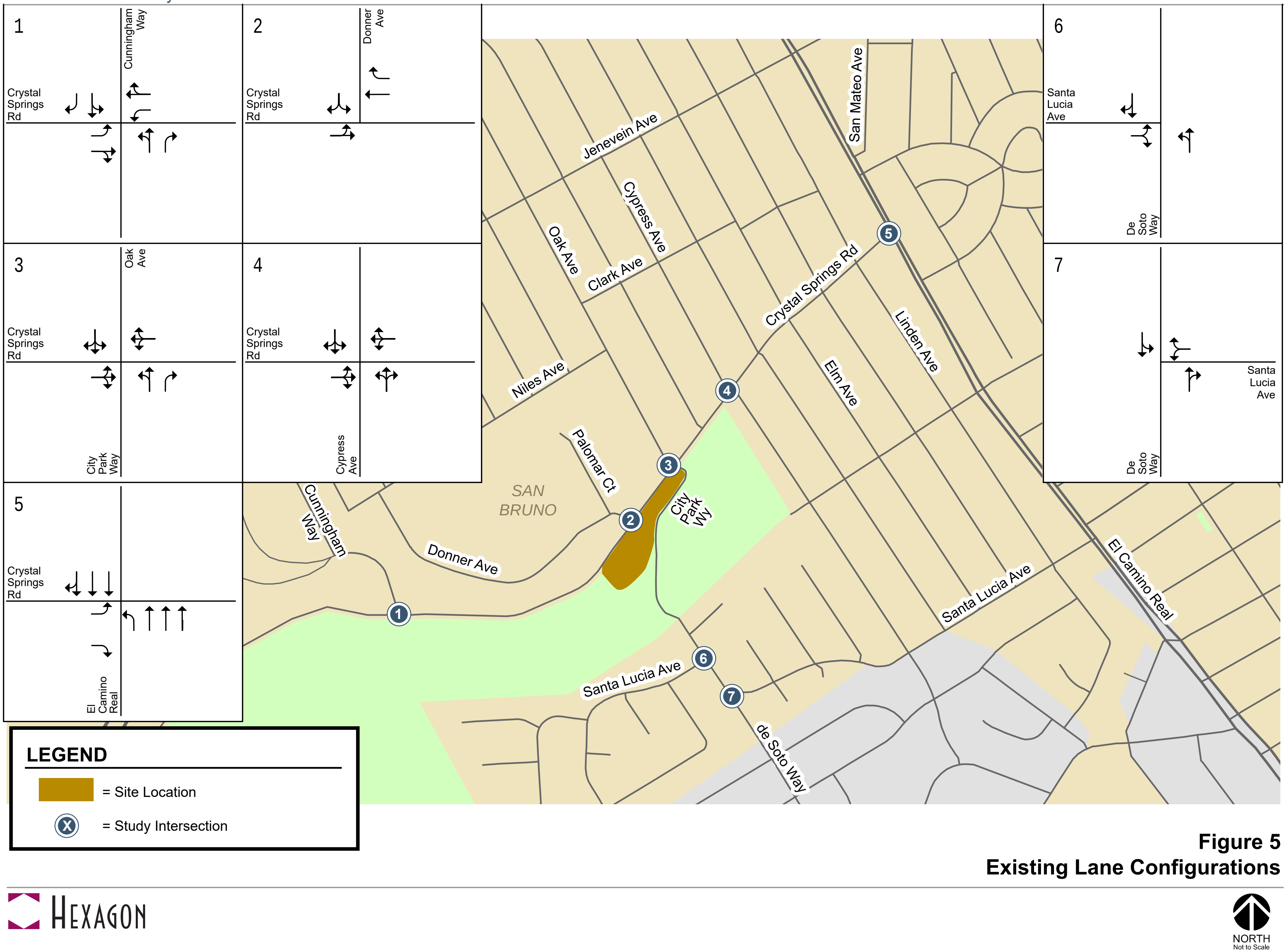

Figure 5
Existing Lane Configurations

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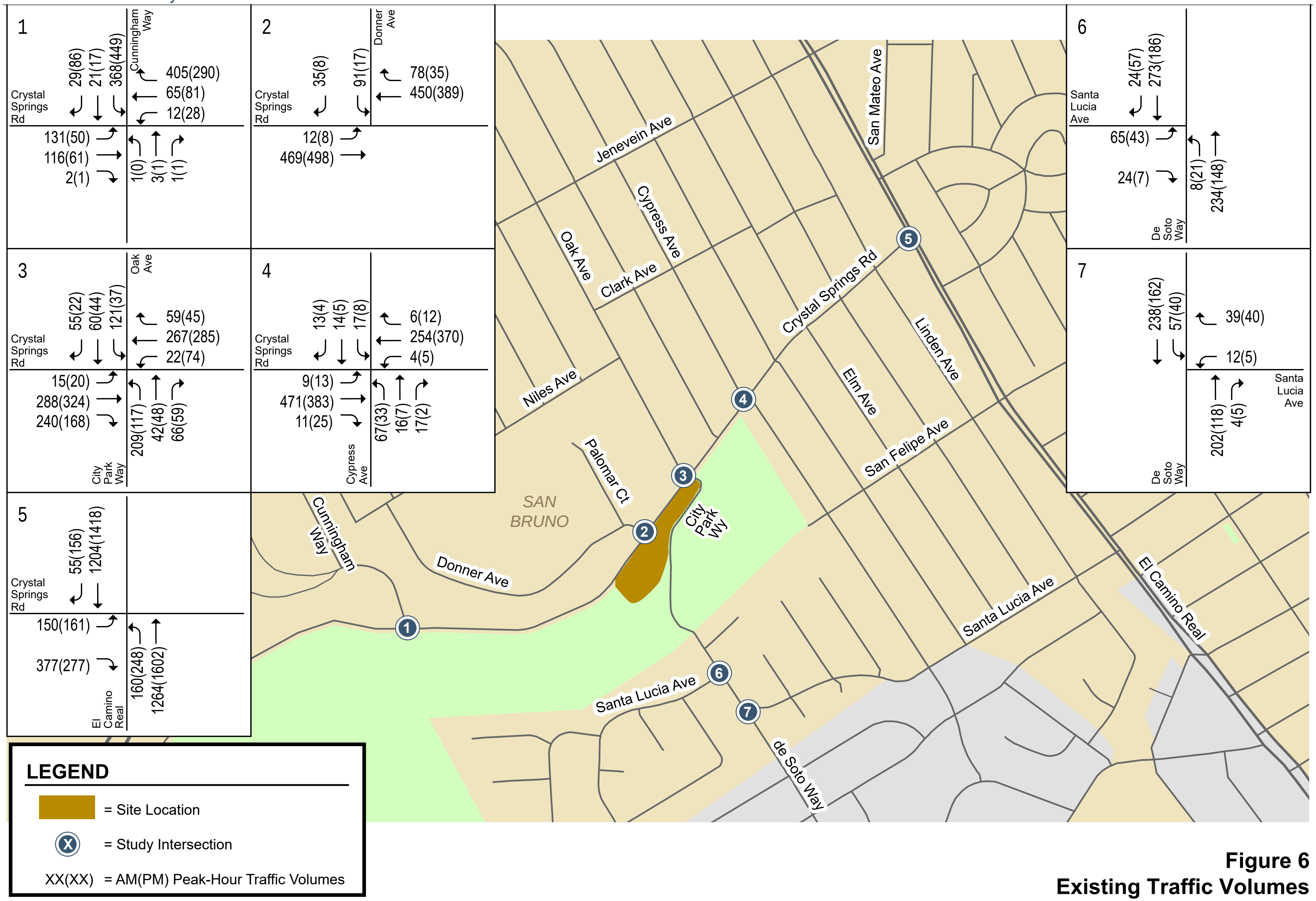

Figure 6
Existing Traffic Volumes

Observed Existing Traffic Conditions

Traffic conditions were observed in the field to identify existing operational deficiencies and to confirm the accuracy of calculated intersection levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to level of service, and (2) to identify any locations where the level of service analysis does not accurately reflect existing traffic conditions. Overall, most study intersections operate adequately during both the AM and PM peak hours of traffic, and the level of service analysis appears to accurately reflect actual existing traffic conditions. However, field observations showed that some minor operational problems occur during the AM peak commute hours. These issues are described below.

Oak Avenue/City Park Way and Crystal Springs Road

This intersection experiences heavy traffic along Crystal Springs Road and City Park Way during the AM peak hour. Vehicle queues were long on the eastbound and northbound approaches, with the eastbound right turn movement occasionally extending to the Donner Avenue and Crystal Springs Road intersection. The movement was separated from the through movement as most vehicles traveling eastbound often created two lanes. Vehicles traveling northbound on City Park Way often experienced a long queue that extended to the front of the current recreational center.

Donner Avenue and Crystal Springs Road

Field observations also showed that during the AM peak hour at the Donner Avenue and Crystal Springs Road intersection, the eastbound through queue often extended past 10 vehicles; however due to the low traffic volume on the southbound left turn movement, vehicles were able to move through the intersection without a large amount of delay. Occasionally, the queue from the Oak Avenue/City Park Way and Crystal Springs Road intersection backed up into the Donner Avenue and Crystal Springs Road intersection.

Cypress Avenue and Crystal Springs Road

Eastbound traffic on Crystal Springs Road often experienced a queue of 10 or more vehicles. Due to the low volume of vehicles on Cypress Avenue, vehicles were able to clear the intersection quickly. Vehicles blocked the driveway to the Playground/Corporation Lot (Lot #2), but there were not many vehicles trying to access the lot during the AM peak hour.

3. Cumulative Conditions

This chapter describes cumulative traffic conditions. Cumulative conditions are defined as conditions within the next 3-5 years (a horizon year of 2021-2023) just prior to completion/occupation of the proposed development. Traffic volumes for cumulative conditions comprise existing traffic volumes plus traffic generated by other approved or pending developments in the vicinity of the site. This chapter describes the procedure used to determine cumulative traffic volumes and the resulting traffic conditions.

Roadway Network and Traffic Volumes Under Cumulative Conditions

It is assumed in this analysis that the transportation network under cumulative conditions would be the same as the existing transportation network because there are no planned and funded transportation improvements at the study intersections.

Cumulative traffic volumes for the study intersections were estimated by adding to existing traffic volumes the trips generated by nearby approved but not yet completed or occupied projects, projects under construction, and projects with a formal application submitted. A list of developments was obtained from the City of San Bruno (see Appendix C). Nearby projects within a 1-mile radius of the project site that are expected to generate a measurable number of vehicle trips at one or more study intersections include the following:

- 406 San Mateo Avenue – a three-story mixed-use development of 83 apartment units and 7,000 square feet of retail space
- 160 El Camino Real Hotel – a three-story hotel with 34 rooms
- 271 El Camino Real – a three-story multi-family development with 24 units
- The Stratford School – a private school for Pre-Kindergarten and Kindergarten students located at 201 Balboa Way

Trip generation estimates for the approved projects were based on their respective traffic study, if available. The traffic study, done by Hexagon, was used for the 406 San Mateo Avenue project. The 160 El Camino Real Hotel project, the 271 El Camino Real residential development, and The Stratford School do not have traffic studies; therefore, trips were estimated based off the ITE *Trip Generation Manual, 10th Edition* (2017). The estimated trips from the projects were distributed and assigned throughout the study area based on the trip distribution assumptions present in the traffic studies or based on knowledge of travel patterns in the study area. Figure 7 shows the cumulative traffic volumes.

San Bruno Community Center

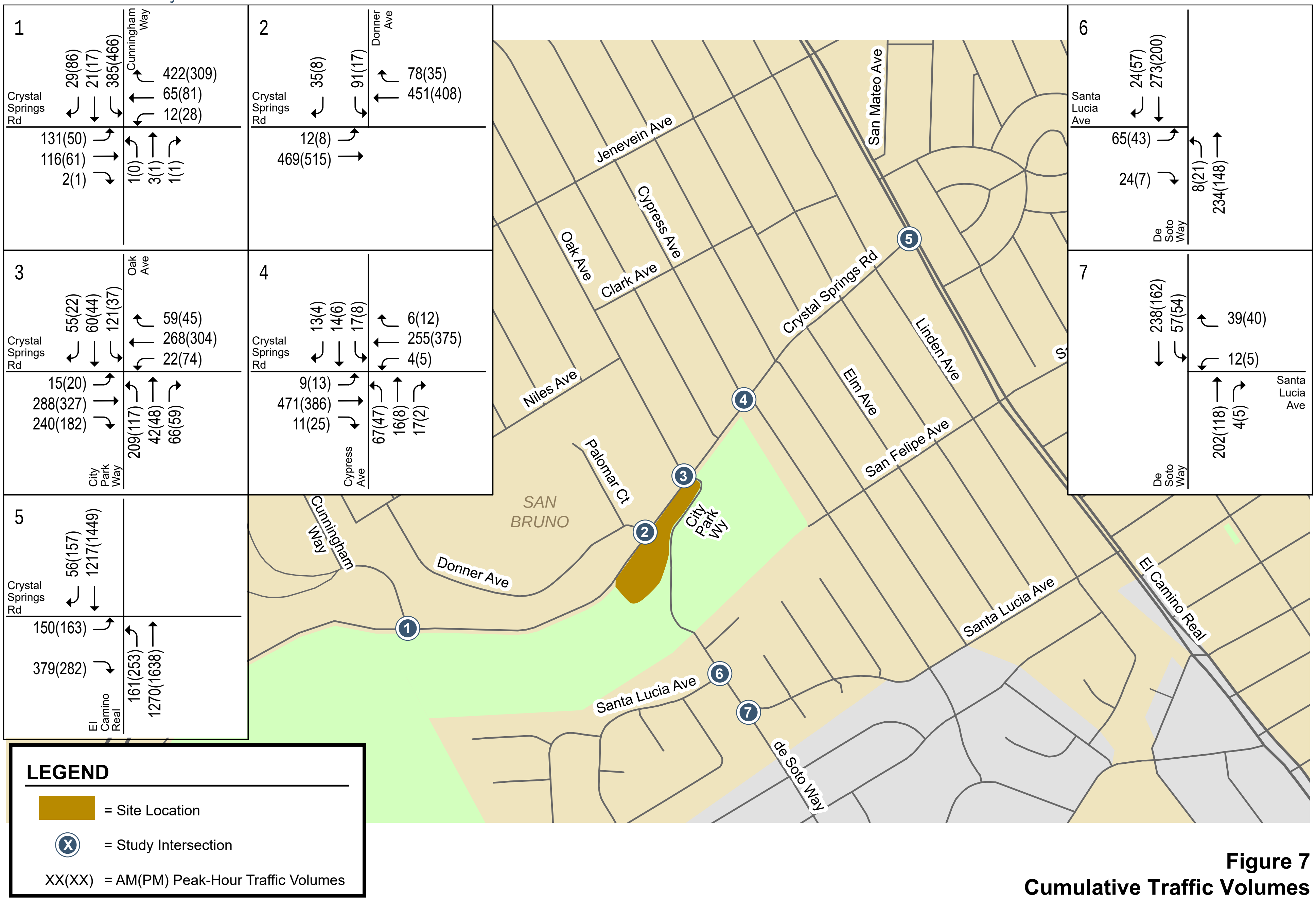

Figure 7
Cumulative Traffic Volumes

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Cumulative Conditions Intersection Level of Service

The analysis results show that the signalized and unsignalized study intersections would operate at LOS D or better during both the AM and PM peak hours, except the Oak Avenue/City Park Way and Crystal Springs Road intersection, which would continue to operate at LOS F during the AM peak hour and would degrade to LOS E during the PM peak hour(see Table 5). The intersection levels of service calculation sheets are included in Appendix D.

Table 5
Cumulative Intersection Levels of Service

Study Number	Intersection	Traffic Control	Peak Hour	Existing Conditions Avg. Delay (sec.)	Existing Conditions LOS	Cumulative Conditions Avg. Delay (sec.)	Cumulative Conditions LOS
1	Cunningham Way & Crystal Springs Road	Signal	AM PM	26.2 27.7	C C	29.5 28.1	C C
2	Donner Avenue & Crystal Springs Road	AWSC[1]	AM PM	20.7 15.9	C C	20.8 17.0	C C
3	Oak Avenue & Crystal Springs Road	AWSC[1]	AM PM	**73.0** 31.5	**F** D	**73.5** 36.9	**F** E
4	Cyrpess Avenue & Crystal Springs Road	AWSC[1]	AM PM	15.0 13.1	B B	15.4 13.4	B B
5	El Camino Real & Crystal Springs Road	Signal	AM PM	21.9 21.5	C C	22.1 22.1	C C
6	De Soto Way & Santa Lucia Avenue (North)	AWSC[1]	AM PM	10.0 8.7	A A	10.0 8.9	A A
7	De Soto Way & Santa Lucia Avenue (Sorth)	TWSC[2]	AM PM	9.5 8.3	A A	9.5 8.3	A A

Notes:
AWSC = All-Way Stop Control
TWSC = Two-Way Stop Control
[1] Average delay for an all-way stop controlled intersection is reported for the entire intersection.
[2] Average delay for the two-way stop controlled intersection is reported by the Synchro output delay and LOS
Bold indicates a substandard level of service.

4.
Project Conditions

This chapter describes traffic conditions with the project and includes: (1) the method by which project traffic is estimated and (2) a level of service summary. Existing plus project conditions are represented by existing traffic conditions with the addition of traffic generated by the project. Existing plus project traffic conditions could potentially occur if the project were to be occupied prior to the other approved projects in the area.

Transportation Network

Under project conditions, as proposed, the transportation network are assumed to be the same as the existing transportation network.

Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear were estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic traveling to and from the proposed recreation center was estimated for the AM and PM peak hours. As part of the project trip distribution, the directions to and from which the project trips would travel were estimated. In the project trip assignment, the project trips were assigned to specific streets and intersections. These procedures are described below.

Trip Generation

Through empirical research, data have been collected that quantify the amount of traffic expected to be generated by many types of land uses. These trip generation rates can be used to estimate the future traffic increases that would result from a new development. The trip generation research is published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*.

Project trip generation was estimated by applying the appropriate trip generation rates obtained from the ITE *Trip Generation Manual, 10th Edition* (2017). The average trip generation rates for a Recreational Community Center (Land Use 495) was applied to the project. According to the ITE Trip Generation Manual, a recreational community center is described as a stand-alone public facility that often includes classes and clubs, swimming pools, athletic courts, exercise equipment, locker rooms, and a restaurant or snack bar.

The project intends to redevelop the current recreation center of approximately 30,000 square feet into a new recreation center of 47,000 square feet. The trip generation is based on the added square footage of the proposed project. Based on the project description and ITE trip generation rates, the proposed new recreation center would generate a total of 490 new daily vehicle trips, with 30 new trips (20 inbound and 10 outbound) occurring during the AM peak hour and 39 new trips (18 inbound and 21 outbound) occurring during the PM peak hour (see Table 6).

Table 6
Project Trip Generation Estimates

	Net Increase		Daily		AM Peak Hour				PM Peak Hour			
Land Use	in Size		Rate	Trips	Rate	In	Out	Total	Rate	In	Out	Total
Proposed Uses												
Community Center[1]	17	ksf	28.82	490	1.76	20	10	30	2.31	18	21	39

Notes:
KSF = 1,000 square feet
[1] Recreational Community Center (Land Use 495) average rates published in ITE's Trip Generation Manual, 10th Edition, 2017.

Trip Distribution and Assignment

The trip distribution pattern for the project was developed based on existing travel patterns on the surrounding roadway system and the locations of complementary land uses. The peak hour vehicle trips generated by the project were assigned to the roadway network in accordance with the trip distribution pattern. Figure 8 shows the trip distribution pattern for the proposed recreation center. Figure 9 shows the net project trip assignment at the study intersections.

Existing Plus Project Traffic Volumes

Project trips, as represented in the above project trip assignment, were added to the existing traffic volumes to obtain existing plus project traffic volumes. The existing plus project traffic volumes are shown on Figure 10.

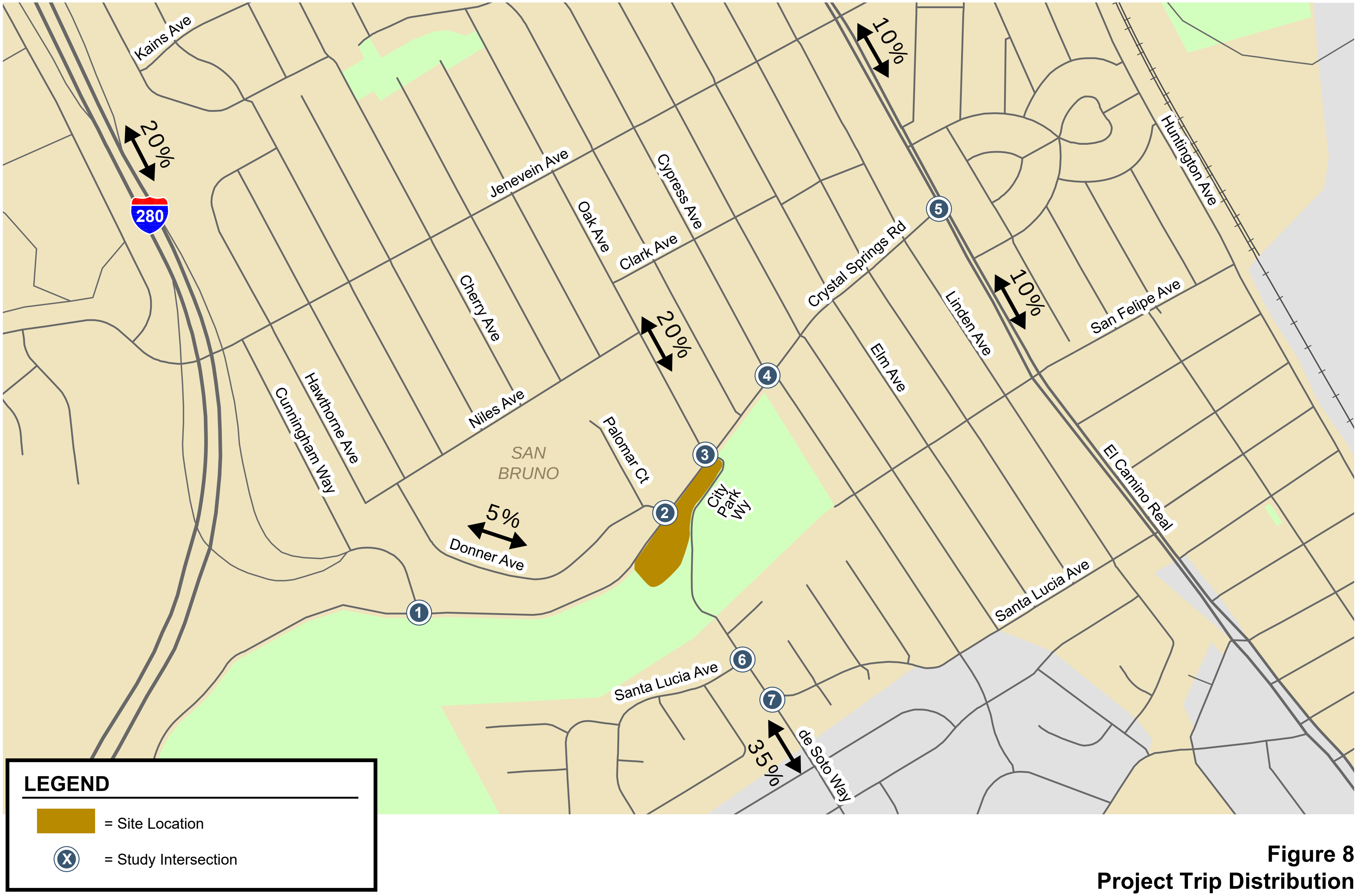

Figure 8
Project Trip Distribution

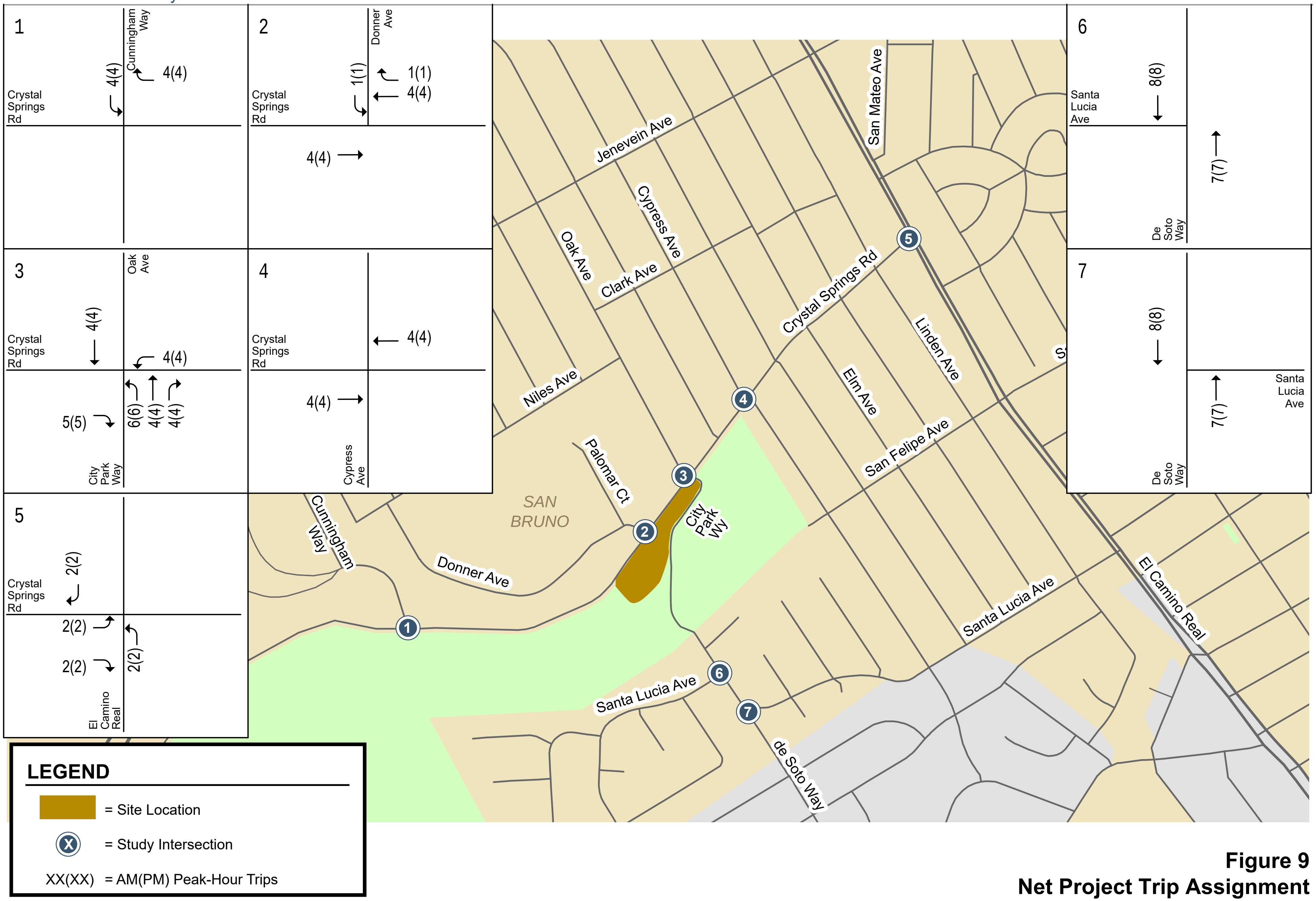

Figure 9
Net Project Trip Assignment

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San Bruno Community Center

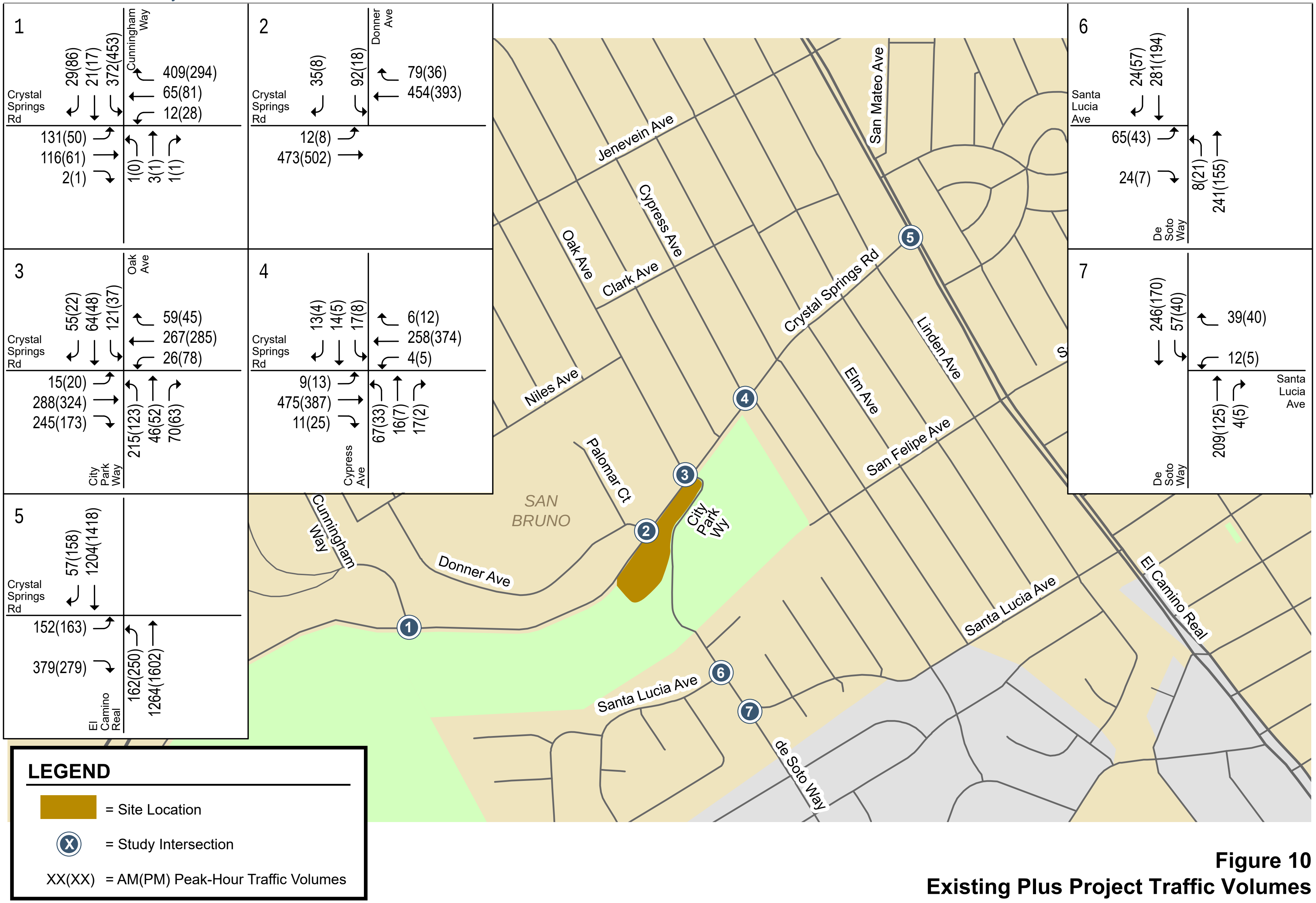


Figure 10
Existing Plus Project Traffic Volumes

HEXAGON

NORTH
Not to Scale

Existing Plus Project Intersection Analysis

The results of the level of service analysis under existing plus project conditions are summarized in Table 7. The results of the analysis show that all study intersections would continue to operate at LOS D or better during both the AM and PM peak hours, except the Oak Avenue/City Park Way and Crystal Springs Road intersection, which would continue to operate at LOS F during the AM peak hour. The intersection levels of service calculation sheets are included in Appendix D.

The San Bruno Walk ‘n Bike Plan recommends a mini-roundabout at the intersection to simplify the intersection control and calm traffic. However, the plan also noted that the mini-roundabout should be further studied to determine the feasibility of a mini-roundabout at this location given the relatively large number of school children and activity. As shown in the signal warrant analysis below, the AM and PM peak-hour intersection volumes warrant signalization under existing, cumulative, and project conditions. Therefore, Hexagon recommends that the City conduct further analysis and feasibility assessment to determine whether a traffic signal should be implemented at the Crystal Springs Road and City Park Way intersection.

The Oak Avenue/City Park Way and Crystal Springs Avenue intersection operates at an unacceptable LOS (LOS F) during the AM peak hour under existing conditions, and the project would add more than 10 trips to a stop-controlled movement. The intersection would also warrant a traffic signal after project completion. Therefore, the project would create a significant impact at the study intersection.

Table 7
Existing Plus Project Intersection Levels of Service

				Existing Conditions				
				No Project		With Project		
Study Number	Intersection	Traffic Control	Peak Hour	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Incr. In Avg. Delay
1	Cunningham Way & Crystal Springs Road	Signal	AM	26.2	C	26.8	C	0.0
			PM	27.7	C	27.0	C	0.0
2	Donner Avenue & Crystal Springs Road	AWSC[1]	AM	20.7	C	21.3	C	--
			PM	15.9	C	16.2	C	--
3	Oak Avenue & Crystal Springs Road	AWSC[1]	AM	**73.0**	**F**	**79.8**	**F**	--
			PM	31.5	D	34.9	D	--
4	Cyrpess Avenue & Crystal Springs Road	AWSC[1]	AM	15.0	B	15.2	C	--
			PM	13.1	B	13.2	B	--
5	El Camino Real & Crystal Springs Road	Signal	AM	21.9	C	22.6	C	0.1
			PM	21.5	C	21.6	C	0.1
6	De Soto Way & Santa Lucia Avenue (North)	AWSC[1]	AM	10.0	A	10.1	A	--
			PM	8.7	A	8.8	A	--
7	De Soto Way & Santa Lucia Avenue (Sorth)	TWSC[2]	AM	9.5	A	9.6	A	--
			PM	8.3	A	8.4	A	--

Note:
AWSC = All-Way Stop Control
TWSC = Two-Way Stop Control
[1] Average delay for an all-way stop controlled intersection is reported for the entire intersection.
[2] Average delay for the two-way stop controlled intersection is reported by the Synchro output delay and LOS
Bold indicates a substandard level of service.

Cumulative Plus Project Traffic Volumes

Project trips, as previously shown on Figure 9, were added to cumulative traffic volumes to obtain cumulative plus project traffic volumes. The cumulative plus project traffic volumes at the study intersections are shown on Figure 11.

Cumulative Plus Project Intersection Analysis

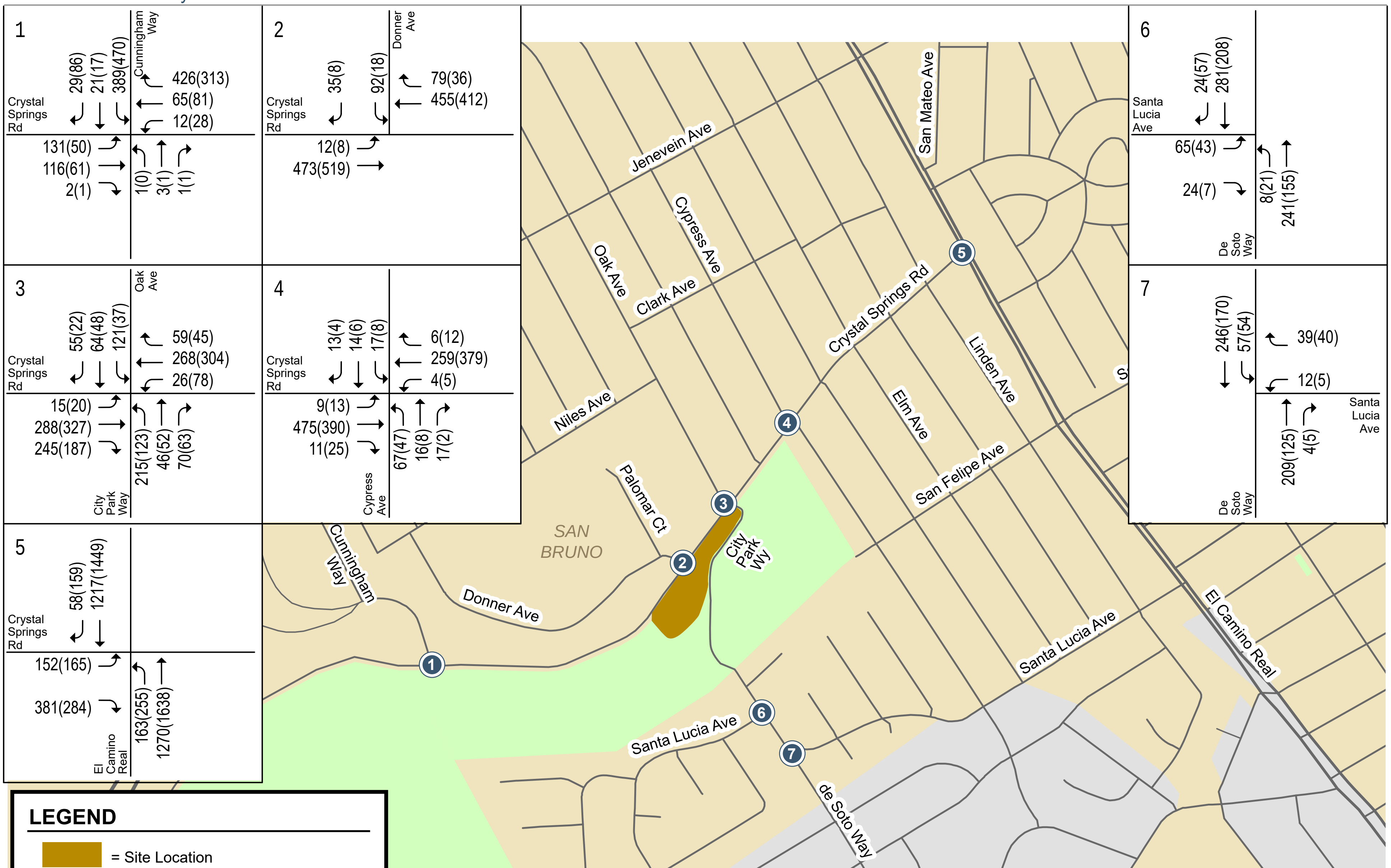
The results of the intersection level of service analysis show that all study intersections would continue to operate at LOS D or better during both the AM and PM peak hours of traffic, except the Oak Avenue/City Park Way and Crystal Springs Road intersection, which would continue to operate at LOS F during the AM peak hour and continue to operate at LOS E during the PM peak hour (see Table 8). The project would add more than 10 trips to a stop-controlled movement, and the intersection would warrant a traffic signal; therefore, the project would create a significant impact. The intersection levels of service calculation sheets are included in Appendix D.

Table 8
Cumulative Plus Project Intersection Levels of Service

				Cumulative Conditions				
				No Project		With Project		
Study Number	Intersection	Traffic Control	Peak Hour	Avg Delay (sec.)	LOS	Avg Delay (sec.)	LOS	Incr. In Avg. Delay
1	Cunningham Way & Crystal Springs Road	Signal	AM	29.5	C	30.5	C	0.0
			PM	28.1	C	28.3	C	0.0
2	Donner Avenue & Crystal Springs Road	AWSC[1]	AM	20.8	C	21.3	C	--
			PM	17.0	C	17.4	C	--
3	Oak Avenue & Crystal Springs Road	AWSC[1]	AM	**73.4**	**F**	**80.0**	**F**	**--**
			PM	**36.9**	**E**	**43.8**	**E**	--
4	Cyrpess Avenue & Crystal Springs Road	AWSC[1]	AM	15.4	B	15.2	C	--
			PM	13.4	B	13.6	B	--
5	El Camino Real & Crystal Springs Road	Signal	AM	22.1	C	22.7	C	0.1
			PM	22.1	C	22.3	C	0.1
6	De Soto Way & Santa Lucia Avenue (North)	AWSC[1]	AM	10.0	A	10.1	A	--
			PM	8.9	A	8.9	A	--
7	De Soto Way & Santa Lucia Avenue (Sorth)	TWSC[2]	AM	9.5	A	9.6	A	--
			PM	8.3	A	8.4	A	--

Note:
AWSC = All-Way Stop Control
TWSC = Two-Way Stop Control
[1] Average delay for an all-way stop controlled intersection is reported for the entire intersection.
[2] Average delay for the two-way stop controlled intersection is reported by the Synchro output delay and LOS
Bold indicates a substandard level of service.

San Bruno Community Center



LEGEND

= Site Location

= Study Intersection

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 11
Cumulative Plus Project Traffic Volumes

HEXAGON

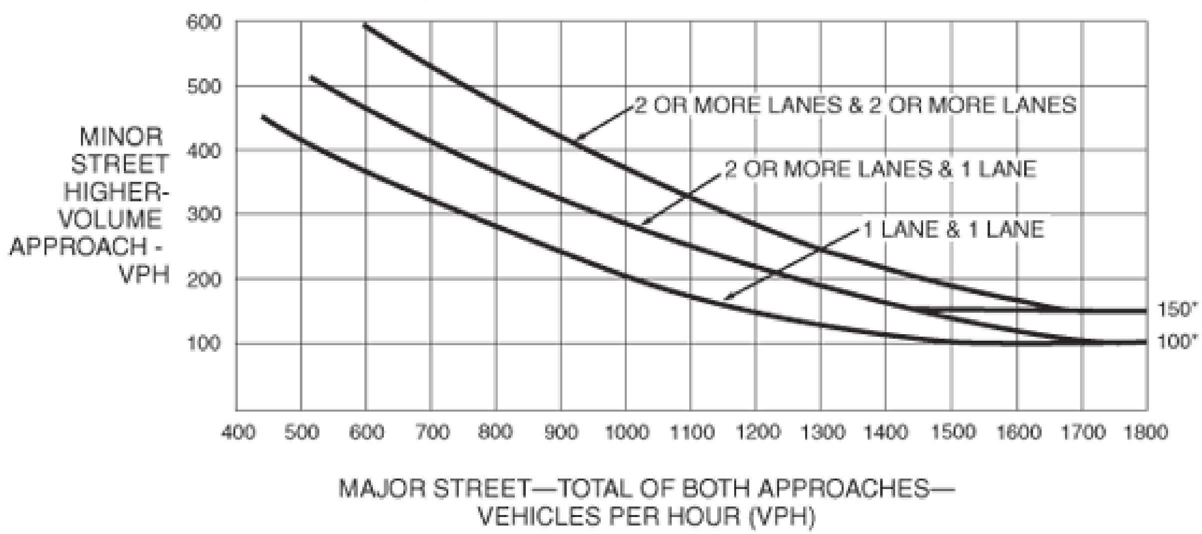
NORTH
Not to Scale

Signal Warrant Analysis

In conjunction with the level of service analysis, a signal warrant analysis was performed to determine if the unsignalized intersection of Oak Avenue/City Park Way and Crystal Springs Avenue would warrant a traffic signal. The study intersection was analyzed on the basis of one-hour traffic volumes and were checked against the One-Hour signal warrant described in Section 4C.01 of the *California Manual of Uniform Traffic Control Devices (CA MUTCD)*. The guidelines of the signal warrant analysis as well as the result of the analysis is described and summarized below. The signal warrant worksheet and threshold tables are included in Appendix E.

Warrant 3 (One-Hour Vehicular Volume) states that the need for a traffic control signal shall be considered if an engineering study finds that, for one hour of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) all fall above the applicable curve in Figure 4C-3 for the existing combination of approach lanes. As shown in the graph, the minimum volume on the minor street with one lane approach should be at least 100 vehicles and at least 150 vehicles for the minor street approach with two lanes to meet the signal warrant.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Signal Warrant Analysis Results

Major and minor approach volumes were plotted for the Oak Avenue/City Park Way and Crystal Springs Avenue intersection on Figure 4C-3 (see Appendix E). The intersection would warrant a traffic signal as both the AM and PM peak hour show that the plotted points of the volumes fall above the curve of a minor street with a one lane approach. The Walk ‘n Bike Plan also recommends that a mini-roundabout be considered at the intersection to help calm traffic. The roundabout would have similar effects as a signal (see Table 9). In both cases, average delays would be mitigated from over 70 seconds as an unsignalized intersection to under 15 seconds as either a roundabout or signalized intersection. Hexagon recommends that the City conduct further analysis to determine whether a roundabout or traffic signal should be implemented at the Crystal Springs Road and City Park Way intersection.

Table 9
Roundabout vs Signal Level of Service

			Existing Plus Project				Cumulative Plus Project			
			Roundabout		Signal		Roundabout		Signal	
Study Number	Intersection	Peak hour	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS
3	Oak Avenue & Crystal Springs Road	AM	12.5	B	14.8	B	12.5	B	14.8	B
		PM	10.6	B	12.4	B	11.0	B	12.1	B

5.
Other Transportation Issues

This chapter presents other transportation issues associated with the project. These include an analysis of:

- Site access and circulation
- Potential impacts to pedestrian, bicycle, and transit facilities

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

Site Access and On-Site Circulation

The site access and on-site circulation evaluation is based on the site plan prepared by Group 4 Architecture Research + Planning (see Figure 2). Site access was evaluated to determine the adequacy of the site's driveways with regard to the following: traffic volume, delays, geometric design, and sight distance. On-site vehicular circulation was reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles.

Vehicle Site Access

Vehicular access to the project site would be provided via Crystal Springs Road and City Park Way. The project would provide four parking lots and one drop off zone. One of the parking lots would be accessible from Crystal Springs Road, one lot would be accessed by Santa Lucia Avenue (north) and an alleyway that extends to the Beckner Shelter picnic area, another lot would be accessed by the same alleyway, and one of the parking lots, as well as the drop off zone, would be accessible from City Park Way. The four parking lots are existing to the current site. The project plans to redesign the parking lots to create more spaces. A drop off zone would be created along the project frontage on City Park Way.

Driveway Operations

The project would provide four ingress/egress driveways along City Park Way, Crystal Springs Road and Santa Lucia Avenue/alleyway. All driveways are existing to the current site, however the driveways on City Park Way would be relocated and redesigned into an ingress/egress driveway for the parking lot. Inbound traffic accessing the project from Crystal Springs Road via the City Park Way driveways experiences virtually no delay since the right turns into the lot do not conflict with other vehicular movements. Inbound traffic traveling northbound on City Park Way must wait for southbound traffic on City Park Way to clear to turn left into the driveways. The tube count conducted on City Park Way showed that, on average, the mid-week AM peak hour occurred from 7:00 AM to 8:00 AM with 276 vehicles traveling southbound, and the mid-week PM peak hour occurred from 3:00 to 4:00 PM with 303 vehicles traveling southbound. Vehicles turning left into the driveway may experience some delay waiting for the southbound traffic to clear but would generally be able to find a gap in the traffic. Vehicles would also have to yield to pedestrians crossing to and from the field. Outbound vehicles leaving the lot can turn either right or left onto City Park Way. Vehicles turning left out of the parking lot would have to wait for both northbound and southbound traffic on City Park Way to clear. On average, the mid-week AM peak hour had 276 vehicles and the PM peak hour had 287 vehicles. Vehicles may experience delays if the northbound queue extends past the driveways. Vehicles turning right out of the parking lot would also have to yield to pedestrians crossing from the field.

Inbound traffic accessing the project using the corporation yard parking lot via eastbound Crystal Springs Road experiences virtually no delay since the right turns into the lot do not conflict with other vehicular movements; however, vehicles traveling westbound on Crystal Springs Road would have to give the right of way to eastbound traffic on Crystal Springs Road. Field observations showed that there was often an eastbound queue blocking the driveway in the AM peak hour, but there were little to no vehicles trying to access the driveway during the AM peak hour. The PM peak hour showed large gaps between vehicles, therefore there would not be any issues for vehicles turning left into the driveway. Inbound traffic accessing the project via De Soto Way are able to enter the driveway on Santa Lucia Way or the alleyway. Traffic volumes on Santa Lucia Way and De Soto Way are low, therefore vehicles traveling inbound and outbound do not experience heavy delays.

Sight Distance

The project access points should be free and clear of any obstructions to provide adequate sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and vehicles and bicycles traveling on Crystal Springs Road and City Park Way. Any landscaping and signage should be located in such a way to ensure an unobstructed view for drivers exiting the site.

Adequate sight distance (sight distance triangles) should be provided at each parking lot entrance/exit in order to avoid collision with oncoming traffic. Caltrans Highway Design Manual (Section 405.1) states that sight distance requirements are not applied to urban driveways, however, Caltrans standards for stopping sight distance were used in order to provide adequate sight distance at the City Park Way driveways. Sight distance triangles should be measured approximately 10 feet back from the traveled way. Sight distance requirements vary depending on the roadway speeds. Given that City Park Way has a legal speed limit of 25 mph, the Caltrans stopping sight distance is 200 feet (based on a design speed of 30 mph) for the entrances located on City Park Way. Thus, a driver must be able to see 200 feet north of the driveway along City Park Way in order to stop and avoid a collision. Driveways along Crystal Springs Road and Santa Lucia Avenue and the alleyway provide adequate sight distance.

Drop-Off and Loading Zone

The existing recreation center does not have a specified drop-off area, but there is approximately 140 feet of a curbside loading zone. The proposed site plan shows a drop off zone on City Park Way of approximately 175 feet. The drop-off zone would fit 7 vehicles, given that one vehicle measures to be 25 feet long, including one police vehicle parking space. The drop-off zone would be 24.5 feet at its widest, which would allow more flexibility for drivers to exit the drop-off zone. The drop off zone would operate similar to the existing loading zone. The proposed loading zone could accommodate more cars than the existing curb area, so even though the new community center would generate more traffic, the drop-off operation would be essentially the same as existing conditions.

Pedestrian, Bicycle, and Transit Analysis

All new development projects in San Bruno should enhance opportunities for all modes of transportation, consistent with the goals of the City's General Plan and the Walk 'n Bike Plan. It is the goal of the General Plan and the Walk 'n Bike Plan that all development projects accommodate and encourage the use of non-automobile transportation modes within the area. The Walk 'n Bike Plan establishes strategies to foster more multi-modal opportunities, promote active living, and connect to the other modes of transportation within the network. In order to further the goals of the City, pedestrian and bicycle facilities should be encouraged with new development projects.

Pedestrian Facilities

Pedestrian facilities in the study area consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections (see Chapter 2 for details). The project plans show sidewalks surrounding the border of the recreation center, as well as connecting to the parking lots. The project would install two new crosswalks on City Park Way with pedestrian bridges crossing the creek and connecting to the existing pedestrian path behind the tennis courts and ball field. The project would also construct one publicly accessible pedestrian plaza at the recreation center's entrance along City Park Way. The project should consider assessing the following concerns from the Walk 'n Bike Plan:

- Wider sidewalk paths
- Better maintenance of the paths within the park

Hexagon recommends that better speed signs and pedestrian crossing signs be installed on City Park Way in front of the project site to raise driver awareness of the pedestrian crossings. Wayfinding signage should also be installed for the pedestrian path that runs through the park from the San Bruno Senior Center to help guide pedestrians, as there is no connecting sidewalk on Crystal Springs Road between Donner Avenue and the Senior Center.

The City's Walk 'n Bike Plan outlines the following potential pedestrian improvement strategies, although none are planned or funded projects:

- Intersection of Crystal Springs Road and El Camino Real: Install corner bulb-outs to shorten pedestrian crossing distance and reduce corner curb radii, remove turn pockets where capacity is not needed, narrow travel lanes to provide a pedestrian refuge, and provide supplemental signal faces and signal push buttons or other detectors, as needed.
- Intersection of Crystal Springs Road and Oak Avenue: Construct a mini roundabout to simplify the intersection control and calm traffic. The improvement should be studied to determine the feasibility of a mini roundabout at this location given the relatively large number of school children and activity.
- Crystal Springs Road from Donner Avenue to Cunningham Way: Construct a minimum six-foot sidewalk, curb and gutter. Some locations might require retaining walls.

The project would not include the removal of any pedestrian facilities, nor would it conflict with any adopted plans or policies for new pedestrian facilities. Therefore, the proposed project would have a less-than-significant impact on pedestrian facilities in the immediate vicinity of the project site, and no project sponsored improvements would be necessary.

The project should consider extending the proposed sidewalks along the project on City Park Way southward to connect to the existing sidewalks that end just north of Portola Way.

Bicycle Facilities

There are no existing bike facilities in the immediate vicinity of the project site (see Chapter 2 for details). However, there are several potential future additional bicycle facilities in the study area. The City's Walk 'n Bike Plan outlines the following potential bicycle improvement strategies although none are planned or funded projects:

- Class III bike route on Cunningham Way between Jenevein Road and Crystal Springs Road
- Class III bike route on Crystal Springs Road between Cunningham Way and Linden Avenue
- Class III bike route on De Soto Way between Bayview Avenue and Crystal Springs Avenue
- Class III bike route on Oak Avenue between San Bruno Avenue and Crystal Springs Road

The project would not remove any bicycle facilities, nor would it conflict with any adopted plans or policies for new bicycle facilities. Thus, no project sponsored improvements would be necessary.

Transit Services

The project site is well-served by SamTrans, BART, and Caltrain (see Chapter 2 for details). The nearest bus stops are located on Crystal Springs Road, east of Cunningham Way and at the intersection of Crystal Springs Road and El Camino Real. Additional transit services are provided at the San Bruno Caltrain Station, less than 1.1 miles northeast of the project site, and the San Bruno BART station, located approximately 2 miles northeast of the project site. With the proximity to transit services, it could be expected that a portion (10%) of employee and patron trips would be made by transit. Assuming up to 10% of the project trips are transit trips, the project would generate 3 transit trips during the AM peak hour and 3 transit trips during the PM peak hour. There are between 13 and 15 scheduled buses that serve the bus stops near the site during peak hours, eight BART and four Caltrain trains that stop at the San Bruno BART and Caltrain stations. It is assumed that the trains and buses would have sufficient capacity to accommodate this relatively minor increase in ridership. Given that the project would not remove any transit facilities, nor would it conflict with any adopted plans or policies for new transit facilities or services, the proposed project is not expected to have an adverse impact on transit services in the immediate vicinity of the project site. Thus, no project sponsored improvements would be necessary.

San Bruno Recreation and Aquatics Center TIA

Technical Appendices

January 13, 2020

Appendix A
Traffic Counts

Location: City Park Way, B/W Crystal Springs Rd & Portola Way
Date Range: 1/23/2019 - 1/29/2019
Site Code: 01

IDAX DATA SOLUTIONS

	Wednesday			Thursday			Friday			Saturday			Sunday			Monday			Tuesday					
	1/23/2019			1/24/2019			1/25/2019			1/26/2019			1/27/2019			1/28/2019			1/29/2019			Mid-Week Average		
Time	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	9	13	22	8	14	22	8	11	19	16	30	46	17	30	47	1	11	12	3	6	9	7	11	18
1:00 AM	11	7	18	3	4	7	9	9	18	11	18	29	10	19	29	6	12	18	5	3	8	6	5	11
2:00 AM	0	4	4	1	4	5	1	2	3	6	6	12	4	10	14	3	6	9	4	4	8	2	4	6
3:00 AM	5	5	10	4	4	8	3	3	6	3	9	12	4	5	9	5	5	10	4	2	6	4	4	8
4:00 AM	15	4	19	10	3	13	12	6	18	9	4	13	2	4	6	15	3	18	15	4	19	13	4	17
5:00 AM	45	12	57	42	10	52	51	17	68	16	3	19	14	5	19	55	15	70	53	20	73	47	14	61
6:00 AM	108	34	142	119	33	152	121	63	184	29	18	47	18	9	27	118	22	140	123	21	144	117	29	146
7:00 AM	**281**	**327**	**608**	228	163	391	**307**	**307**	**614**	60	39	99	57	33	90	**294**	**324**	**618**	**318**	**339**	**657**	**276**	**276**	**552**
8:00 AM	259	250	509	270	243	513	270	248	518	112	61	173	99	78	177	292	244	536	271	243	514	267	245	512
9:00 AM	194	115	309	**278**	**266**	**544**	196	105	301	161	108	269	142	81	223	170	124	294	190	117	307	221	166	387
10:00 AM	185	104	289	165	137	302	150	135	285	**187**	**151**	**338**	188	131	319	159	111	270	144	117	261	165	119	284
11:00 AM	124	149	273	149	127	276	162	160	322	170	145	315	**196**	**148**	**344**	127	159	286	125	127	252	133	134	267
12:00 PM	131	163	294	156	149	305	152	140	292	145	162	307	**183**	164	**347**	149	117	266	146	123	269	144	145	289
1:00 PM	166	147	313	185	170	355	183	157	340	146	159	305	164	159	323	181	163	344	167	159	326	173	159	331
2:00 PM	237	219	456	200	179	379	246	183	429	138	129	267	179	141	320	231	193	424	237	223	460	225	207	432
3:00 PM	**270**	**302**	**572**	**320**	298	**618**	**331**	**313**	**644**	166	159	325	170	155	325	**326**	277	603	272	**310**	582	**287**	**303**	**591**
4:00 PM	219	261	480	206	256	462	237	263	500	**182**	148	330	161	**175**	336	233	257	490	281	244	525	235	254	489
5:00 PM	225	283	508	238	**299**	537	238	289	527	179	**186**	**365**	132	152	284	279	**330**	**609**	**302**	296	**598**	255	293	548
6:00 PM	173	222	395	203	276	479	183	233	416	102	129	231	99	156	255	140	195	335	180	224	404	185	241	426
7:00 PM	135	141	276	128	151	279	142	149	291	78	108	186	78	94	172	95	118	213	110	155	265	124	149	273
8:00 PM	151	149	300	100	128	228	91	111	202	90	99	189	81	81	162	90	104	194	90	117	207	114	131	245
9:00 PM	44	78	122	62	81	143	148	115	263	72	96	168	42	66	108	59	75	134	58	95	153	55	85	139
10:00 PM	22	51	73	20	36	56	76	74	150	58	66	124	33	25	58	23	48	71	35	54	89	26	47	73
11:00 PM	10	22	32	19	31	50	33	54	87	28	36	64	16	22	38	13	21	34	16	31	47	15	28	43
Total	3,019	3,062	6,081	3,114	3,062	6,176	3,350	3,147	6,497	2,164	2,069	4,233	2,089	1,943	4,032	3,064	2,934	5,998	3,149	3,034	6,183	3,094	3,053	6,147
Percent	50%	50%	-	50%	50%	-	52%	48%	-	51%	49%	-	52%	48%	-	51%	49%	-	51%	49%	-	50%	50%	-
AM Peak	07:00	07:00	07:00	09:00	09:00	09:00	07:00	07:00	07:00	10:00	10:00	10:00	11:00	11:00	11:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00
Vol.	281	327	608	278	266	544	307	307	614	187	151	338	196	148	344	294	324	618	318	339	657	276	276	552
PM Peak	15:00	15:00	15:00	15:00	17:00	15:00	15:00	15:00	15:00	16:00	17:00	17:00	12:00	16:00	12:00	15:00	17:00	17:00	17:00	15:00	17:00	15:00	15:00	15:00
Vol.	270	302	572	320	299	618	331	313	644	182	186	365	183	175	347	326	330	609	302	310	598	287	303	591

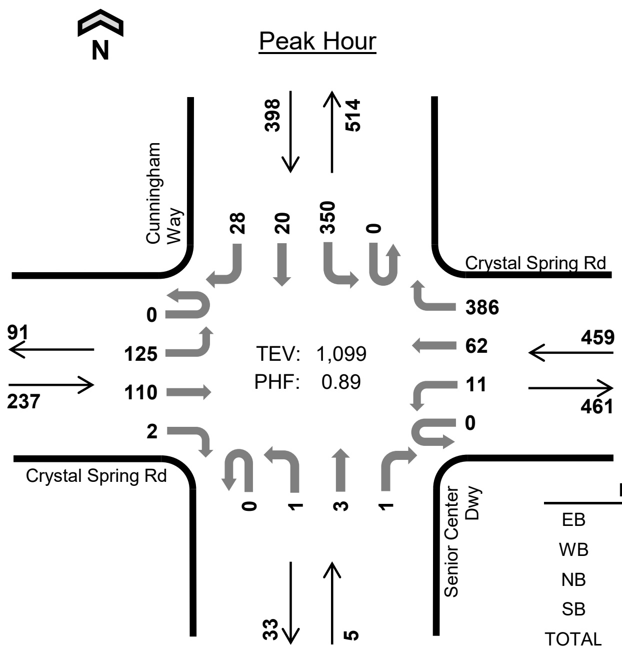
1. Mid-week average includes data between Tuesday and Thursday.

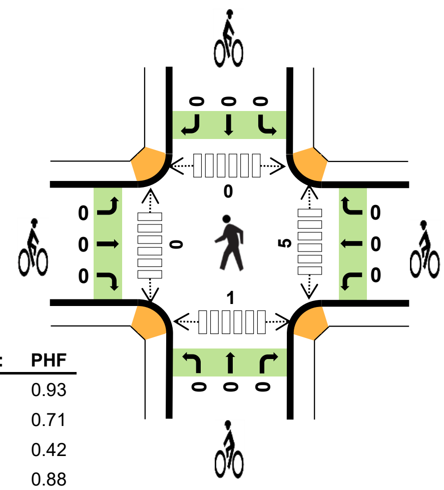
Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Cunningham Way
Crystal Spring Rd

Date: 01-23-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM

Peak Hour





	HV %:	PHF
EB	0.0%	0.93
WB	0.4%	0.71
NB	0.0%	0.42
SB	0.5%	0.88
TOTAL	0.4%	0.89

Two-Hour Count Summaries

Interval Start		Crystal Spring Rd				Crystal Spring Rd				Senior Center Dwy				Cunningham Way				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	26	6	0	0	1	1	66	0	0	0	0	0	38	1	7	146	0
7:15 AM		0	29	11	0	0	2	2	68	0	0	0	0	0	50	0	6	168	0
7:30 AM		**0**	**40**	**21**	**0**	**0**	**3**	**5**	**103**	**0**	**0**	**0**	**0**	**0**	**81**	**2**	**7**	**262**	0
7:45 AM		**0**	**32**	**20**	**1**	**0**	**1**	**14**	**99**	**0**	**1**	**0**	**0**	**0**	**102**	**5**	**6**	**281**	857
8:00 AM		**0**	**24**	**35**	**0**	**0**	**6**	**36**	**119**	**0**	**0**	**1**	**0**	**0**	**70**	**11**	**8**	**310**	1,021
8:15 AM		**0**	**29**	**34**	**1**	**0**	**1**	**7**	**65**	**0**	**0**	**2**	**1**	**0**	**97**	**2**	**7**	**246**	**1,099**
8:30 AM		0	24	13	0	0	3	6	84	0	0	1	0	0	89	6	6	232	1,069
8:45 AM		0	21	14	2	0	5	7	69	0	0	1	1	0	78	6	6	210	998
Count Total		0	225	154	4	0	22	78	673	0	1	5	2	0	605	33	53	1,855	0
Peak Hour	**All**	**0**	**125**	**110**	**2**	**0**	**11**	**62**	**386**	**0**	**1**	**3**	**1**	**0**	**350**	**20**	**28**	**1,099**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**4**	**0**
	HV%	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**2%**	**0%**	**-**	**0%**	**0%**	**0%**	**-**	**1%**	**0%**	**0%**	**0%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	*1*
7:45 AM	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**1**	*3*
8:00 AM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**0**	*2*
8:15 AM	**0**	**2**	**0**	**1**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
8:30 AM	0	1	0	0	*1*	0	0	0	0	*0*	1	0	0	1	*2*
8:45 AM	2	0	0	2	*4*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	2	3	0	4	*9*	0	0	0	0	*0*	6	0	0	2	*8*
Peak Hour	**0**	**2**	**0**	**2**	***4***	**0**	**0**	**0**	**0**	***0***	**5**	**0**	**0**	**1**	***6***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Crystal Spring Rd				Crystal Spring Rd				Senior Center Dwy				Cunningham Way				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	1
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	**4**
8:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	5
8:45 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2	0	0	4	8
Count Total	0	1	1	0	0	1	1	1	0	0	0	0	0	4	0	0	9	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**4**	**0**

Two-Hour Count Summaries - Bikes

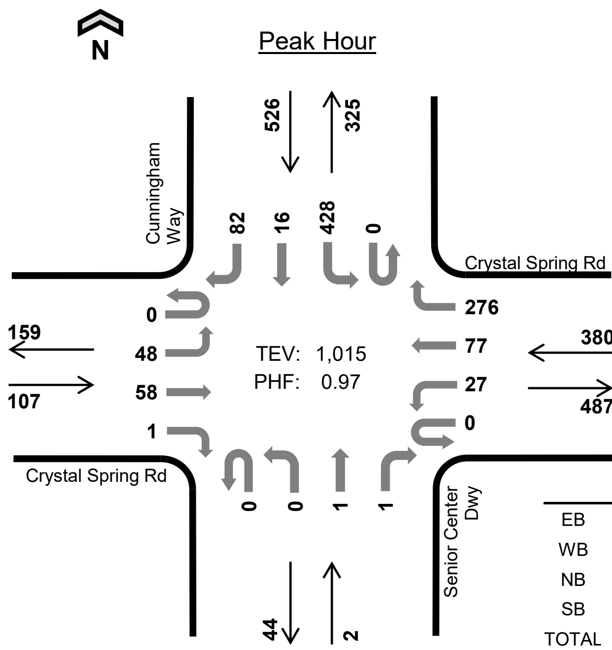
Interval Start	Crystal Spring Rd			Crystal Spring Rd			Senior Center Dwy			Cunningham Way			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

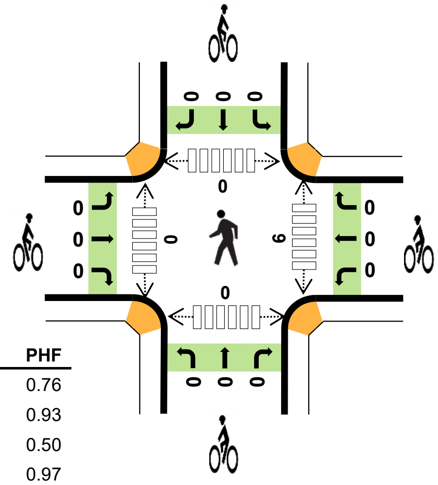
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Cunningham Way
Crystal Spring Rd

Date: 01-23-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

Peak Hour





	HV %:	PHF
EB	0.0%	0.76
WB	0.0%	0.93
NB	0.0%	0.50
SB	0.2%	0.97
TOTAL	0.1%	0.97

Two-Hour Count Summaries

Interval Start	Crystal Spring Rd Eastbound				Crystal Spring Rd Westbound				Senior Center Dwy Northbound				Cunningham Way Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	16	14	0	0	1	8	42	0	0	3	1	0	89	1	16	191	0
4:15 PM	0	10	11	0	0	0	8	65	0	0	0	0	0	103	1	15	213	0
4:30 PM	0	8	17	0	0	1	8	68	0	0	4	0	0	111	1	23	241	0
4:45 PM	0	12	11	0	0	0	15	62	0	0	0	1	0	108	1	13	223	868
5:00 PM	**0**	**11**	**9**	**0**	**0**	**3**	**22**	**67**	**0**	**0**	**0**	**1**	**0**	**107**	**0**	**20**	**240**	917
5:15 PM	**0**	**16**	**19**	**0**	**0**	**2**	**20**	**66**	**0**	**0**	**0**	**0**	**0**	**111**	**4**	**20**	**258**	962
5:30 PM	**0**	**12**	**12**	**0**	**0**	**13**	**17**	**72**	**0**	**0**	**1**	**0**	**0**	**97**	**6**	**26**	**256**	977
5:45 PM	**0**	**9**	**18**	**1**	**0**	**9**	**18**	**71**	**0**	**0**	**0**	**0**	**0**	**113**	**6**	**16**	**261**	**1,015**
Count Total	0	94	111	1	0	29	116	513	0	0	8	3	0	839	20	149	1,883	0
Peak Hour All	**0**	**48**	**58**	**1**	**0**	**27**	**77**	**276**	**0**	**0**	**1**	**1**	**0**	**428**	**16**	**82**	**1,015**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**
Peak Hour HV%	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**0%**	**-**	**-**	**0%**	**0%**	**-**	**0%**	**0%**	**0%**	**0%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	1	0	3	*4*	0	0	0	0	*0*	2	0	0	1	*3*
4:15 PM	0	1	0	2	*3*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	1	*1*
4:45 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	0	0	0	*0*
5:00 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**0**	*2*
5:15 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:30 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	*1*
5:45 PM	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	***0***	**3**	**0**	**0**	**0**	***3***
Count Total	0	2	0	7	*9*	0	0	0	0	*0*	8	0	0	2	*10*
Peak Hour	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	***0***	**6**	**0**	**0**	**0**	*6*

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Crystal Spring Rd				Crystal Spring Rd				Senior Center Dwy				Cunningham Way				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	2	1	0	4	0
4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	3	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	8
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	4
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**1**
Count Total	0	0	0	0	0	0	0	2	0	0	0	0	0	5	2	0	9	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**

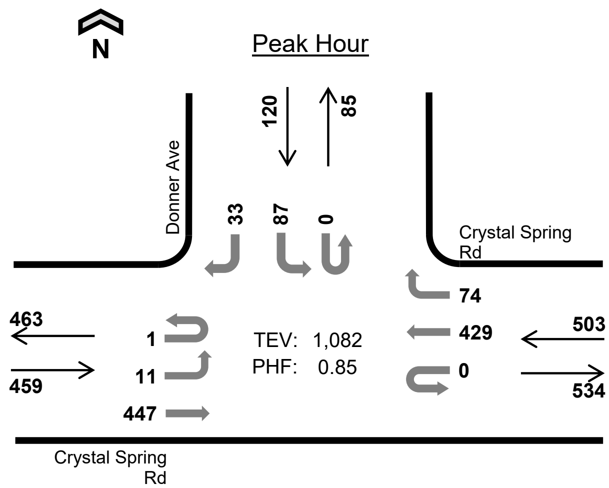
Two-Hour Count Summaries - Bikes

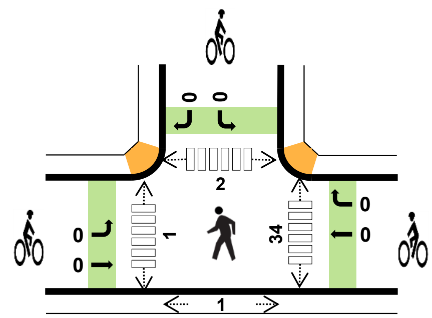
Interval Start	Crystal Spring Rd			Crystal Spring Rd			Senior Center Dwy			Cunningham Way			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Donner Ave
Crystal Spring Rd

Date: 01-23-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM





	HV %:	PHF
EB	0.4%	0.86
WB	0.2%	0.73
NB	-	-
SB	0.8%	0.56
TOTAL	0.4%	0.85

Two-Hour Count Summaries

Interval Start		Crystal Spring Rd				Crystal Spring Rd				0				Donner Ave				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	42	0	0	0	64	1	0	0	0	0	0	4	0	5	116	0
7:15 AM		0	0	59	0	0	0	71	2	0	0	0	0	0	5	0	2	139	0
7:30 AM		**0**	**2**	**95**	**0**	**0**	**0**	**107**	**7**	**0**	**0**	**0**	**0**	**0**	**19**	**0**	**4**	**234**	0
7:45 AM		**0**	**0**	**112**	**0**	**0**	**0**	**106**	**36**	**0**	**0**	**0**	**0**	**0**	**44**	**0**	**10**	**308**	797
8:00 AM		**1**	**5**	**111**	**0**	**0**	**0**	**146**	**27**	**0**	**0**	**0**	**0**	**0**	**15**	**0**	**14**	**319**	1,000
8:15 AM		**0**	**4**	**129**	**0**	**0**	**0**	**70**	**4**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**5**	**221**	**1,082**
8:30 AM		0	2	104	0	0	0	89	2	0	0	0	0	0	4	0	0	201	1,049
8:45 AM		0	2	99	0	0	0	79	3	0	0	0	0	0	8	0	1	192	933
Count Total		1	15	751	0	0	0	732	82	0	0	0	0	0	108	0	41	1,730	0
Peak Hour	**All**	**1**	**11**	**447**	**0**	**0**	**0**	**429**	**74**	**0**	**0**	**0**	**0**	**0**	**87**	**0**	**33**	**1,082**	**0**
	HV	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**4**	**0**
	HV%	**0%**	**9%**	**0%**	**-**	**-**	**-**	**0%**	**0%**	**-**	**-**	**-**	**-**	**-**	**0%**	**-**	**3%**	**0%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	0	1	*1*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**1**	**0**	*3*
7:45 AM	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**26**	**1**	**1**	**1**	*29*
8:00 AM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**6**	**0**	**0**	**0**	*6*
8:15 AM	**1**	**1**	**0**	**1**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
8:30 AM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	2	0	0	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	4	2	0	2	*8*	0	0	0	0	*0*	34	1	2	1	*38*
Peak Hr	**2**	**1**	**0**	**1**	***4***	**0**	**0**	**0**	**0**	***0***	**34**	**1**	**2**	**1**	***38***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Crystal Spring Rd Eastbound				Crystal Spring Rd Westbound				0 Northbound				Donner Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	2
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:15 AM	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	**4**
8:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	5
8:45 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6
Count Total	0	1	3	0	0	0	2	0	0	0	0	0	0	1	0	1	8	0
Peak Hour	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**4**	**0**

Two-Hour Count Summaries - Bikes

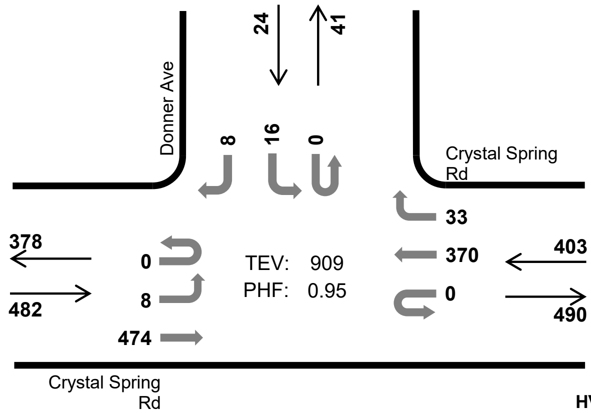
Interval Start	Crystal Spring Rd Eastbound			Crystal Spring Rd Westbound			0 Northbound			Donner Ave Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

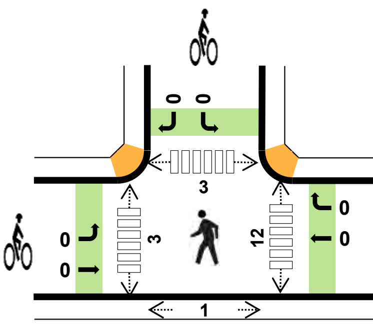
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Donner Ave
Crystal Spring Rd

Date: 01-23-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

Peak Hour





	HV %:	PHF
EB	0.4%	0.93
WB	0.0%	0.94
NB	-	-
SB	0.0%	0.75
TOTAL	0.2%	0.95

Two-Hour Count Summaries

Interval Start		Crystal Spring Rd				Crystal Spring Rd				0				Donner Ave				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	1	108	0	0	0	47	17	0	0	0	0	0	4	0	1	178	0
4:15 PM		0	1	115	0	0	0	67	13	0	0	0	0	0	6	0	3	205	0
4:30 PM		0	4	126	0	0	0	74	11	0	0	0	0	0	7	0	2	224	0
4:45 PM		0	3	118	0	0	0	81	6	0	0	0	0	0	11	0	1	220	827
5:00 PM		**0**	**3**	**112**	**0**	**0**	**0**	**87**	**12**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**3**	**222**	871
5:15 PM		**0**	**1**	**128**	**0**	**0**	**0**	**85**	**6**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**3**	**227**	893
5:30 PM		**0**	**2**	**106**	**0**	**0**	**0**	**103**	**3**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**1**	**220**	889
5:45 PM		**0**	**2**	**128**	**0**	**0**	**0**	**95**	**12**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**240**	**909**
Count Total		0	17	941	0	0	0	639	80	0	0	0	0	0	44	0	15	1,736	0
Peak Hour	**All**	**0**	**8**	**474**	**0**	**0**	**0**	**370**	**33**	**0**	**0**	**0**	**0**	**0**	**16**	**0**	**8**	**909**	**0**
	HV	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**
	HV%	**-**	**0%**	**0%**	**-**	**-**	**-**	**0%**	**0%**	**-**	**-**	**-**	**-**	**-**	**0%**	**-**	**0%**	**0%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	2	0	0	0	*2*	1	0	0	0	*1*	2	0	0	0	*2*
4:15 PM	1	0	0	0	*1*	0	0	0	0	*0*	1	0	0	0	*1*
4:30 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	2	0	2	*4*
4:45 PM	1	0	0	0	*1*	0	0	0	0	*0*	1	0	0	0	*1*
5:00 PM	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**4**	**2**	**0**	**1**	*7*
5:15 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**5**	**1**	**1**	**0**	*7*
5:30 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**3**	**0**	**0**	**0**	*3*
5:45 PM	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**2**	**0**	***2***
Count Total	6	0	0	0	*6*	1	0	0	0	*1*	16	5	3	3	*27*
Peak Hr	**2**	**0**	**0**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**12**	**3**	**3**	**1**	***19***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Crystal Spring Rd				Crystal Spring Rd				0				Donner Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
4:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
5:00 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	3
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:45 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**
Count Total	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
Peak Hour	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**

Two-Hour Count Summaries - Bikes

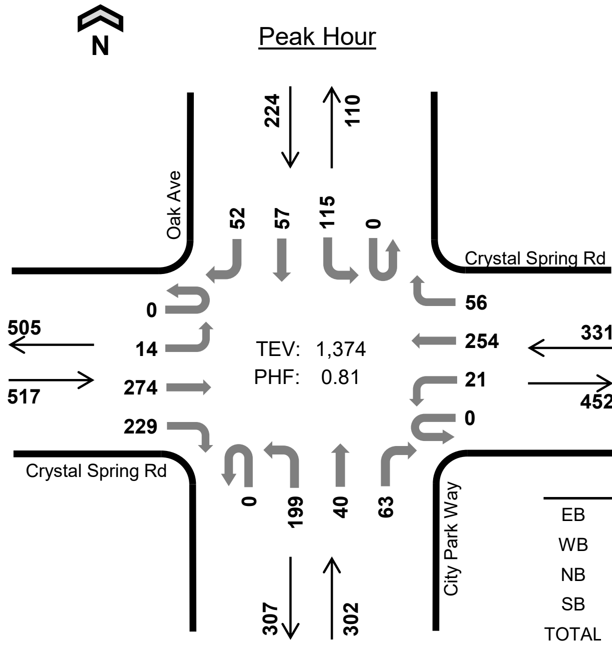
Interval Start	Crystal Spring Rd			Crystal Spring Rd			0			Donner Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Count Total	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

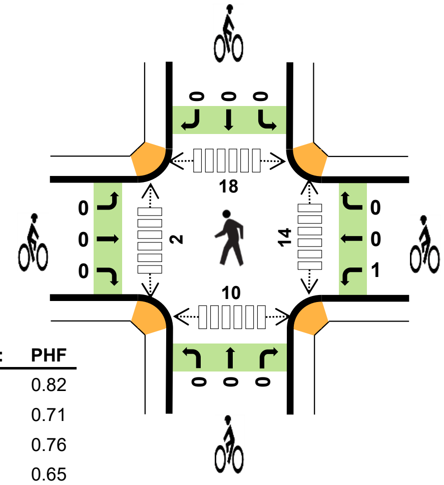
City Park Way
Crystal Spring Rd

idax

Date: 01-23-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	0.2%	0.82
WB	0.3%	0.71
NB	1.0%	0.76
SB	0.0%	0.65
TOTAL	0.4%	0.81



Two-Hour Count Summaries

Interval Start	Crystal Spring Rd Eastbound				Crystal Spring Rd Westbound				City Park Way Northbound				Oak Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	29	9	0	6	32	5	0	31	4	12	0	4	2	3	137	0
7:15 AM	0	7	36	21	0	5	31	4	0	36	2	12	0	3	3	6	166	0
7:30 AM	**0**	**7**	**43**	**53**	**0**	**5**	**66**	**5**	**0**	**49**	**8**	**8**	**0**	**14**	**14**	**7**	**279**	0
7:45 AM	**0**	**0**	**59**	**98**	**0**	**3**	**64**	**17**	**0**	**62**	**14**	**23**	**0**	**43**	**23**	**20**	**426**	1,008
8:00 AM	**0**	**2**	**79**	**46**	**0**	**5**	**83**	**29**	**0**	**56**	**11**	**15**	**0**	**46**	**15**	**17**	**404**	1,275
8:15 AM	**0**	**5**	**93**	**32**	**0**	**8**	**41**	**5**	**0**	**32**	**7**	**17**	**0**	**12**	**5**	**8**	**265**	**1,374**
8:30 AM	0	4	82	28	0	8	46	10	0	39	4	13	0	10	4	2	250	1,345
8:45 AM	0	2	74	29	0	13	45	4	0	36	5	16	0	6	12	4	246	1,165
Count Total	0	27	495	316	0	53	408	79	0	341	55	116	0	138	78	67	2,173	0
Peak Hour All	**0**	**14**	**274**	**229**	**0**	**21**	**254**	**56**	**0**	**199**	**40**	**63**	**0**	**115**	**57**	**52**	**1,374**	**0**
Peak Hour HV	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**5**	**0**
Peak Hour HV%	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**5%**	**2%**	**-**	**0%**	**0%**	**0%**	**0%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	1	0	2	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	1	0	*1*
7:30 AM	**0**	**0**	**0**	**0**	*0*	**0**	**1**	**0**	**0**	*1*	**3**	**1**	**4**	**2**	*10*
7:45 AM	**1**	**0**	**1**	**0**	*2*	**0**	**0**	**0**	**0**	*0*	**8**	**0**	**9**	**5**	*22*
8:00 AM	**0**	**0**	**1**	**0**	*1*	**0**	**0**	**0**	**0**	*0*	**2**	**1**	**3**	**1**	*7*
8:15 AM	**0**	**1**	**1**	**0**	*2*	**0**	**0**	**0**	**0**	*0*	**1**	**0**	**2**	**2**	*5*
8:30 AM	0	1	0	0	*1*	0	0	0	0	*0*	2	1	0	1	*4*
8:45 AM	2	0	0	0	*2*	0	0	0	0	*0*	1	0	0	2	*3*
Count Total	4	2	5	0	*11*	0	1	0	0	*1*	17	3	19	13	*52*
Peak Hour	**1**	**1**	**3**	**0**	***5***	**0**	**1**	**0**	**0**	***1***	**14**	**2**	**18**	**10**	***44***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Crystal Spring Rd				Crystal Spring Rd				City Park Way				Oak Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	3	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	5
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	3
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**5**
8:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	6
8:45 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6
Count Total	0	0	4	0	0	0	2	0	0	0	4	1	0	0	0	0	11	0
Peak Hour	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**5**	**0**

Two-Hour Count Summaries - Bikes

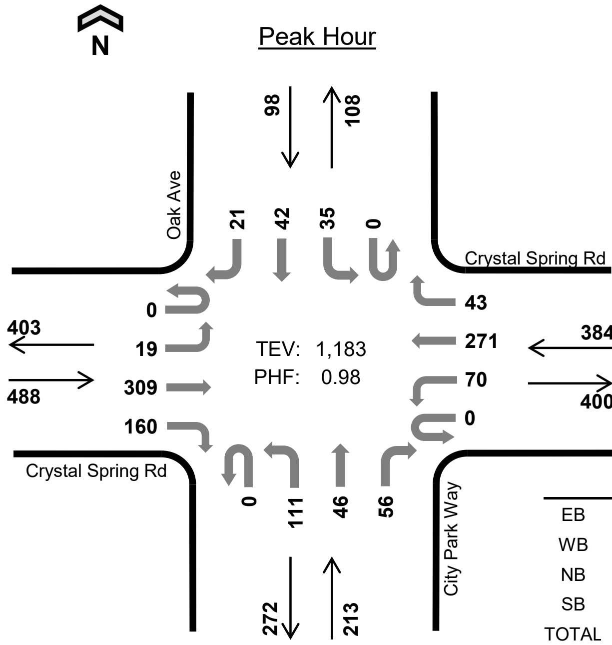
Interval Start	Crystal Spring Rd			Crystal Spring Rd			City Park Way			Oak Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	1	0	0	0	0	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**

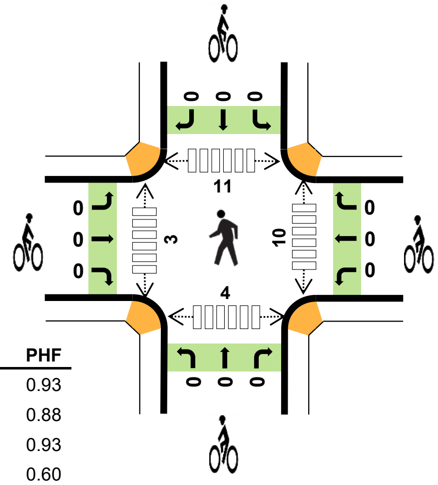
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

City Park Way
Crystal Spring Rd

Date: 01-23-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

Peak Hour





	HV %:	PHF
EB	0.4%	0.93
WB	0.0%	0.88
NB	0.9%	0.93
SB	0.0%	0.60
TOTAL	0.3%	0.98

Two-Hour Count Summaries

Interval Start		Crystal Spring Rd Eastbound				Crystal Spring Rd Westbound				City Park Way Northbound				Oak Ave Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	5	74	32	0	22	34	17	0	24	4	12	0	8	5	4	241	0
4:15 PM		0	2	79	40	0	9	54	14	0	21	8	19	0	10	14	7	277	0
4:30 PM		0	5	90	37	0	12	50	6	0	32	12	19	0	14	11	4	292	0
4:45 PM		0	6	87	37	0	10	54	9	0	28	13	9	0	5	14	7	279	1,089
5:00 PM		**0**	**4**	**67**	**46**	**0**	**17**	**62**	**8**	**0**	**27**	**12**	**18**	**0**	**18**	**14**	**9**	**302**	1,150
5:15 PM		**0**	**6**	**82**	**43**	**0**	**18**	**57**	**14**	**0**	**31**	**10**	**14**	**0**	**4**	**13**	**2**	**294**	1,167
5:30 PM		**0**	**1**	**84**	**29**	**0**	**19**	**83**	**7**	**0**	**23**	**11**	**18**	**0**	**5**	**7**	**4**	**291**	1,166
5:45 PM		**0**	**8**	**76**	**42**	**0**	**16**	**69**	**14**	**0**	**30**	**13**	**6**	**0**	**8**	**8**	**6**	**296**	**1,183**
Count Total		0	37	639	306	0	123	463	89	0	216	83	115	0	72	86	43	2,272	0
Peak Hour	**All**	**0**	**19**	**309**	**160**	**0**	**70**	**271**	**43**	**0**	**111**	**46**	**56**	**0**	**35**	**42**	**21**	**1,183**	**0**
	HV	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**4**	**0**
	HV%	**-**	**0%**	**0%**	**1%**	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**4%**	**-**	**0%**	**0%**	**0%**	**0%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	2	1	0	0	*3*	1	0	0	0	*1*	4	0	2	1	*7*
4:15 PM	1	1	0	0	*2*	0	0	0	0	*0*	2	1	3	2	*8*
4:30 PM	1	0	0	0	*1*	0	0	0	0	*0*	0	2	3	0	*5*
4:45 PM	1	0	0	0	*1*	0	0	0	0	*0*	2	1	0	0	*3*
5:00 PM	**1**	**0**	**1**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**6**	**2**	**4**	**2**	*14*
5:15 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**1**	**2**	*4*
5:30 PM	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**2**	**1**	**4**	**0**	*7*
5:45 PM	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**2**	**0**	***3***
Count Total	7	2	2	0	*11*	1	0	0	0	*1*	18	7	19	7	*51*
Peak Hour	**2**	**0**	**2**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**10**	**3**	**11**	**4**	***28***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Crystal Spring Rd Eastbound UT	LT	TH	RT	Crystal Spring Rd Westbound UT	LT	TH	RT	City Park Way Northbound UT	LT	TH	RT	Oak Ave Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0
4:15 PM	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2	0
4:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
4:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7
5:00 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	6
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	4
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	4
5:45 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**4**
Count Total	0	0	5	2	0	1	0	1	0	0	0	2	0	0	0	0	11	0
Peak Hour	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**4**	**0**

Two-Hour Count Summaries - Bikes

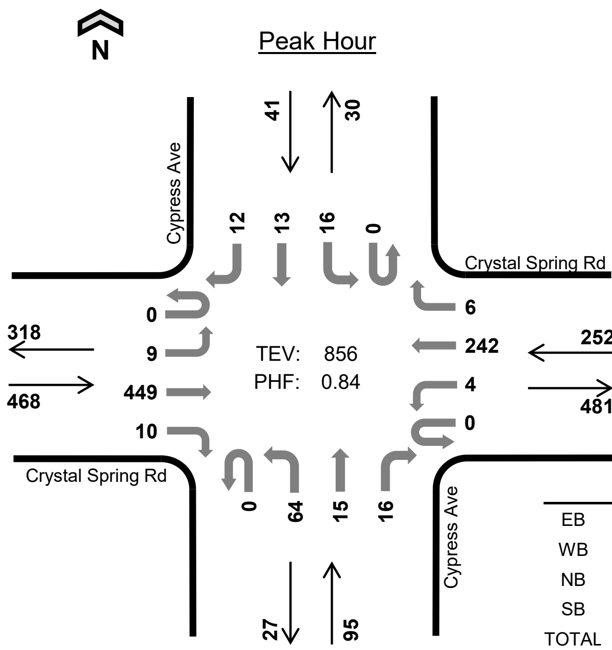
Interval Start	Crystal Spring Rd Eastbound LT	TH	RT	Crystal Spring Rd Westbound LT	TH	RT	City Park Way Northbound LT	TH	RT	Oak Ave Southbound LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Count Total	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

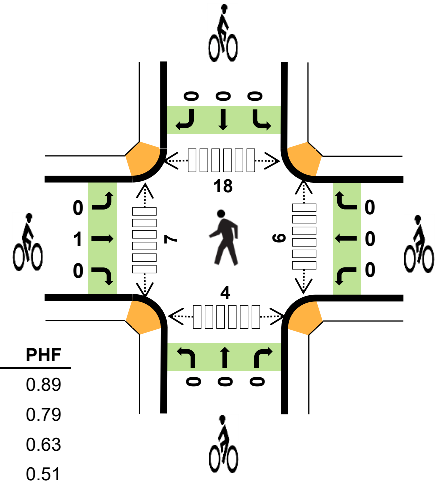
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Cypress Ave
Crystal Spring Rd

Date: 01-23-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM

Peak Hour





	HV %:	PHF
EB	0.4%	0.89
WB	1.2%	0.79
NB	0.0%	0.63
SB	0.0%	0.51
TOTAL	0.6%	0.84

Two-Hour Count Summaries

Interval Start		Crystal Spring Rd Eastbound UT	LT	TH	RT	Crystal Spring Rd Westbound UT	LT	TH	RT	Cypress Ave Northbound UT	LT	TH	RT	Cypress Ave Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		0	2	49	1	0	0	35	1	0	1	0	7	0	2	0	4	102	0
7:15 AM		0	2	47	4	0	0	29	0	0	2	0	3	0	0	0	2	89	0
7:30 AM		0	0	64	4	0	1	54	1	0	9	0	4	0	3	1	9	150	0
7:45 AM		**0**	**4**	**100**	**5**	**0**	**3**	**69**	**4**	**0**	**22**	**7**	**9**	**0**	**5**	**9**	**6**	**243**	584
8:00 AM		**0**	**3**	**127**	**2**	**0**	**1**	**77**	**2**	**0**	**26**	**5**	**4**	**0**	**3**	**4**	**1**	**255**	737
8:15 AM		**0**	**1**	**120**	**2**	**0**	**0**	**43**	**0**	**0**	**9**	**2**	**2**	**0**	**3**	**0**	**2**	**184**	832
8:30 AM		**0**	**1**	**102**	**1**	**0**	**0**	**53**	**0**	**0**	**7**	**1**	**1**	**0**	**5**	**0**	**3**	**174**	**856**
8:45 AM		0	1	90	3	0	2	54	1	0	8	1	0	0	7	1	3	171	784
Count Total		0	14	699	22	0	7	414	9	0	84	16	30	0	28	15	30	1,368	0
Peak Hour	**All**	**0**	**9**	**449**	**10**	**0**	**4**	**242**	**6**	**0**	**64**	**15**	**16**	**0**	**16**	**13**	**12**	**856**	**0**
	HV	**0**	**1**	**1**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**
	HV%	**-**	**11%**	**0%**	**0%**	**-**	**0%**	**1%**	**17%**	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	1	0	0	0	*1*	0	0	0	0	*0*	1	0	1	0	*2*
7:15 AM	0	0	0	0	*0*	0	1	0	0	*1*	1	0	3	0	*4*
7:30 AM	0	1	0	0	*1*	0	0	0	0	*0*	4	2	4	4	*14*
7:45 AM	**2**	**1**	**0**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**5**	**0**	*6*
8:00 AM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**3**	**5**	**7**	**1**	*16*
8:15 AM	**0**	**2**	**0**	**0**	***2***	**1**	**0**	**0**	**0**	***1***	**2**	**1**	**5**	**2**	*10*
8:30 AM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**1**	**1**	*3*
8:45 AM	2	0	0	0	*2*	0	0	0	0	*0*	0	4	3	6	*13*
Count Total	5	4	0	0	*9*	1	1	0	0	*2*	12	13	29	14	*68*
Peak Hour	**2**	**3**	**0**	**0**	***5***	**1**	**0**	**0**	**0**	***1***	**6**	**7**	**18**	**4**	***35***

Project Manager: (415) 310-6469

project.manager.ca@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Crystal Spring Rd Eastbound				Crystal Spring Rd Westbound				Cypress Ave Northbound				Cypress Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
7:45 AM	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	5
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	4
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	6
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**
8:45 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4
Count Total	0	1	4	0	0	1	2	1	0	0	0	0	0	0	0	0	9	0
Peak Hour	**0**	**1**	**1**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**

Two-Hour Count Summaries - Bikes

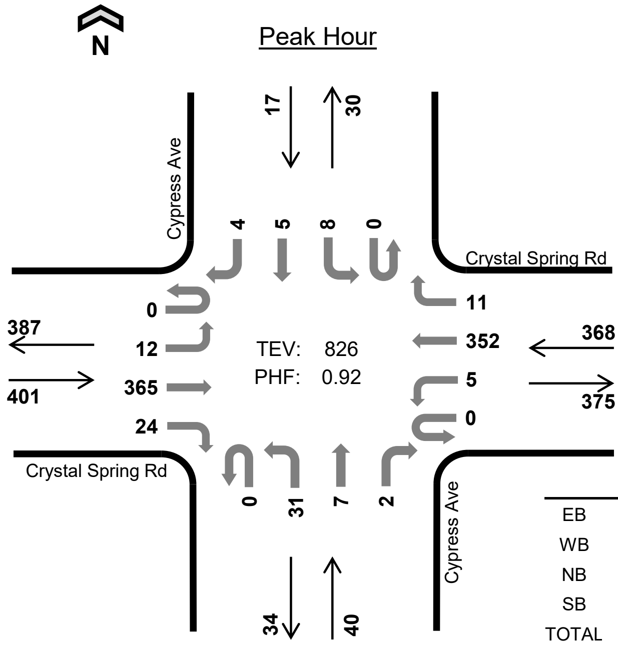
Interval Start	Crystal Spring Rd Eastbound			Crystal Spring Rd Westbound			Cypress Ave Northbound			Cypress Ave Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:15 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	1
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	1	0	0	1	0	0	0	0	0	0	0	2	0
Peak Hour	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

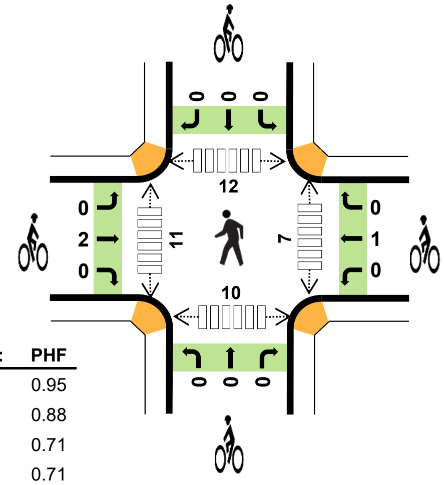
Cypress Ave
Crystal Spring Rd

Date: 01-23-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

Peak Hour



	HV %:	PHF
EB	0.5%	0.95
WB	0.0%	0.88
NB	0.0%	0.71
SB	0.0%	0.71
TOTAL	0.2%	0.92



Two-Hour Count Summaries

Interval Start	Crystal Spring Rd Eastbound				Crystal Spring Rd Westbound				Cypress Ave Northbound				Cypress Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	2	88	8	0	1	77	2	0	3	1	2	0	1	1	1	187	0
4:15 PM	0	6	93	7	0	1	66	1	0	10	2	1	0	0	0	0	187	0
4:30 PM	0	3	111	1	0	2	56	5	0	5	0	2	0	4	0	1	190	0
4:45 PM	0	2	100	3	0	1	69	1	0	6	0	1	0	4	2	0	189	753
5:00 PM	**0**	**4**	**93**	**5**	**0**	**0**	**73**	**4**	**0**	**10**	**4**	**0**	**0**	**3**	**0**	**0**	**196**	762
5:15 PM	**0**	**3**	**97**	**5**	**0**	**1**	**86**	**0**	**0**	**5**	**1**	**1**	**0**	**3**	**1**	**2**	**205**	780
5:30 PM	**0**	**4**	**94**	**6**	**0**	**2**	**97**	**5**	**0**	**10**	**2**	**0**	**0**	**2**	**2**	**1**	**225**	815
5:45 PM	**0**	**1**	**81**	**8**	**0**	**2**	**96**	**2**	**0**	**6**	**0**	**1**	**0**	**0**	**2**	**1**	**200**	**826**
Count Total	0	25	757	43	0	10	620	20	0	55	10	8	0	17	8	6	1,579	0
Peak Hour All	**0**	**12**	**365**	**24**	**0**	**5**	**352**	**11**	**0**	**31**	**7**	**2**	**0**	**8**	**5**	**4**	**826**	**0**
Peak Hour HV	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**
Peak Hour HV%	**-**	**0%**	**1%**	**0%**	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**0%**	**0%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	3	1	0	0	*4*	1	0	0	0	*1*	1	5	2	6	*14*
4:15 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	12	11	2	*25*
4:30 PM	2	1	0	0	*3*	0	0	0	0	*0*	0	6	4	12	*22*
4:45 PM	1	0	0	0	*1*	0	0	0	0	*0*	2	4	0	5	*11*
5:00 PM	**1**	**0**	**0**	**0**	***1***	**2**	**0**	**0**	**0**	***2***	**3**	**3**	**1**	**5**	*12*
5:15 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**1**	**4**	**6**	**4**	*15*
5:30 PM	**1**	**0**	**0**	**0**	***1***	**0**	**1**	**0**	**0**	***1***	**1**	**1**	**3**	**0**	*5*
5:45 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**2**	**3**	**2**	**1**	*8*
Count Total	8	2	0	0	*10*	3	1	0	0	*4*	10	38	29	35	*112*
Peak Hour	**2**	**0**	**0**	**0**	***2***	**2**	**1**	**0**	**0**	***3***	**7**	**11**	**12**	**10**	***40***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Crystal Spring Rd				Crystal Spring Rd				Cypress Ave				Cypress Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	4	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	3	0
4:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8
5:00 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	5
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	5
5:30 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	3
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
Count Total	0	0	7	1	0	1	1	0	0	0	0	0	0	0	0	0	10	0
Peak Hour	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Crystal Spring Rd			Crystal Spring Rd			Cypress Ave			Cypress Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	2
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:30 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	3
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
Count Total	0	3	0	0	1	0	0	0	0	0	0	0	4	0
Peak Hour	**0**	**2**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**

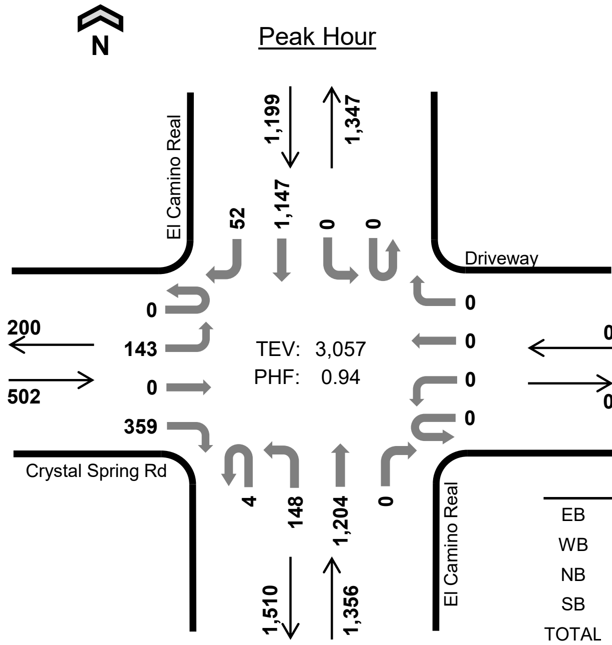
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

El Camino Real
Crystal Spring Rd

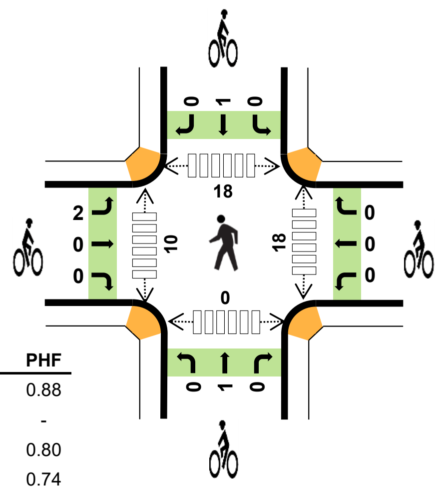
idax

Date: 01-23-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM

Peak Hour



	HV %:	PHF
EB	0.0%	0.88
WB	-	-
NB	2.3%	0.80
SB	2.8%	0.74
TOTAL	2.1%	0.94



Two-Hour Count Summaries

Interval Start		Crystal Spring Rd Eastbound UT	LT	TH	RT	Driveway Westbound UT	LT	TH	RT	El Camino Real Northbound UT	LT	TH	RT	El Camino Real Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		0	29	0	34	0	0	0	0	0	23	143	0	0	0	117	10	356	0
7:15 AM		0	26	0	34	0	0	0	0	1	16	210	0	0	0	172	5	464	0
7:30 AM		0	32	0	53	0	0	0	0	0	23	256	0	0	0	272	17	653	0
7:45 AM		**0**	**27**	**0**	**81**	**0**	**0**	**0**	**0**	**2**	**41**	**211**	**0**	**0**	**0**	**391**	**16**	**769**	2,242
8:00 AM		**0**	**50**	**0**	**89**	**0**	**0**	**0**	**0**	**1**	**36**	**386**	**0**	**0**	**0**	**236**	**19**	**817**	2,703
8:15 AM		**0**	**41**	**0**	**102**	**0**	**0**	**0**	**0**	**0**	**42**	**326**	**0**	**0**	**0**	**223**	**7**	**741**	2,980
8:30 AM		**0**	**25**	**0**	**87**	**0**	**0**	**0**	**0**	**1**	**29**	**281**	**0**	**0**	**0**	**297**	**10**	**730**	**3,057**
8:45 AM		0	32	0	73	0	0	0	0	2	22	253	0	0	0	259	18	659	2,947
Count Total		0	262	0	553	0	0	0	0	7	232	2,066	0	0	0	1,967	102	5,189	0
Peak Hour	**All**	**0**	**143**	**0**	**359**	**0**	**0**	**0**	**0**	**4**	**148**	**1,204**	**0**	**0**	**0**	**1,147**	**52**	**3,057**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**27**	**0**	**0**	**0**	**33**	**0**	**64**	**0**
	HV%	**-**	**0%**	**-**	**0%**	**-**	**-**	**-**	**-**	**0%**	**3%**	**2%**	**-**	**-**	**-**	**3%**	**0%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	2	0	3	3	*8*	0	0	1	0	*1*	3	1	0	0	*4*
7:15 AM	0	0	6	4	*10*	0	0	0	0	*0*	6	4	1	0	*11*
7:30 AM	2	0	6	3	*11*	0	0	2	1	*3*	4	6	1	0	*11*
7:45 AM	**0**	**0**	**6**	**12**	***18***	**0**	**0**	**1**	**0**	***1***	**6**	**6**	**7**	**0**	*19*
8:00 AM	**0**	**0**	**9**	**6**	***15***	**0**	**0**	**0**	**0**	***0***	**4**	**1**	**5**	**0**	*10*
8:15 AM	**0**	**0**	**10**	**8**	***18***	**2**	**0**	**0**	**1**	***3***	**4**	**2**	**2**	**0**	*8*
8:30 AM	**0**	**0**	**6**	**7**	***13***	**0**	**0**	**0**	**0**	***0***	**4**	**1**	**4**	**0**	***9***
8:45 AM	3	0	9	7	*19*	0	0	0	0	*0*	2	2	0	0	*4*
Count Total	7	0	55	50	*112*	2	0	4	2	*8*	33	23	20	0	*76*
Peak Hour	**0**	**0**	**31**	**33**	***64***	**2**	**0**	**1**	**1**	***4***	**18**	**10**	**18**	**0**	***46***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Crystal Spring Rd Eastbound UT	LT	TH	RT	Driveway Westbound UT	LT	TH	RT	El Camino Real Northbound UT	LT	TH	RT	El Camino Real Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	0	2	0	0	0	0	0	0	0	0	3	0	0	0	3	0	8	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	4	0	10	0
7:30 AM	0	2	0	0	0	0	0	0	0	0	6	0	0	0	2	1	11	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**5**	**0**	**0**	**0**	**12**	**0**	**18**	47
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**6**	**0**	**15**	54
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**8**	**0**	**0**	**0**	**8**	**0**	**18**	62
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**5**	**0**	**0**	**0**	**7**	**0**	**13**	**64**
8:45 AM	0	0	0	3	0	0	0	0	1	1	7	0	0	0	7	0	19	65
Count Total	0	4	0	3	0	0	0	0	1	5	49	0	0	0	49	1	112	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**27**	**0**	**0**	**0**	**33**	**0**	**64**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Crystal Spring Rd Eastbound LT	TH	RT	Driveway Westbound LT	TH	RT	El Camino Real Northbound LT	TH	RT	El Camino Real Southbound LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	2	0	0	1	0	3	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	5
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	4
8:15 AM	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	7
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Count Total	2	0	0	0	0	0	0	4	0	0	2	0	8	0
Peak Hour	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**4**	**0**

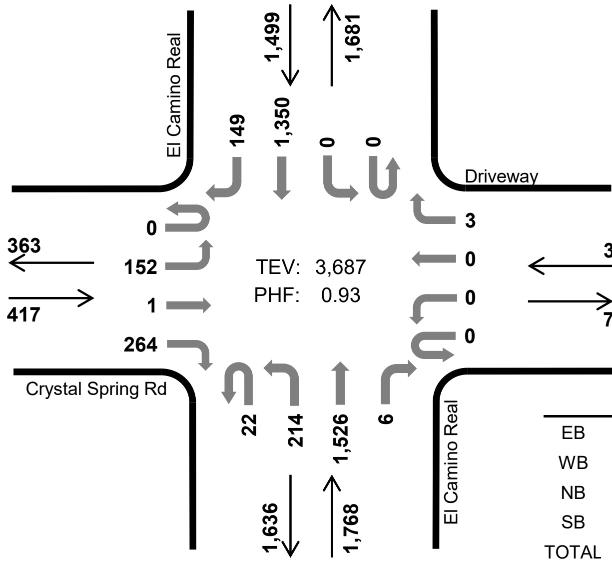
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

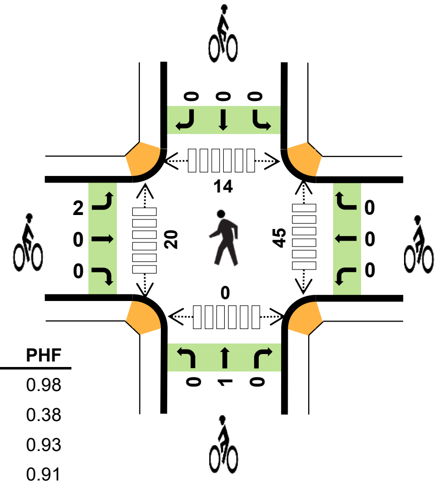
El Camino Real
Crystal Spring Rd

idax

Date: 01-23-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

Peak Hour





	HV %:	PHF
EB	0.7%	0.98
WB	0.0%	0.38
NB	0.6%	0.93
SB	0.7%	0.91
TOTAL	0.7%	0.93

Two-Hour Count Summaries

Interval Start		Crystal Spring Rd Eastbound				Driveway Westbound				El Camino Real Northbound				El Camino Real Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	33	0	55	0	0	0	0	7	41	327	1	0	0	300	26	790	0
4:15 PM		0	44	0	61	0	0	0	2	6	45	332	0	0	0	290	22	802	0
4:30 PM		0	38	0	57	0	0	0	1	6	37	353	1	0	0	348	18	859	0
4:45 PM		0	46	0	72	0	0	0	0	6	52	355	3	0	0	336	25	895	3,346
5:00 PM		**0**	**38**	**0**	**66**	**0**	**0**	**0**	**0**	**5**	**43**	**359**	**1**	**0**	**0**	**309**	**30**	**851**	3,407
5:15 PM		**0**	**46**	**0**	**60**	**0**	**0**	**0**	**0**	**4**	**56**	**414**	**0**	**0**	**0**	**379**	**33**	**992**	3,597
5:30 PM		**0**	**37**	**1**	**68**	**0**	**0**	**0**	**1**	**6**	**61**	**385**	**4**	**0**	**0**	**315**	**49**	**927**	3,665
5:45 PM		**0**	**31**	**0**	**70**	**0**	**0**	**0**	**2**	**7**	**54**	**368**	**1**	**0**	**0**	**347**	**37**	**917**	**3,687**
Count Total		0	313	1	509	0	0	0	6	47	389	2,893	11	0	0	2,624	240	7,033	0
Peak Hour	**All**	**0**	**152**	**1**	**264**	**0**	**0**	**0**	**3**	**22**	**214**	**1,526**	**6**	**0**	**0**	**1,350**	**149**	**3,687**	**0**
	HV	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**11**	**0**	**25**	**0**
	HV%	**-**	**2%**	**0%**	**0%**	**-**	**-**	**-**	**0%**	**0%**	**0%**	**1%**	**0%**	**-**	**-**	**1%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	2	0	8	6	*16*	0	0	0	0	*0*	16	3	11	0	*30*
4:15 PM	0	0	2	4	*6*	1	0	1	1	*3*	8	9	5	0	*22*
4:30 PM	0	0	2	4	*6*	0	0	1	0	*1*	12	8	13	0	*33*
4:45 PM	1	0	2	4	*7*	0	0	0	0	*0*	5	0	1	0	*6*
5:00 PM	**1**	**0**	**2**	**3**	***6***	**2**	**0**	**0**	**0**	***2***	**8**	**6**	**1**	**0**	*15*
5:15 PM	**1**	**0**	**3**	**3**	***7***	**0**	**0**	**0**	**0**	***0***	**16**	**7**	**7**	**0**	*30*
5:30 PM	**1**	**0**	**4**	**4**	***9***	**0**	**0**	**1**	**0**	***1***	**15**	**3**	**5**	**0**	*23*
5:45 PM	**0**	**0**	**2**	**1**	***3***	**0**	**0**	**0**	**0**	***0***	**6**	**4**	**1**	**0**	***11***
Count Total	6	0	25	29	*60*	3	0	3	1	*7*	86	40	44	0	*170*
Peak Hour	**3**	**0**	**11**	**11**	***25***	**2**	**0**	**1**	**0**	***3***	**45**	**20**	**14**	**0**	***79***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Crystal Spring Rd				Driveway				El Camino Real				El Camino Real				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	1	0	1	0	0	0	0	0	0	8	0	0	0	5	1	16	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	4	0	6	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	1	6	0
4:45 PM	0	0	0	1	0	0	0	0	0	1	1	0	0	0	4	0	7	35
5:00 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**3**	**0**	**6**	25
5:15 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**3**	**0**	**7**	26
5:30 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**4**	**0**	**9**	29
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**3**	**25**
Count Total	0	4	0	2	0	0	0	0	0	1	24	0	0	0	27	2	60	0
Peak Hour	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**11**	**0**	**25**	**0**

Two-Hour Count Summaries - Bikes

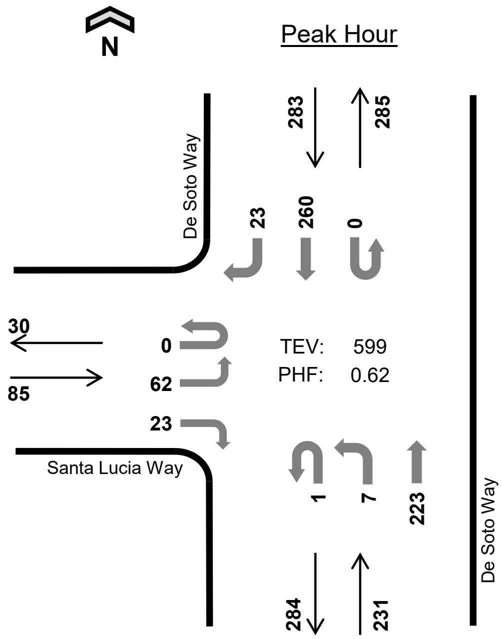
Interval Start	Crystal Spring Rd			Driveway			El Camino Real			El Camino Real			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	1	0	0	0	0	0	0	1	0	0	1	0	3	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
5:00 PM	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	6
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	3
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
Count Total	3	0	0	0	0	0	0	3	0	0	1	0	7	0
Peak Hour	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**3**	**0**

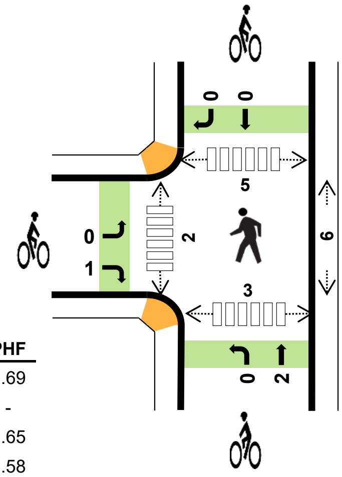
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

De Soto Way
Santa Lucia Way

Date: 01-23-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM

Peak Hour





	HV %:	PHF
EB	0.0%	0.69
WB	-	-
NB	1.3%	0.65
SB	0.0%	0.58
TOTAL	0.5%	0.62

Two-Hour Count Summaries

Interval Start		Santa Lucia Way Eastbound UT	LT	TH	RT	0 Westbound UT	LT	TH	RT	De Soto Way Northbound UT	LT	TH	RT	De Soto Way Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		0	16	0	1	0	0	0	0	0	1	27	0	0	0	12	5	62	0
7:15 AM		0	13	0	3	0	0	0	0	0	2	37	0	0	0	22	4	81	0
7:30 AM		**0**	**24**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**1**	**48**	**0**	**0**	**0**	**66**	**4**	**146**	0
7:45 AM		**0**	**20**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**1**	**88**	**0**	**0**	**0**	**113**	**8**	**241**	530
8:00 AM		**0**	**11**	**0**	**5**	**0**	**0**	**0**	**0**	**1**	**3**	**45**	**0**	**0**	**0**	**49**	**6**	**120**	588
8:15 AM		**0**	**7**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**2**	**42**	**0**	**0**	**0**	**32**	**5**	**92**	**599**
8:30 AM		0	11	0	0	0	0	0	0	0	3	43	0	0	0	23	2	82	535
8:45 AM		0	11	0	3	0	0	0	0	0	1	33	0	0	0	33	6	87	381
Count Total		0	113	0	30	0	0	0	0	1	14	363	0	0	0	350	40	911	0
Peak Hour	**All**	**0**	**62**	**0**	**23**	**0**	**0**	**0**	**0**	**1**	**7**	**223**	**0**	**0**	**0**	**260**	**23**	**599**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**3**	**0**
	HV%	**-**	**0%**	**-**	**0%**	**-**	**-**	**-**	**-**	**0%**	**14%**	**1%**	**-**	**-**	**-**	**0%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	0	0	0	0	*0*	0	0	0	0	*0*	2	0	1	0	*3*
7:15 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	1	0	0	*1*
7:30 AM	**0**	**0**	**0**	**0**	*0*	**0**	**0**	**0**	**0**	*0*	**2**	**0**	**0**	**0**	*2*
7:45 AM	**0**	**0**	**0**	**0**	*0*	**1**	**0**	**0**	**0**	*1*	**0**	**1**	**0**	**0**	*1*
8:00 AM	**0**	**0**	**1**	**0**	*1*	**0**	**0**	**0**	**0**	*0*	**4**	**0**	**5**	**2**	*11*
8:15 AM	**0**	**0**	**2**	**0**	*2*	**0**	**0**	**2**	**0**	*2*	**0**	**1**	**0**	**1**	*2*
8:30 AM	0	0	0	0	*0*	0	0	0	0	*0*	3	0	2	2	*7*
8:45 AM	0	0	0	0	*0*	0	0	0	0	*0*	2	1	1	1	*5*
Count Total	0	0	3	0	*3*	1	0	2	0	*3*	13	4	9	6	*32*
Peak Hr	**0**	**0**	**3**	**0**	*3*	**1**	**0**	**2**	**0**	*3*	**6**	**2**	**5**	**3**	***16***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Santa Lucia Way				0				De Soto Way				De Soto Way				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	1
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**3**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Count Total	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	3	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**3**	**0**

Two-Hour Count Summaries - Bikes

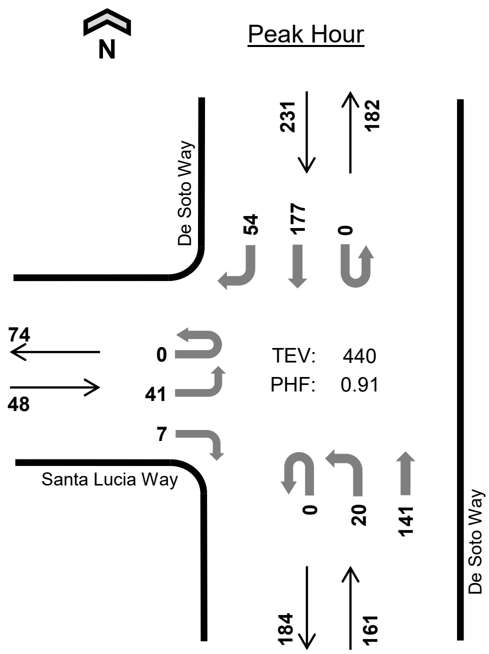
Interval Start	Santa Lucia Way			0			De Soto Way			De Soto Way			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	1
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**3**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	0	1	0	0	0	0	2	0	0	0	0	3	0
Peak Hour	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**3**	**0**

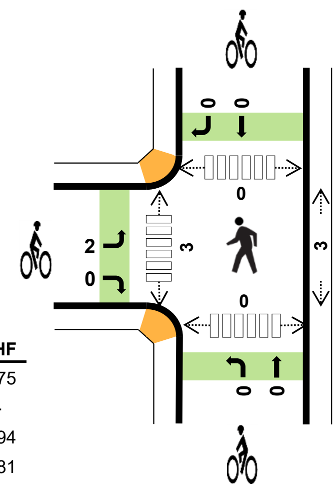
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

De Soto Way
Santa Lucia Way

Date: 01-23-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM

Peak Hour





	HV %:	PHF
EB	2.1%	0.75
WB	-	-
NB	1.2%	0.94
SB	0.0%	0.81
TOTAL	0.7%	0.91

Two-Hour Count Summaries

Interval Start		Santa Lucia Way				0				De Soto Way				De Soto Way				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	5	0	2	0	0	0	0	0	4	30	0	1	0	37	11	90	0
4:15 PM		0	5	0	4	0	0	0	0	1	1	32	0	0	0	37	14	94	0
4:30 PM		0	9	0	3	0	0	0	0	0	3	32	0	0	0	46	11	104	0
4:45 PM		**0**	**11**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**4**	**37**	**0**	**0**	**0**	**38**	**12**	**104**	392
5:00 PM		**0**	**13**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**3**	**31**	**0**	**0**	**0**	**55**	**16**	**121**	423
5:15 PM		**0**	**7**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**3**	**40**	**0**	**0**	**0**	**44**	**15**	**110**	439
5:30 PM		**0**	**10**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**10**	**33**	**0**	**0**	**0**	**40**	**11**	**105**	**440**
5:45 PM		0	10	0	0	0	0	0	0	0	6	28	0	0	0	44	16	104	440
Count Total		0	70	0	16	0	0	0	0	1	34	263	0	1	0	341	106	832	0
Peak Hour	**All**	**0**	**41**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**20**	**141**	**0**	**0**	**0**	**177**	**54**	**440**	**0**
	HV	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**3**	**0**
	HV%	**-**	**2%**	**-**	**0%**	**-**	**-**	**-**	**-**	**-**	**5%**	**1%**	**-**	**-**	**-**	**0%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	1	*1*
4:15 PM	1	0	0	1	*2*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	0	0	0	1	*1*	0	0	0	0	*0*	4	3	1	0	*8*
4:45 PM	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**0**	**0**	*2*
5:00 PM	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**0**	***2***	**1**	**2**	**0**	**0**	*3*
5:15 PM	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	*1*
5:30 PM	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
5:45 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	1	0	0	*1*
Count Total	2	0	2	3	*7*	2	0	0	0	*2*	7	7	1	1	*16*
Peak Hr	**1**	**0**	**2**	**0**	***3***	**2**	**0**	**0**	**0**	***2***	**3**	**3**	**0**	**0**	***6***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Santa Lucia Way				0				De Soto Way				De Soto Way				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	4
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	4
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	3
5:30 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
Count Total	0	1	0	1	0	0	0	0	0	1	1	0	0	0	2	1	7	0
Peak Hour	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**3**	**0**

Two-Hour Count Summaries - Bikes

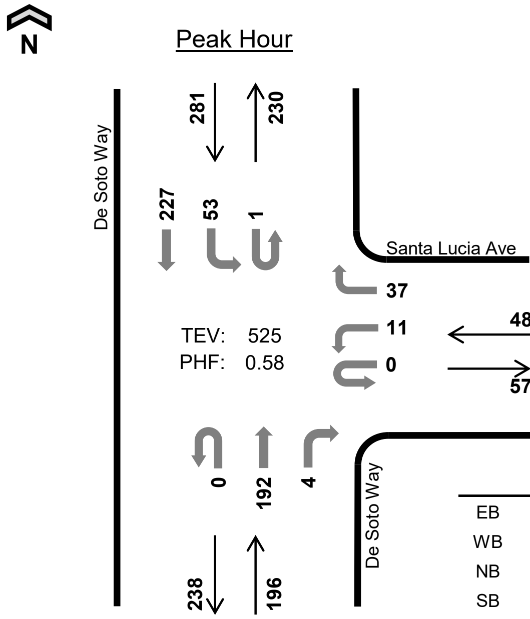
Interval Start	Santa Lucia Way			0			De Soto Way			De Soto Way			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:00 PM	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	2
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	2	0	0	0	0	0	0	0	0	0	0	0	2	0
Peak Hour	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

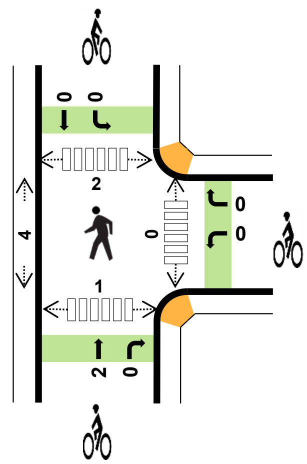
De Soto Way
Santa Lucia Ave

idax

Date: 01-23-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	-	-
WB	4.2%	0.71
NB	1.0%	0.63
SB	0.0%	0.54
TOTAL	0.8%	0.58



Two-Hour Count Summaries

Interval Start	0				Santa Lucia Ave				De Soto Way				De Soto Way				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	1	0	10	0	0	17	0	0	2	11	0	41	0
7:15 AM	0	0	0	0	0	2	0	16	0	0	25	2	0	6	18	0	69	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**9**	**0**	**0**	**39**	**0**	**0**	**8**	**55**	**0**	**114**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**12**	**0**	**0**	**75**	**3**	**0**	**19**	**111**	**0**	**225**	449
8:00 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**9**	**0**	**0**	**40**	**0**	**1**	**13**	**41**	**0**	**105**	513
8:15 AM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**7**	**0**	**0**	**38**	**1**	**0**	**13**	**20**	**0**	**81**	**525**
8:30 AM	0	0	0	0	0	0	0	5	0	0	40	1	0	6	21	0	73	484
8:45 AM	0	0	0	0	0	1	0	9	0	0	25	1	0	16	22	0	74	333
Count Total	0	0	0	0	0	15	0	77	0	0	299	8	1	83	299	0	782	0
Peak Hour All	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**37**	**0**	**0**	**192**	**4**	**1**	**53**	**227**	**0**	**525**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**4**	**0**
Peak Hour HV%	**-**	**-**	**-**	**-**	**-**	**0%**	**-**	**5%**	**-**	**-**	**1%**	**0%**	**0%**	**0%**	**0%**	**-**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	1	0	0	*1*
7:30 AM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	*2*
7:45 AM	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	*1*
8:00 AM	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**1**	**1**	*4*
8:15 AM	**0**	**2**	**0**	**0**	***2***	**0**	**0**	**2**	**0**	***2***	**0**	**0**	**0**	**0**	***0***
8:30 AM	0	1	0	0	*1*	0	0	0	0	*0*	1	2	1	0	*4*
8:45 AM	0	0	0	0	*0*	0	0	0	0	*0*	1	1	0	0	*2*
Count Total	0	4	2	0	*6*	0	0	2	0	*2*	2	8	3	1	*14*
Peak Hr	**0**	**2**	**2**	**0**	***4***	**0**	**0**	**2**	**0**	***2***	**0**	**4**	**2**	**1**	***7***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	0				Santa Lucia Ave				De Soto Way				De Soto Way				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	2
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	2
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**4**
8:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	5
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Count Total	0	0	0	0	0	0	0	4	0	0	2	0	0	0	0	0	6	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**4**	**0**

Two-Hour Count Summaries - Bikes

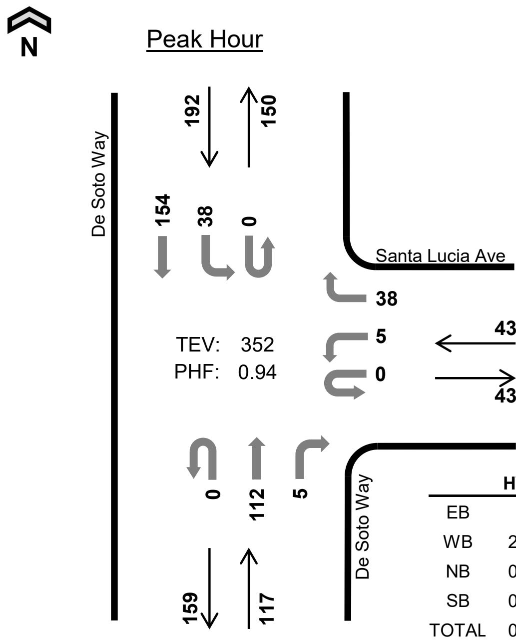
Interval Start	0			Santa Lucia Ave			De Soto Way			De Soto Way			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**2**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	0	0	0	0	0	0	2	0	0	0	0	2	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

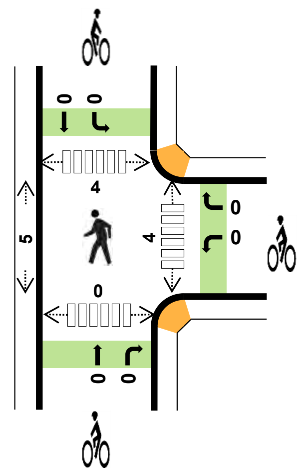
De Soto Way
Santa Lucia Ave

Date: 01-23-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM

Peak Hour



	HV %:	PHF
EB	-	-
WB	2.3%	0.72
NB	0.0%	0.86
SB	0.5%	0.89
TOTAL	0.6%	0.94



Two-Hour Count Summaries

Interval Start	0				Santa Lucia Ave				De Soto Way				De Soto Way				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	1	0	15	1	0	22	2	0	13	26	0	80	0
4:15 PM	0	0	0	0	0	0	0	9	0	0	26	4	0	13	30	0	82	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**8**	**0**	**0**	**26**	**1**	**0**	**15**	**32**	**0**	**84**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**14**	**0**	**0**	**26**	**1**	**0**	**6**	**35**	**0**	**83**	329
5:00 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**7**	**0**	**0**	**29**	**0**	**0**	**11**	**43**	**0**	**91**	340
5:15 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**9**	**0**	**0**	**31**	**3**	**0**	**6**	**44**	**0**	**94**	**352**
5:30 PM	0	0	0	0	1	1	0	18	0	0	26	0	0	8	29	0	83	351
5:45 PM	0	0	0	0	0	1	0	10	0	0	25	0	0	9	33	0	78	346
Count Total	0	0	0	0	1	8	0	90	1	0	211	11	0	81	272	0	675	0
Peak Hour All	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**38**	**0**	**0**	**112**	**5**	**0**	**38**	**154**	**0**	**352**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**
Peak Hour HV%	**-**	**-**	**-**	**-**	**-**	**0%**	**-**	**3%**	**-**	**-**	**0%**	**0%**	**-**	**3%**	**0%**	**-**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	1	0	0	*1*
4:15 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	0	2	0	*2*
4:30 PM	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	***0***	**1**	**2**	**2**	**0**	*5*
4:45 PM	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
5:00 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**2**	**2**	**0**	**0**	*4*
5:15 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**2**	**0**	***3***
5:30 PM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	2	0	*2*
5:45 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	0	2	0	2	*4*	0	0	0	0	*0*	4	6	8	0	*18*
Peak Hr	**0**	**1**	**0**	**1**	***2***	**0**	**0**	**0**	**0**	***0***	**4**	**5**	**4**	**0**	***13***

Project Manager: (415) 310-6469 project.manager.ca@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	0				Santa Lucia Ave				De Soto Way				De Soto Way				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	3
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	4	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	0			Santa Lucia Ave			De Soto Way			De Soto Way			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Appendix B
Volume Summary Sheets

Intersection Number: 1
Traffix Node Number: 1
Intersection Name: Cunningham Way and Crystal Springs Road
Peak Hour: AM
Count Date: 1/23/2019

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**28**	**20**	**350**	**386**	**62**	**11**	**1**	**3**	**1**	**2**	**110**	**125**	**1099**
Existing Conditions Increased 5%	**29**	**21**	**368**	**405**	**65**	**12**	**1**	**3**	**1**	**2**	**116**	**131**	**1154**
Pending Project Trips													
406 San Mateo Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
160 El Camino Real	0	0	0	1	0	0	0	0	0	0	0	0	1
271 El Camino Real	0	0	3	2	0	0	0	0	0	0	0	0	5
The Stratford School	0	0	14	14	0	0	0	0	0	0	0	0	28
Total Pending Trips	0	0	17	17	0	0	0	0	0	0	0	0	34
Cumulative Conditions	**29**	**21**	**385**	**422**	**65**	**12**	**1**	**3**	**1**	**2**	**116**	**131**	**1188**
Project Trips	0	0	4	4	0	0	0	0	0	0	0	0	8
Existing Plus Project Conditions	**29**	**21**	**372**	**409**	**65**	**12**	**1**	**3**	**1**	**2**	**116**	**131**	**1162**
Cumulative Plus Project Conditions	**29**	**21**	**389**	**426**	**65**	**12**	**1**	**3**	**1**	**2**	**116**	**131**	**1196**

Intersection Number: 2
Traffix Node Number: 2
Intersection Name: Donner Avenue and Crystal Springs Avenue
Peak Hour: AM
Count Date: 1/23/2019

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**33**	**0**	**87**	**74**	**429**	**0**	**0**	**0**	**0**	**0**	**447**	**11**	**1081**
Existing Conditions Increased 5%	**35**	**0**	**91**	**78**	**450**	**0**	**0**	**0**	**0**	**0**	**469**	**12**	**1135**
Pending Project Trips													
406 San Mateo Avenue	0	0	0	0	0	0	0	0	0	0	0	0	
160 El Camino Real	0	0	0	0	1	0	0	0	0	0	0	0	
271 El Camino Real	0	0	0	0	2	0	0	0	0	0	3	0	
The Stratford School	0	0	0	0	14	0	0	0	0	0	14	0	
Total Pending Trips	0	0	0	0	1	0	0	0	0	0	0	0	0
Cumulative Conditions	**35**	**0**	**91**	**78**	**451**	**0**	**0**	**0**	**0**	**0**	**469**	**12**	**1136**
Project Trips	0	0	1	1	4	0	0	0	0	0	4	0	10
Existing Plus Project Conditions	**35**	**0**	**92**	**79**	**454**	**0**	**0**	**0**	**0**	**0**	**473**	**12**	**1145**
Cumulative Plus Project Conditions	**35**	**0**	**92**	**79**	**455**	**0**	**0**	**0**	**0**	**0**	**473**	**12**	**1146**

Intersection Number: 3
Traffix Node Number: 3
Intersection Name: Oak Avenue and Crystal Springs Avenue
Peak Hour: AM
Count Date: 1/23/2019

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**52**	**57**	**115**	**56**	**254**	**21**	**63**	**40**	**199**	**229**	**274**	**14**	**1374**
Existing Conditions Increased 5%	**55**	**60**	**121**	**59**	**267**	**22**	**66**	**42**	**209**	**240**	**288**	**15**	**1443**
Pending Project Trips													
406 San Mateo Avenue	0	0	0	0	0	0	0	0	0	0	0	0	
160 El Camino Real	0	0	0	0	1	0	0	0	0	0	0	0	
271 El Camino Real	0	0	0	0	2	0	0	0	0	0	3	0	
The Stratford School	0	0	0	0	14	0	0	0	0	14	0	0	
Total Pending Trips	0	0	0	0	1	0	0	0	0	0	0	0	0
Cumulative Conditions	**55**	**60**	**121**	**59**	**268**	**22**	**66**	**42**	**209**	**240**	**288**	**15**	**1444**
Project Trips	0	4	0	0	0	4	4	4	6	5	0	0	27
Existing Plus Project Conditions	**55**	**64**	**121**	**59**	**267**	**26**	**70**	**46**	**215**	**245**	**288**	**15**	**1470**
Cumulative Plus Project Conditions	**55**	**64**	**121**	**59**	**268**	**26**	**70**	**46**	**215**	**245**	**288**	**15**	**1471**

Intersection Number: 4
Traffix Node Number: 4
Intersection Name: Cypress Avenue and Crystal Springs Avenue
Peak Hour: AM
Count Date: 1/23/2019

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**12**	**13**	**16**	**6**	**242**	**4**	**16**	**15**	**64**	**10**	**449**	**9**	**856**
Existing Conditions Increased 5%	**13**	**14**	**17**	**6**	**254**	**4**	**17**	**16**	**67**	**11**	**471**	**9**	**899**
Pending Project Trips													
406 San Mateo Avenue	0	0	0	0	0	0	0	0	0	0	0	0	
160 El Camino Real	0	0	0	0	1	0	0	0	0	0	0	0	
271 El Camino Real	0	0	0	0	2	0	0	0	0	0	3	0	
The Stratford School	0	1	0	0	0	0	0	1	14	0	0	0	
Total Pending Trips	0	0	0	0	1	0	0	0	0	0	0	0	0
Cumulative Conditions	**13**	**14**	**17**	**6**	**255**	**4**	**17**	**16**	**67**	**11**	**471**	**9**	**900**
Project Trips	0	0	0	0	4	0	0	0	0	0	4	0	8
Existing Plus Project Conditions	**13**	**14**	**17**	**6**	**258**	**4**	**17**	**16**	**67**	**11**	**475**	**9**	**907**
Cumulative Plus Project Conditions	**13**	**14**	**17**	**6**	**259**	**4**	**17**	**16**	**67**	**11**	**475**	**9**	**908**

Intersection Number: 5
Traffix Node Number: 5
Intersection Name: El Camino Real and Crystal Springs Avenue
Peak Hour: AM
Count Date: 1/23/2019

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**52**	**1147**	**0**	**0**	**0**	**0**	**0**	**1204**	**152**	**359**	**0**	**143**	**3057**
Existing Conditions Increased 5%	**55**	**1204**	**0**	**0**	**0**	**0**	**0**	**1264**	**160**	**377**	**0**	**150**	**3210**
Pending Project Trips													
406 San Mateo Avenue	1	8	0	0	0	0	0	2	0	0	0	0	
160 El Camino Real	0	5	0	0	0	0	0	4	1	2	0	0	
271 El Camino Real	0	2	0	0	0	0	0	2	2	3	0	0	
The Stratford School	0	18	0	0	0	0	0	18	0	0	0	0	
Total Pending Trips	1	13	0	0	0	0	0	6	1	2	0	0	0
Cumulative Conditions	**56**	**1217**	**0**	**0**	**0**	**0**	**0**	**1270**	**161**	**379**	**0**	**150**	**3233**
Project Trips	2	0	0	0	0	0	0	0	2	2	0	2	8
Existing Plus Project Conditions	**57**	**1204**	**0**	**0**	**0**	**0**	**0**	**1264**	**162**	**379**	**0**	**152**	**3218**
Cumulative Plus Project Conditions	**58**	**1217**	**0**	**0**	**0**	**0**	**0**	**1270**	**163**	**381**	**0**	**152**	**3241**

Intersection Number: 6
Traffix Node Number: 6
Intersection Name: Santa Lucia Avenue (N) and De Soto Way
Peak Hour: AM
Count Date: 1/23/2019

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**23**	**260**	**0**	**0**	**0**	**0**	**0**	**223**	**8**	**23**	**0**	**62**	**599**
Existing Conditions Increased 5%	**24**	**273**	**0**	**0**	**0**	**0**	**0**	**234**	**8**	**24**	**0**	**65**	**629**
Pending Project Trips													
406 San Mateo Avenue	0	0	0	0	0	0	0	0	0	0	0	0	
160 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	
271 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	
The Stratford School	0	14	0	0	0	0	0	0	0	0	0	0	
Total Pending Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative Conditions	**24**	**273**	**0**	**0**	**0**	**0**	**0**	**234**	**8**	**24**	**0**	**65**	**629**
Project Trips	0	8	0	0	0	0	0	7	0	0	0	0	15
Existing Plus Project Conditions	**24**	**281**	**0**	**0**	**0**	**0**	**0**	**241**	**8**	**24**	**0**	**65**	**644**
Cumulative Plus Project Conditions	**24**	**281**	**0**	**0**	**0**	**0**	**0**	**241**	**8**	**24**	**0**	**65**	**644**

Intersection Number: 7
Traffix Node Number: 7
Intersection Name: Santa Lucia Avenue (S) and De Soto Way
Peak Hour: AM
Count Date: 1/23/2019

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**0**	**227**	**54**	**37**	**0**	**11**	**4**	**192**	**0**	**0**	**0**	**0**	**525**
Existing Conditions Increased 5%	**0**	**238**	**57**	**39**	**0**	**12**	**4**	**202**	**0**	**0**	**0**	**0**	**551**
Pending Project Trips													
406 San Mateo Avenue	0	0	0	0	0	0	0	0	0	0	0	0	
160 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	
271 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	
The Stratford School	0	0	14	0	0	0	0	0	0	0	0	0	
Total Pending Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative Conditions	**0**	**238**	**57**	**39**	**0**	**12**	**4**	**202**	**0**	**0**	**0**	**0**	**551**
Project Trips	0	8	0	0	0	0	0	7	0	0	0	0	15
Existing Plus Project Conditions	**0**	**246**	**57**	**39**	**0**	**12**	**4**	**209**	**0**	**0**	**0**	**0**	**566**
Cumulative Plus Project Conditions	**0**	**246**	**57**	**39**	**0**	**12**	**4**	**209**	**0**	**0**	**0**	**0**	**566**

Intersection Number: 1
Traffix Node Number: 1
Intersection NPMe: Cunningham Way and Crystal Springs Road
Peak Hour: PM
Count Date: 1/23/2019

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**82**	**16**	**428**	**276**	**77**	**27**	**1**	**1**	**0**	**1**	**58**	**48**	**1015**
Existing Conditions Increased 5%	**86**	**17**	**449**	**290**	**81**	**28**	**1**	**1**	**0**	**1**	**61**	**50**	**1066**
Pending Project Trips													
406 San Mateo Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
160 El Camino Real	0	0	0	3	0	0	0	0	0	0	0	0	3
271 El Camino Real	0	0	3	2	0	0	0	0	0	0	0	0	5
The Stratford School	0	0	14	14	0	0	0	0	0	0	0	0	28
Total Pending Trips	0	0	17	19	0	0	0	0	0	0	0	0	36
Cumulative Conditions	**86**	**17**	**466**	**309**	**81**	**28**	**1**	**1**	**0**	**1**	**61**	**50**	**1102**
Project Trips	0	0	4	4	0	0	0	0	0	0	0	0	8
Existing Plus Project Conditions	**86**	**17**	**453**	**294**	**81**	**28**	**1**	**1**	**0**	**1**	**61**	**50**	**1074**
Cumulative Plus Project Conditions	**86**	**17**	**470**	**313**	**81**	**28**	**1**	**1**	**0**	**1**	**61**	**50**	**1110**

Intersection Number: 2
Traffix Node Number: 2
Intersection NPMe: Donner Avenue and Crystal Springs Avenue
Peak Hour: PM
Count Date: 1/23/2019

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**8**	**0**	**16**	**33**	**370**	**0**	**0**	**0**	**0**	**0**	**474**	**8**	**909**
Existing Conditions Increased 5%	**8**	**0**	**17**	**35**	**389**	**0**	**0**	**0**	**0**	**0**	**498**	**8**	**954**
Pending Project Trips													
406 San Mateo Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
160 El Camino Real	0	0	0	0	3	0	0	0	0	0	0	0	3
271 El Camino Real	0	0	0	0	2	0	0	0	0	0	3	0	5
The Stratford School	0	0	0	0	14	0	0	0	0	0	14	0	28
Total Pending Trips	0	0	0	0	19	0	0	0	0	0	17	0	36
Cumulative Conditions	**8**	**0**	**17**	**35**	**408**	**0**	**0**	**0**	**0**	**0**	**515**	**8**	**990**
Project Trips	0	0	1	1	4	0	0	0	0	0	4	0	10
Existing Plus Project Conditions	**8**	**0**	**18**	**36**	**393**	**0**	**0**	**0**	**0**	**0**	**502**	**8**	**964**
Cumulative Plus Project Conditions	**8**	**0**	**18**	**36**	**412**	**0**	**0**	**0**	**0**	**0**	**519**	**8**	**1000**

Intersection Number: 3
Traffix Node Number: 3
Intersection NPMe: Oak Avenue and Crystal Springs Avenue
Peak Hour: PM
Count Date: 1/23/2019

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**21**	**42**	**35**	**43**	**271**	**70**	**56**	**46**	**111**	**160**	**309**	**19**	**1183**
Existing Conditions Increased 5%	**22**	**44**	**37**	**45**	**285**	**74**	**59**	**48**	**117**	**168**	**324**	**20**	**1242**
Pending Project Trips													
406 San Mateo Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
160 El Camino Real	0	0	0	0	3	0	0	0	0	0	0	0	3
271 El Camino Real	0	0	0	0	2	0	0	0	0	0	3	0	5
The Stratford School	0	0	0	0	14	0	0	0	0	14	0	0	28
Total Pending Trips	0	0	0	0	19	0	0	0	0	14	3	0	36
Cumulative Conditions	**22**	**44**	**37**	**45**	**304**	**74**	**59**	**48**	**117**	**182**	**327**	**20**	**1278**
Project Trips	0	4	0	0	0	4	4	4	6	5	0	0	27
Existing Plus Project Conditions	**22**	**48**	**37**	**45**	**285**	**78**	**63**	**52**	**123**	**173**	**324**	**20**	**1269**
Cumulative Plus Project Conditions	**22**	**48**	**37**	**45**	**304**	**78**	**63**	**52**	**123**	**187**	**327**	**20**	**1305**

Intersection Number: 4
Traffix Node Number: 4
Intersection NPMe: Cypress Avenue and Crystal Springs Avenue
Peak Hour: PM
Count Date: 1/23/2019

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**4**	**5**	**8**	**11**	**352**	**5**	**2**	**7**	**31**	**24**	**365**	**12**	**826**
Existing Conditions Increased 5%	**4**	**5**	**8**	**12**	**370**	**5**	**2**	**7**	**33**	**25**	**383**	**13**	**867**
Pending Project Trips													
406 San Mateo Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
160 El Camino Real	0	0	0	0	3	0	0	0	0	0	0	0	3
271 El Camino Real	0	0	0	0	2	0	0	0	0	0	3	0	5
The Stratford School	0	1	0	0	0	0	0	1	14	0	0	0	16
Total Pending Trips	0	1	0	0	5	0	0	1	14	0	3	0	24
Cumulative Conditions	**4**	**6**	**8**	**12**	**375**	**5**	**2**	**8**	**47**	**25**	**386**	**13**	**891**
Project Trips	0	0	0	0	4	0	0	0	0	0	4	0	8
Existing Plus Project Conditions	**4**	**5**	**8**	**12**	**374**	**5**	**2**	**7**	**33**	**25**	**387**	**13**	**875**
Cumulative Plus Project Conditions	**4**	**6**	**8**	**12**	**379**	**5**	**2**	**8**	**47**	**25**	**390**	**13**	**899**

Intersection Number: 5
Traffix Node Number: 5
Intersection NPMe: El Camino Real and Crystal Springs Avenue
Peak Hour: PM
Count Date: 1/23/2019

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**149**	**1350**	**0**	**0**	**0**	**0**	**0**	**1526**	**236**	**264**	**0**	**153**	**3678**
Existing Conditions Increased 5%	**156**	**1418**	**0**	**0**	**0**	**0**	**0**	**1602**	**248**	**277**	**0**	**161**	**3862**
Pending Project Trips													
406 San Mateo Avenue	1	6	0	0	0	0	0	9	0	0	0	2	18
160 El Camino Real	0	5	0	0	0	0	0	7	3	2	0	0	17
271 El Camino Real	0	2	0	0	0	0	0	2	2	3	0	0	9
The Stratford School	0	18	0	0	0	0	0	18	0	0	0	0	36
Total Pending Trips	1	31	0	0	0	0	0	36	5	5	0	2	80
Cumulative Conditions	**157**	**1449**	**0**	**0**	**0**	**0**	**0**	**1638**	**253**	**282**	**0**	**163**	**3942**
Project Trips	2	0	0	0	0	0	0	0	2	2	0	2	8
Existing Plus Project Conditions	**158**	**1418**	**0**	**0**	**0**	**0**	**0**	**1602**	**250**	**279**	**0**	**163**	**3870**
Cumulative Plus Project Conditions	**159**	**1449**	**0**	**0**	**0**	**0**	**0**	**1638**	**255**	**284**	**0**	**165**	**3950**

Intersection Number: 6
Traffix Node Number: 6
Intersection NPMe: Santa Lucia Avenue (N) and De Soto Way
Peak Hour: PM
Count Date: 1/23/2019

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**54**	**177**	**0**	**0**	**0**	**0**	**0**	**141**	**20**	**7**	**0**	**41**	**440**
Existing Conditions Increased 5%	**57**	**186**	**0**	**0**	**0**	**0**	**0**	**148**	**21**	**7**	**0**	**43**	**462**
Pending Project Trips													
406 San Mateo Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
160 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	0
271 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	0
The Stratford School	0	14	0	0	0	0	0	0	0	0	0	0	14
Total Pending Trips	0	14	0	0	0	0	0	0	0	0	0	0	14
Cumulative Conditions	**57**	**200**	**0**	**0**	**0**	**0**	**0**	**148**	**21**	**7**	**0**	**43**	**476**
Project Trips	0	8	0	0	0	0	0	7	0	0	0	0	15
Existing Plus Project Conditions	**57**	**194**	**0**	**0**	**0**	**0**	**0**	**155**	**21**	**7**	**0**	**43**	**477**
Cumulative Plus Project Conditions	**57**	**208**	**0**	**0**	**0**	**0**	**0**	**155**	**21**	**7**	**0**	**43**	**491**

Intersection Number: 7
Traffix Node Number: 7
Intersection NPMe: Santa Lucia Avenue (S) and De Soto Way
Peak Hour: PM
Count Date: 1/23/2019

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	**0**	**154**	**38**	**38**	**0**	**5**	**5**	**112**	**0**	**0**	**0**	**0**	**352**
Existing Conditions Increased 5%	**0**	**162**	**40**	**40**	**0**	**5**	**5**	**118**	**0**	**0**	**0**	**0**	**370**
Pending Project Trips													
406 San Mateo Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
160 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	0
271 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	0
The Stratford School	0	0	14	0	0	0	0	0	0	0	0	0	14
Total Pending Trips	0	0	14	0	0	0	0	0	0	0	0	0	14
Cumulative Conditions	**0**	**162**	**54**	**40**	**0**	**5**	**5**	**118**	**0**	**0**	**0**	**0**	**384**
Project Trips	0	8	0	0	0	0	0	7	0	0	0	0	15
Existing Plus Project Conditions	**0**	**170**	**40**	**40**	**0**	**5**	**5**	**125**	**0**	**0**	**0**	**0**	**385**
Cumulative Plus Project Conditions	**0**	**170**	**54**	**40**	**0**	**5**	**5**	**125**	**0**	**0**	**0**	**0**	**399**

Appendix C
List of Approved Projects

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	Location	Land Use	Project Description	Status
	406-418 San Mateo Ave (TCP Area)	Mixed Use Residential Multi-Family / Commercial	Three-story mixed-use development with 83 residential rental units and five individual tenant spaces with either specialty restaurant and/or retail uses in approximately 6,975 square feet. The project includes sub-grade parking garage containing 106 parking spaces for the residential uses. All rental units	Under construction – completion of residential portion expected approx. May 2019.
	1250 Grundy Ln (Bayhill Specific Plan Area)	Office	Three-story office building for the San Francisco Police Credit Union with 67,586 square foot of office space and a credit union facility located within the Bayhill Office Park. The project includes two levels of underground parking with 214 spaces.	Under construction – TCO issued for floors 2 and 3 in February 2019.
	College Drive East entrance to Skyline College	Residential Single Family Multi-Family	70-unit residential development, consisting of 40 for-sale detached single-family homes and 30 multi-family rental units for college faculty and staff. Includes 11 total affordable rental units: 6 units designated for low income households and 5 for moderate income households. Located on an 8-acre site on the east side of the Skyline College campus.	Under construction-grading permit issued.
	111 San Bruno Ave (TCP Area)	Mixed Use – Residential Multi-Family / Retail	Five-story mixed-use building, 62 multi-family dwelling units and 7,600 sq. ft. of ground floor retail. Includes 11 total affordable units: 6 units designated for low income households and 5 for moderate income households.	Approved by the City Council in October 2018. Builidng permits submitted and under review.
	500 Sylvan Ave (TCP Area)	Residential – Multi-Family	Proposed three-story building with 9-unit multi-family rental units with an at-grade parking garage. The project will include a mix of one studio, two one-bedroom and six two-bedroom units.	Planning Commission recommendation for approval to City Council on March 19, 2019; to be reviewed by City Council TBD.

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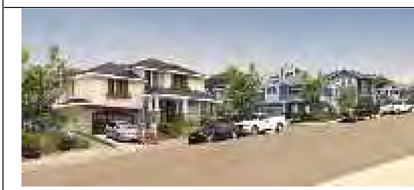
	Location	Land Use	Project Description	Status
	Mills Park Plaza (TCP Area) 601 – 611 and 643 – 799 El Camino Real 701- 751 Camino Plaza 711 – 777 Kains Ave	Mixed Use Residential – Multi-Family / Retail	Proposed 5-story mixed-use development with 425 multi-family rental units, 45,000 sq. ft. retail, an approximately 41,600 square foot grocery store 12,600 sq. ft. of retail space. 15% of the units on site will be designated as affordable units. The existing Mills Plaza commercial buildings would be removed. The Planning process is anticipated to be completed by the end of Summer 2019.	Planning application under review – Reviewed by the Architectural Review Committee on March 14, 2019.
	271 El Camino Real	Residential Multi-Family	Proposed 3-story multi-family development with 24 multi-family rental and for-sale dwelling units.	Planning application under review
	Glenview Terrace	Residential – Single-Family	Proposed development with 29 for-sale detached single-family homes.	Planning application under review
	160 El Camino Real	Hotel	Proposed 3-story hotel with 34 rooms and underground parking on a vacant parcel.	Planning application under review

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	Location	Land Use	Project Description	Status
	Bayhill Specific Plan	Specific Plan	The Bayhill Specific Plan will outline a cohesive, long-term, community driven vision for this key district, that is home to the largest cluster of offices in San Bruno, including headquarters of YouTube, as well as several other uses. Preparation of the Specific Plan will ensure that YouTube's campus expansion needs are integrated into an attractive setting that benefits Bayhill's other property owners, as well as the broader San Bruno community. More information at: https://www.sanbruno.ca.gov/gov/city_departments/commdev/planning_division/long_range_planning/bayhill_specific_plan.htm	Draft EIR and Draft Specific Plan preparation underway.

Appendix D
Level of Service Calculations

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	116	2	12	65	405	1	3	1	368	21	29
Future Volume (veh/h)	131	116	2	12	65	405	1	3	1	368	21	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	142	126	2	13	71	440	1	3	1	400	23	32
Adj No. of Lanes	1	1	0	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	429	840	13	99	128	794	2	7	8	433	25	408
Arrive On Green	0.46	0.46	0.46	0.06	0.57	0.57	0.01	0.01	0.01	0.26	0.26	0.26
Sat Flow, veh/h	885	1829	29	1774	225	1392	460	1380	1583	1682	97	1583
Grp Volume(v), veh/h	142	0	128	13	0	511	4	0	1	423	0	32
Grp Sat Flow(s),veh/h/ln	885	0	1858	1774	0	1617	1840	0	1583	1779	0	1583
Q Serve(g_s), s	8.6	0.0	2.9	0.5	0.0	14.3	0.2	0.0	0.0	16.7	0.0	1.1
Cycle Q Clear(g_c), s	14.9	0.0	2.9	0.5	0.0	14.3	0.2	0.0	0.0	16.7	0.0	1.1
Prop In Lane	1.00		0.02	1.00		0.86	0.25		1.00	0.95		1.00
Lane Grp Cap(c), veh/h	429	0	853	99	0	922	10	0	8	458	0	408
V/C Ratio(X)	0.33	0.00	0.15	0.13	0.00	0.55	0.41	0.00	0.12	0.92	0.00	0.08
Avail Cap(c_a), veh/h	429	0	853	457	0	922	474	0	408	458	0	408
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.9	0.0	11.3	32.3	0.0	9.7	35.6	0.0	35.6	26.0	0.0	20.2
Incr Delay (d2), s/veh	0.4	0.0	0.1	0.6	0.0	2.4	25.5	0.0	6.2	24.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	1.5	0.3	0.0	6.9	0.1	0.0	0.0	11.2	0.0	0.5
LnGrp Delay(d),s/veh	17.3	0.0	11.4	32.9	0.0	12.1	61.1	0.0	41.8	50.5	0.0	20.3
LnGrp LOS	B		B	C		B	E		D	D		C
Approach Vol, veh/h		270			524			5			455	
Approach Delay, s/veh		14.5			12.6			57.2			48.4	
Approach LOS		B			B			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		4.4	8.0	37.0		22.5		45.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.5	18.5	18.5		18.5		41.0
Max Q Clear Time (g_c+I1), s		2.2	2.5	16.9		18.7		16.3
Green Ext Time (p_c), s		0.0	0.0	0.2		0.0		1.9

Intersection Summary		
HCM 2010 Ctrl Delay		26.2
HCM 2010 LOS		C

Intersection	
Intersection Delay, s/veh	20.7
Intersection LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	469	450	78	91	35
Future Vol, veh/h	12	469	450	78	91	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	510	489	85	99	38
Number of Lanes	0	1	1	1	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	22.8	21	11.6
HCM LOS	C	C	B

Lane	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	2%	0%	0%	72%
Vol Thru, %	98%	100%	0%	0%
Vol Right, %	0%	0%	100%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	481	450	78	126
LT Vol	12	0	0	91
Through Vol	469	450	0	0
RT Vol	0	0	78	35
Lane Flow Rate	523	489	85	137
Geometry Grp	5	7	7	2
Degree of Util (X)	0.759	0.753	0.114	0.246
Departure Headway (Hd)	5.228	5.541	4.832	6.465
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	695	655	743	555
Service Time	3.255	3.267	2.558	4.507
HCM Lane V/C Ratio	0.753	0.747	0.114	0.247
HCM Control Delay	22.8	23.2	8.2	11.6
HCM Lane LOS	C	C	A	B
HCM 95th-tile Q	7	6.8	0.4	1

Intersection	
Intersection Delay, s/veh	73
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	288	240	22	267	59	209	42	66	121	60	55
Future Vol, veh/h	15	288	240	22	267	59	209	42	66	121	60	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	313	261	24	290	64	227	46	72	132	65	60
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	142.4	39.1	26.6	25.5
HCM LOS	F	E	D	D

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	83%	0%	3%	6%	51%
Vol Thru, %	17%	0%	53%	77%	25%
Vol Right, %	0%	100%	44%	17%	23%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	251	66	543	348	236
LT Vol	209	0	15	22	121
Through Vol	42	0	288	267	60
RT Vol	0	66	240	59	55
Lane Flow Rate	273	72	590	378	257
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.676	0.155	1.224	0.815	0.604
Departure Headway (Hd)	9.625	8.461	7.466	8.399	9.285
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	379	427	490	435	392
Service Time	7.325	6.161	5.466	6.399	7.285
HCM Lane V/C Ratio	0.72	0.169	1.204	0.869	0.656
HCM Control Delay	30.2	12.7	142.4	39.1	25.5
HCM Lane LOS	D	B	F	E	D
HCM 95th-tile Q	4.8	0.5	23.1	7.5	3.8

Intersection	
Intersection Delay, s/veh	15.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	471	11	4	254	6	67	16	17	17	14	13
Future Vol, veh/h	9	471	11	4	254	6	67	16	17	17	14	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	512	12	4	276	7	73	17	18	18	15	14
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	19	11.6	10.5	9.7
HCM LOS	C	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	67%	2%	2%	39%
Vol Thru, %	16%	96%	96%	32%
Vol Right, %	17%	2%	2%	30%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	491	264	44
LT Vol	67	9	4	17
Through Vol	16	471	254	14
RT Vol	17	11	6	13
Lane Flow Rate	109	534	287	48
Geometry Grp	1	1	1	1
Degree of Util (X)	0.183	0.715	0.406	0.081
Departure Headway (Hd)	6.052	4.822	5.091	6.075
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	592	753	709	589
Service Time	4.094	2.822	3.119	4.122
HCM Lane V/C Ratio	0.184	0.709	0.405	0.081
HCM Control Delay	10.5	19	11.6	9.7
HCM Lane LOS	B	C	B	A
HCM 95th-tile Q	0.7	6.1	2	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	150	377	160	1264	1204	55
Future Volume (veh/h)	150	377	160	1264	1204	55
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	163	410	174	1374	1309	60
Adj No. of Lanes	1	1	1	3	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	493	440	211	3161	2253	103
Arrive On Green	0.28	0.28	0.12	0.62	0.45	0.45
Sat Flow, veh/h	1774	1583	1774	5253	5152	228
Grp Volume(v), veh/h	163	410	174	1374	890	479
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1695	1695	1822
Q Serve(g_s), s	6.5	22.5	8.6	12.5	17.4	17.4
Cycle Q Clear(g_c), s	6.5	22.5	8.6	12.5	17.4	17.4
Prop In Lane	1.00	1.00	1.00			0.13
Lane Grp Cap(c), veh/h	493	440	211	3161	1532	824
V/C Ratio(X)	0.33	0.93	0.82	0.43	0.58	0.58
Avail Cap(c_a), veh/h	507	452	336	3161	1532	824
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.7	31.4	38.4	8.8	18.2	18.2
Incr Delay (d2), s/veh	0.4	26.1	8.7	0.4	1.6	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	20.7	4.7	5.9	8.5	9.5
LnGrp Delay(d),s/veh	26.0	57.5	47.1	9.2	19.8	21.2
LnGrp LOS	C	E	D	A	B	C
Approach Vol, veh/h	573			1548	1369	
Approach Delay, s/veh	48.5			13.5	20.3	
Approach LOS	D			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		60.0		29.3	15.1	44.9		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		55.5		25.5	16.9	34.1		
Max Q Clear Time (g_c+I1), s		14.5		24.5	10.6	19.4		
Green Ext Time (p_c), s		14.0		0.2	0.2	8.1		

Intersection Summary		
HCM 2010 Ctrl Delay		21.9
HCM 2010 LOS		C

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	65	24	8	234	273	24
Future Vol, veh/h	65	24	8	234	273	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	71	26	9	254	297	26
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9.1	9.8	10.4
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	3%	73%	0%
Vol Thru, %	97%	0%	92%
Vol Right, %	0%	27%	8%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	242	89	297
LT Vol	8	65	0
Through Vol	234	0	273
RT Vol	0	24	24
Lane Flow Rate	263	97	323
Geometry Grp	1	1	1
Degree of Util (X)	0.332	0.14	0.397
Departure Headway (Hd)	4.539	5.204	4.427
Convergence, Y/N	Yes	Yes	Yes
Cap	792	687	814
Service Time	2.571	3.252	2.458
HCM Lane V/C Ratio	0.332	0.141	0.397
HCM Control Delay	9.8	9.1	10.4
HCM Lane LOS	A	A	B
HCM 95th-tile Q	1.5	0.5	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	61	1	28	81	290	0	1	1	449	17	86
Future Volume (veh/h)	50	61	1	28	81	290	0	1	1	449	17	86
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	54	66	1	30	88	315	0	1	1	488	18	93
Adj No. of Lanes	1	1	0	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	456	775	12	91	188	673	0	4	3	534	20	493
Arrive On Green	0.42	0.42	0.42	0.05	0.53	0.53	0.00	0.00	0.00	0.31	0.31	0.31
Sat Flow, veh/h	978	1830	28	1774	357	1280	0	1863	1583	1714	63	1583
Grp Volume(v), veh/h	54	0	67	30	0	403	0	1	1	506	0	93
Grp Sat Flow(s),veh/h/ln	978	0	1858	1774	0	1637	0	1863	1583	1777	0	1583
Q Serve(g_s), s	2.9	0.0	1.7	1.3	0.0	12.1	0.0	0.0	0.0	21.4	0.0	3.3
Cycle Q Clear(g_c), s	6.9	0.0	1.7	1.3	0.0	12.1	0.0	0.0	0.0	21.4	0.0	3.3
Prop In Lane	1.00		0.01	1.00		0.78	0.00		1.00	0.96		1.00
Lane Grp Cap(c), veh/h	456	0	787	91	0	861	0	4	3	553	0	493
V/C Ratio(X)	0.12	0.00	0.09	0.33	0.00	0.47	0.00	0.25	0.29	0.91	0.00	0.19
Avail Cap(c_a), veh/h	456	0	787	421	0	861	0	454	386	627	0	559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.3	0.0	13.4	35.7	0.0	11.6	0.0	38.8	38.8	25.8	0.0	19.6
Incr Delay (d2), s/veh	0.1	0.0	0.0	2.1	0.0	1.8	0.0	29.0	41.0	16.9	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.9	0.7	0.0	5.8	0.0	0.1	0.1	13.0	0.0	1.5
LnGrp Delay(d),s/veh	16.4	0.0	13.5	37.8	0.0	13.4	0.0	67.8	79.8	42.7	0.0	19.8
LnGrp LOS	B		B	D		B		E	E	D		B
Approach Vol, veh/h		121			433			2			599	
Approach Delay, s/veh		14.8			15.1			73.8			39.2	
Approach LOS		B			B			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		4.2	8.0	37.0		28.8		45.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.5		4.0
Max Green Setting (Gmax), s		19.0	18.5	18.5		27.5		41.0
Max Q Clear Time (g_c+I1), s		2.0	3.3	8.9		23.4		14.1
Green Ext Time (p_c), s		0.0	0.0	0.2		0.9		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	27.7
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	15.9
Intersection LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	498	389	35	17	8
Future Vol, veh/h	8	498	389	35	17	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	541	423	38	18	9
Number of Lanes	0	1	1	1	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	17.9	14	9.4
HCM LOS	C	B	A

Lane	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	2%	0%	0%	68%
Vol Thru, %	98%	100%	0%	0%
Vol Right, %	0%	0%	100%	32%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	506	389	35	25
LT Vol	8	0	0	17
Through Vol	498	389	0	0
RT Vol	0	0	35	8
Lane Flow Rate	550	423	38	27
Geometry Grp	5	7	7	2
Degree of Util (X)	0.705	0.587	0.045	0.046
Departure Headway (Hd)	4.612	4.999	4.294	6.064
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	786	723	833	587
Service Time	2.638	2.728	2.023	4.135
HCM Lane V/C Ratio	0.7	0.585	0.046	0.046
HCM Control Delay	17.9	14.6	7.2	9.4
HCM Lane LOS	C	B	A	A
HCM 95th-tile Q	5.9	3.9	0.1	0.1

Intersection	
Intersection Delay, s/veh	31.5
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	324	168	74	285	45	117	48	59	37	44	22
Future Vol, veh/h	20	324	168	74	285	45	117	48	59	37	44	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	352	183	80	310	49	127	52	64	40	48	24
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	45.1	27.9	15	13.5
HCM LOS	E	D	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	71%	0%	4%	18%	36%
Vol Thru, %	29%	0%	63%	71%	43%
Vol Right, %	0%	100%	33%	11%	21%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	165	59	512	404	103
LT Vol	117	0	20	74	37
Through Vol	48	0	324	285	44
RT Vol	0	59	168	45	22
Lane Flow Rate	179	64	557	439	112
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.405	0.126	0.925	0.773	0.246
Departure Headway (Hd)	8.134	7.046	5.984	6.335	7.921
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	441	506	601	566	456
Service Time	5.92	4.832	4.056	4.412	5.921
HCM Lane V/C Ratio	0.406	0.126	0.927	0.776	0.246
HCM Control Delay	16.4	10.9	45.1	27.9	13.5
HCM Lane LOS	C	B	E	D	B
HCM 95th-tile Q	1.9	0.4	11.8	7.1	1

Intersection	
Intersection Delay, s/veh	13.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	383	25	5	370	12	33	7	2	8	5	4
Future Vol, veh/h	13	383	25	5	370	12	33	7	2	8	5	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	416	27	5	402	13	36	8	2	9	5	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.7	12.9	9.6	9.2
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	79%	3%	1%	47%
Vol Thru, %	17%	91%	96%	29%
Vol Right, %	5%	6%	3%	24%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	42	421	387	17
LT Vol	33	13	5	8
Through Vol	7	383	370	5
RT Vol	2	25	12	4
Lane Flow Rate	46	458	421	18
Geometry Grp	1	1	1	1
Degree of Util (X)	0.076	0.578	0.537	0.03
Departure Headway (Hd)	5.998	4.544	4.592	5.885
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	592	792	782	602
Service Time	4.085	2.584	2.633	3.981
HCM Lane V/C Ratio	0.078	0.578	0.538	0.03
HCM Control Delay	9.6	13.7	12.9	9.2
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.2	3.8	3.2	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	161	277	248	1602	1418	156
Future Volume (veh/h)	161	277	248	1602	1418	156
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	175	301	270	1741	1541	170
Adj No. of Lanes	1	1	1	3	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	361	322	309	3543	2196	242
Arrive On Green	0.20	0.20	0.17	0.70	0.47	0.47
Sat Flow, veh/h	1774	1583	1774	5253	4818	512
Grp Volume(v), veh/h	175	301	270	1741	1123	588
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1695	1695	1772
Q Serve(g_s), s	7.8	16.8	13.3	14.2	23.5	23.6
Cycle Q Clear(g_c), s	7.8	16.8	13.3	14.2	23.5	23.6
Prop In Lane	1.00	1.00	1.00			0.29
Lane Grp Cap(c), veh/h	361	322	309	3543	1601	837
V/C Ratio(X)	0.49	0.93	0.87	0.49	0.70	0.70
Avail Cap(c_a), veh/h	361	322	404	3543	1601	837
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	35.3	36.2	6.3	18.7	18.8
Incr Delay (d2), s/veh	1.0	33.6	15.2	0.5	2.6	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	16.4	7.8	6.8	11.5	12.6
LnGrp Delay(d),s/veh	32.7	68.9	51.3	6.8	21.3	23.6
LnGrp LOS	C	E	D	A	C	C
Approach Vol, veh/h	476			2011	1711	
Approach Delay, s/veh	55.6			12.8	22.1	
Approach LOS	E			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		67.2		22.8	20.2	47.0		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		62.7		18.3	20.5	37.7		
Max Q Clear Time (g_c+I1), s		16.2		18.8	15.3	25.6		
Green Ext Time (p_c), s		20.9		0.0	0.4	8.6		

Intersection Summary			
HCM 2010 Ctrl Delay			21.4
HCM 2010 LOS			C

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	43	7	21	148	186	57
Future Vol, veh/h	43	7	21	148	186	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	8	23	161	202	62
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.4	8.6	8.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	12%	86%	0%
Vol Thru, %	88%	0%	77%
Vol Right, %	0%	14%	23%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	169	50	243
LT Vol	21	43	0
Through Vol	148	0	186
RT Vol	0	7	57
Lane Flow Rate	184	54	264
Geometry Grp	1	1	1
Degree of Util (X)	0.222	0.075	0.303
Departure Headway (Hd)	4.356	4.979	4.133
Convergence, Y/N	Yes	Yes	Yes
Cap	827	721	874
Service Time	2.369	3.002	2.133
HCM Lane V/C Ratio	0.222	0.075	0.302
HCM Control Delay	8.6	8.4	8.9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.8	0.2	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	116	2	12	65	409	1	3	1	372	21	29
Future Volume (veh/h)	131	116	2	12	65	409	1	3	1	372	21	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	142	126	2	13	71	445	1	3	1	404	23	32
Adj No. of Lanes	1	1	0	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	425	840	13	99	127	795	2	7	8	433	25	408
Arrive On Green	0.46	0.46	0.46	0.06	0.57	0.57	0.01	0.01	0.01	0.26	0.26	0.26
Sat Flow, veh/h	881	1829	29	1774	222	1394	460	1380	1583	1683	96	1583
Grp Volume(v), veh/h	142	0	128	13	0	516	4	0	1	427	0	32
Grp Sat Flow(s),veh/h/ln	881	0	1858	1774	0	1617	1840	0	1583	1779	0	1583
Q Serve(g_s), s	8.7	0.0	2.9	0.5	0.0	14.5	0.2	0.0	0.0	16.9	0.0	1.1
Cycle Q Clear(g_c), s	15.2	0.0	2.9	0.5	0.0	14.5	0.2	0.0	0.0	16.9	0.0	1.1
Prop In Lane	1.00		0.02	1.00		0.86	0.25		1.00	0.95		1.00
Lane Grp Cap(c), veh/h	425	0	853	99	0	922	10	0	8	458	0	408
V/C Ratio(X)	0.33	0.00	0.15	0.13	0.00	0.56	0.41	0.00	0.12	0.93	0.00	0.08
Avail Cap(c_a), veh/h	425	0	853	457	0	922	474	0	408	458	0	408
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.1	0.0	11.3	32.3	0.0	9.7	35.6	0.0	35.6	26.1	0.0	20.2
Incr Delay (d2), s/veh	0.5	0.0	0.1	0.6	0.0	2.4	25.5	0.0	6.2	26.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	1.5	0.3	0.0	6.9	0.1	0.0	0.0	11.5	0.0	0.5
LnGrp Delay(d),s/veh	17.5	0.0	11.4	32.9	0.0	12.2	61.1	0.0	41.8	52.3	0.0	20.3
LnGrp LOS	B		B	C		B	E		D	D		C
Approach Vol, veh/h		270			529			5			459	
Approach Delay, s/veh		14.6			12.7			57.2			50.0	
Approach LOS		B			B			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		4.4	8.0	37.0		22.5		45.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.5	18.5	18.5		18.5		41.0
Max Q Clear Time (g_c+I1), s		2.2	2.5	17.2		18.9		16.5
Green Ext Time (p_c), s		0.0	0.0	0.2		0.0		1.9

Intersection Summary		
HCM 2010 Ctrl Delay		26.8
HCM 2010 LOS		C

Intersection	
Intersection Delay, s/veh	21.3
Intersection LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	473	454	79	92	35
Future Vol, veh/h	12	473	454	79	92	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	514	493	86	100	38
Number of Lanes	0	1	1	1	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	23.5	21.5	11.7
HCM LOS	C	C	B

Lane	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	2%	0%	0%	72%
Vol Thru, %	98%	100%	0%	0%
Vol Right, %	0%	0%	100%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	485	454	79	127
LT Vol	12	0	0	92
Through Vol	473	454	0	0
RT Vol	0	0	79	35
Lane Flow Rate	527	493	86	138
Geometry Grp	5	7	7	2
Degree of Util (X)	0.768	0.761	0.116	0.249
Departure Headway (Hd)	5.242	5.554	4.846	6.49
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	691	651	740	554
Service Time	3.269	3.281	2.572	4.533
HCM Lane V/C Ratio	0.763	0.757	0.116	0.249
HCM Control Delay	23.5	23.8	8.2	11.7
HCM Lane LOS	C	C	A	B
HCM 95th-tile Q	7.3	7	0.4	1

Intersection	
Intersection Delay, s/veh	79.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	288	245	26	267	59	215	46	70	121	64	55
Future Vol, veh/h	15	288	245	26	267	59	215	46	70	121	64	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	313	266	28	290	64	234	50	76	132	70	60
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	157.5	42.7	28.8	27
HCM LOS	F	E	D	D

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	82%	0%	3%	7%	50%
Vol Thru, %	18%	0%	53%	76%	27%
Vol Right, %	0%	100%	45%	17%	23%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	261	70	548	352	240
LT Vol	215	0	15	26	121
Through Vol	46	0	288	267	64
RT Vol	0	70	245	59	55
Lane Flow Rate	284	76	596	383	261
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.708	0.166	1.261	0.837	0.623
Departure Headway (Hd)	9.771	8.611	7.622	8.611	9.505
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	372	419	482	425	383
Service Time	7.471	6.311	5.622	6.611	7.505
HCM Lane V/C Ratio	0.763	0.181	1.237	0.901	0.681
HCM Control Delay	33	13	157.5	42.7	27
HCM Lane LOS	D	B	F	E	D
HCM 95th-tile Q	5.2	0.6	24.5	8	4

Intersection	
Intersection Delay, s/veh	15.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	475	11	4	258	6	67	16	17	17	14	13
Future Vol, veh/h	9	475	11	4	258	6	67	16	17	17	14	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	516	12	4	280	7	73	17	18	18	15	14
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	18.6	11.7	10.4	9.7
HCM LOS	C	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	67%	2%	1%	39%
Vol Thru, %	16%	96%	96%	32%
Vol Right, %	17%	2%	2%	30%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	495	268	44
LT Vol	67	9	4	17
Through Vol	16	475	258	14
RT Vol	17	11	6	13
Lane Flow Rate	109	538	291	48
Geometry Grp	1	1	1	1
Degree of Util (X)	0.183	0.706	0.413	0.081
Departure Headway (Hd)	6.072	4.829	5.11	6.096
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	592	753	708	589
Service Time	4.089	2.829	3.11	4.117
HCM Lane V/C Ratio	0.184	0.714	0.411	0.081
HCM Control Delay	10.4	18.6	11.7	9.7
HCM Lane LOS	B	C	B	A
HCM 95th-tile Q	0.7	5.9	2	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	152	379	162	1264	1204	57
Future Volume (veh/h)	152	379	162	1264	1204	57
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	165	412	176	1374	1309	62
Adj No. of Lanes	1	1	1	3	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	483	431	213	3192	2277	108
Arrive On Green	0.27	0.27	0.12	0.63	0.46	0.46
Sat Flow, veh/h	1774	1583	1774	5253	5143	236
Grp Volume(v), veh/h	165	412	176	1374	892	479
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1695	1695	1821
Q Serve(g_s), s	6.7	23.0	8.7	12.4	17.4	17.4
Cycle Q Clear(g_c), s	6.7	23.0	8.7	12.4	17.4	17.4
Prop In Lane	1.00	1.00	1.00			0.13
Lane Grp Cap(c), veh/h	483	431	213	3192	1551	833
V/C Ratio(X)	0.34	0.96	0.83	0.43	0.57	0.58
Avail Cap(c_a), veh/h	483	431	335	3192	1551	833
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.3	32.2	38.7	8.5	18.0	18.0
Incr Delay (d2), s/veh	0.4	32.2	9.1	0.4	1.6	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	21.5	4.8	5.9	8.4	9.5
LnGrp Delay(d),s/veh	26.7	64.4	47.8	9.0	19.5	20.8
LnGrp LOS	C	E	D	A	B	C
Approach Vol, veh/h	577			1550	1371	
Approach Delay, s/veh	53.6			13.4	20.0	
Approach LOS	D			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		61.0		29.0	15.3	45.7		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		56.5		24.5	17.0	35.0		
Max Q Clear Time (g_c+I1), s		14.4		25.0	10.7	19.4		
Green Ext Time (p_c), s		14.1		0.0	0.2	8.4		

Intersection Summary		
HCM 2010 Ctrl Delay		22.6
HCM 2010 LOS		C

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	65	24	8	241	281	24
Future Vol, veh/h	65	24	8	241	281	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	71	26	9	262	305	26
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9.2	9.9	10.5
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	3%	73%	0%
Vol Thru, %	97%	0%	92%
Vol Right, %	0%	27%	8%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	249	89	305
LT Vol	8	65	0
Through Vol	241	0	281
RT Vol	0	24	24
Lane Flow Rate	271	97	332
Geometry Grp	1	1	1
Degree of Util (X)	0.342	0.141	0.409
Departure Headway (Hd)	4.55	5.239	4.439
Convergence, Y/N	Yes	Yes	Yes
Cap	790	682	809
Service Time	2.584	3.29	2.47
HCM Lane V/C Ratio	0.343	0.142	0.41
HCM Control Delay	9.9	9.2	10.5
HCM Lane LOS	A	A	B
HCM 95th-tile Q	1.5	0.5	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	61	1	28	81	294	0	1	1	453	17	86
Future Volume (veh/h)	50	61	1	28	81	294	0	1	1	453	17	86
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	54	66	1	30	88	320	0	1	1	492	18	93
Adj No. of Lanes	1	1	0	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	455	779	12	91	187	678	0	4	3	539	20	498
Arrive On Green	0.43	0.43	0.43	0.05	0.53	0.53	0.00	0.00	0.00	0.31	0.31	0.31
Sat Flow, veh/h	974	1830	28	1774	353	1283	0	1863	1583	1714	63	1583
Grp Volume(v), veh/h	54	0	67	30	0	408	0	1	1	510	0	93
Grp Sat Flow(s),veh/h/ln	974	0	1858	1774	0	1636	0	1863	1583	1777	0	1583
Q Serve(g_s), s	2.9	0.0	1.7	1.3	0.0	12.1	0.0	0.0	0.0	21.4	0.0	3.3
Cycle Q Clear(g_c), s	7.0	0.0	1.7	1.3	0.0	12.1	0.0	0.0	0.0	21.4	0.0	3.3
Prop In Lane	1.00		0.01	1.00		0.78	0.00		1.00	0.96		1.00
Lane Grp Cap(c), veh/h	455	0	790	91	0	865	0	4	3	559	0	498
V/C Ratio(X)	0.12	0.00	0.08	0.33	0.00	0.47	0.00	0.25	0.29	0.91	0.00	0.19
Avail Cap(c_a), veh/h	455	0	790	423	0	865	0	451	384	646	0	576
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.2	0.0	13.3	35.5	0.0	11.5	0.0	38.6	38.6	25.6	0.0	19.4
Incr Delay (d2), s/veh	0.1	0.0	0.0	2.1	0.0	1.8	0.0	29.0	41.0	16.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.9	0.7	0.0	5.9	0.0	0.1	0.1	13.0	0.0	1.5
LnGrp Delay(d),s/veh	16.3	0.0	13.3	37.6	0.0	13.3	0.0	67.6	79.6	41.5	0.0	19.5
LnGrp LOS	B		B	D		B		E	E	D		B
Approach Vol, veh/h		121			438			2			603	
Approach Delay, s/veh		14.7			15.0			73.6			38.1	
Approach LOS		B			B			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		4.2	8.0	37.0		28.4		45.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.8	18.5	18.5		28.2		41.0
Max Q Clear Time (g_c+I1), s		2.0	3.3	9.0		23.4		14.1
Green Ext Time (p_c), s		0.0	0.0	0.2		1.0		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	27.0
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	16.2
Intersection LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	502	393	36	18	8
Future Vol, veh/h	8	502	393	36	18	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	546	427	39	20	9
Number of Lanes	0	1	1	1	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	18.3	14.2	9.5
HCM LOS	C	B	A

Lane	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	2%	0%	0%	69%
Vol Thru, %	98%	100%	0%	0%
Vol Right, %	0%	0%	100%	31%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	510	393	36	26
LT Vol	8	0	0	18
Through Vol	502	393	0	0
RT Vol	0	0	36	8
Lane Flow Rate	554	427	39	28
Geometry Grp	5	7	7	2
Degree of Util (X)	0.712	0.594	0.047	0.048
Departure Headway (Hd)	4.622	5.007	4.302	6.092
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	782	722	832	584
Service Time	2.648	2.737	2.032	4.167
HCM Lane V/C Ratio	0.708	0.591	0.047	0.048
HCM Control Delay	18.3	14.8	7.2	9.5
HCM Lane LOS	C	B	A	A
HCM 95th-tile Q	6.1	4	0.1	0.2

Intersection	
Intersection Delay, s/veh	34.9
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	324	173	78	285	45	123	52	63	37	48	22
Future Vol, veh/h	20	324	173	78	285	45	123	52	63	37	48	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	352	188	85	310	49	134	57	68	40	52	24
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	51.5	30.7	15.7	14
HCM LOS	F	D	C	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	70%	0%	4%	19%	35%
Vol Thru, %	30%	0%	63%	70%	45%
Vol Right, %	0%	100%	33%	11%	21%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	175	63	517	408	107
LT Vol	123	0	20	78	37
Through Vol	52	0	324	285	48
RT Vol	0	63	173	45	22
Lane Flow Rate	190	68	562	443	116
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.44	0.138	0.954	0.798	0.262
Departure Headway (Hd)	8.334	7.248	6.109	6.582	8.105
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	436	498	590	554	445
Service Time	6.034	4.948	4.208	4.582	6.118
HCM Lane V/C Ratio	0.436	0.137	0.953	0.8	0.261
HCM Control Delay	17.4	11.1	51.5	30.7	14
HCM Lane LOS	C	B	F	D	B
HCM 95th-tile Q	2.2	0.5	12.8	7.6	1

Intersection	
Intersection Delay, s/veh	13.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	387	25	5	374	12	33	7	2	8	5	4
Future Vol, veh/h	13	387	25	5	374	12	33	7	2	8	5	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	421	27	5	407	13	36	8	2	9	5	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.8	13	9.6	9.2
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	79%	3%	1%	47%
Vol Thru, %	17%	91%	96%	29%
Vol Right, %	5%	6%	3%	24%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	42	425	391	17
LT Vol	33	13	5	8
Through Vol	7	387	374	5
RT Vol	2	25	12	4
Lane Flow Rate	46	462	425	18
Geometry Grp	1	1	1	1
Degree of Util (X)	0.076	0.584	0.543	0.03
Departure Headway (Hd)	6.016	4.549	4.598	5.903
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	590	790	782	600
Service Time	4.105	2.589	2.639	4.001
HCM Lane V/C Ratio	0.078	0.585	0.543	0.03
HCM Control Delay	9.6	13.8	13	9.2
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.2	3.8	3.3	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	163	279	250	1602	1418	158
Future Volume (veh/h)	163	279	250	1602	1418	158
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	177	303	272	1741	1541	172
Adj No. of Lanes	1	1	1	3	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	361	322	311	3543	2188	244
Arrive On Green	0.20	0.20	0.18	0.70	0.47	0.47
Sat Flow, veh/h	1774	1583	1774	5253	4811	518
Grp Volume(v), veh/h	177	303	272	1741	1125	588
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1695	1695	1771
Q Serve(g_s), s	7.9	17.0	13.4	14.2	23.6	23.7
Cycle Q Clear(g_c), s	7.9	17.0	13.4	14.2	23.6	23.7
Prop In Lane	1.00	1.00	1.00			0.29
Lane Grp Cap(c), veh/h	361	322	311	3543	1598	835
V/C Ratio(X)	0.49	0.94	0.87	0.49	0.70	0.70
Avail Cap(c_a), veh/h	361	322	404	3543	1598	835
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	35.3	36.1	6.3	18.8	18.8
Incr Delay (d2), s/veh	1.0	35.0	15.4	0.5	2.6	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	16.7	7.9	6.8	11.5	12.6
LnGrp Delay(d),s/veh	32.8	70.3	51.5	6.8	21.5	23.8
LnGrp LOS	C	E	D	A	C	C
Approach Vol, veh/h	480			2013	1713	
Approach Delay, s/veh	56.5			12.8	22.3	
Approach LOS	E			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		67.2		22.8	20.3	46.9		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		62.7		18.3	20.5	37.7		
Max Q Clear Time (g_c+I1), s		16.2		19.0	15.4	25.7		
Green Ext Time (p_c), s		20.9		0.0	0.4	8.6		

Intersection Summary	
HCM 2010 Ctrl Delay	21.6
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	43	7	21	155	194	57
Future Vol, veh/h	43	7	21	155	194	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	8	23	168	211	62
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.5	8.7	9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	12%	86%	0%
Vol Thru, %	88%	0%	77%
Vol Right, %	0%	14%	23%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	176	50	251
LT Vol	21	43	0
Through Vol	155	0	194
RT Vol	0	7	57
Lane Flow Rate	191	54	273
Geometry Grp	1	1	1
Degree of Util (X)	0.232	0.076	0.314
Departure Headway (Hd)	4.364	5.015	4.148
Convergence, Y/N	Yes	Yes	Yes
Cap	825	715	873
Service Time	2.38	3.04	2.148
HCM Lane V/C Ratio	0.232	0.076	0.313
HCM Control Delay	8.7	8.5	9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.9	0.2	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	116	2	12	65	422	1	3	1	385	21	29
Future Volume (veh/h)	131	116	2	12	65	422	1	3	1	385	21	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	142	126	2	13	71	459	1	3	1	418	23	32
Adj No. of Lanes	1	1	0	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	414	840	13	99	123	798	2	7	8	434	24	408
Arrive On Green	0.46	0.46	0.46	0.06	0.57	0.57	0.01	0.01	0.01	0.26	0.26	0.26
Sat Flow, veh/h	870	1829	29	1774	216	1399	460	1380	1583	1686	93	1583
Grp Volume(v), veh/h	142	0	128	13	0	530	4	0	1	441	0	32
Grp Sat Flow(s),veh/h/ln	870	0	1858	1774	0	1616	1840	0	1583	1778	0	1583
Q Serve(g_s), s	9.0	0.0	2.9	0.5	0.0	15.1	0.2	0.0	0.0	17.6	0.0	1.1
Cycle Q Clear(g_c), s	16.0	0.0	2.9	0.5	0.0	15.1	0.2	0.0	0.0	17.6	0.0	1.1
Prop In Lane	1.00		0.02	1.00		0.87	0.25		1.00	0.95		1.00
Lane Grp Cap(c), veh/h	414	0	853	99	0	922	10	0	8	458	0	408
V/C Ratio(X)	0.34	0.00	0.15	0.13	0.00	0.58	0.41	0.00	0.12	0.96	0.00	0.08
Avail Cap(c_a), veh/h	414	0	853	457	0	922	474	0	408	458	0	408
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.6	0.0	11.3	32.3	0.0	9.9	35.6	0.0	35.6	26.4	0.0	20.2
Incr Delay (d2), s/veh	0.5	0.0	0.1	0.6	0.0	2.6	25.5	0.0	6.2	32.7	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	1.5	0.3	0.0	7.3	0.1	0.0	0.0	12.7	0.0	0.5
LnGrp Delay(d),s/veh	18.0	0.0	11.4	32.9	0.0	12.5	61.1	0.0	41.8	59.1	0.0	20.3
LnGrp LOS	B		B	C		B	E		D	E		C
Approach Vol, veh/h		270			543			5			473	
Approach Delay, s/veh		14.9			13.0			57.2			56.4	
Approach LOS		B			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		4.4	8.0	37.0		22.5		45.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.5	18.5	18.5		18.5		41.0
Max Q Clear Time (g_c+I1), s		2.2	2.5	18.0		19.6		17.1
Green Ext Time (p_c), s		0.0	0.0	0.1		0.0		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.5
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	20.8
Intersection LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	469	451	78	91	35
Future Vol, veh/h	12	469	451	78	91	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	510	490	85	99	38
Number of Lanes	0	1	1	1	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	22.8	21.2	11.6
HCM LOS	C	C	B

Lane	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	2%	0%	0%	72%
Vol Thru, %	98%	100%	0%	0%
Vol Right, %	0%	0%	100%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	481	451	78	126
LT Vol	12	0	0	91
Through Vol	469	451	0	0
RT Vol	0	0	78	35
Lane Flow Rate	523	490	85	137
Geometry Grp	5	7	7	2
Degree of Util (X)	0.759	0.755	0.114	0.246
Departure Headway (Hd)	5.229	5.541	4.832	6.467
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	690	652	743	555
Service Time	3.257	3.267	2.558	4.51
HCM Lane V/C Ratio	0.758	0.752	0.114	0.247
HCM Control Delay	22.8	23.4	8.2	11.6
HCM Lane LOS	C	C	A	B
HCM 95th-tile Q	7	6.9	0.4	1

Intersection	
Intersection Delay, s/veh	73.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	288	240	22	268	59	209	42	66	121	60	55
Future Vol, veh/h	15	288	240	22	268	59	209	42	66	121	60	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	313	261	24	291	64	227	46	72	132	65	60
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	143.2	39.5	26.6	25.5
HCM LOS	F	E	D	D

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	83%	0%	3%	6%	51%
Vol Thru, %	17%	0%	53%	77%	25%
Vol Right, %	0%	100%	44%	17%	23%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	251	66	543	349	236
LT Vol	209	0	15	22	121
Through Vol	42	0	288	268	60
RT Vol	0	66	240	59	55
Lane Flow Rate	273	72	590	379	257
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.676	0.156	1.226	0.818	0.605
Departure Headway (Hd)	9.636	8.472	7.475	8.406	9.297
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	376	426	490	432	390
Service Time	7.336	6.172	5.475	6.406	7.297
HCM Lane V/C Ratio	0.726	0.169	1.204	0.877	0.659
HCM Control Delay	30.2	12.7	143.2	39.5	25.5
HCM Lane LOS	D	B	F	E	D
HCM 95th-tile Q	4.8	0.5	23.2	7.6	3.8

Intersection	
Intersection Delay, s/veh	15.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	9	471	11	4	255	6	67	16	17	17	14	13
Future Vol, veh/h	9	471	11	4	255	6	67	16	17	17	14	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	512	12	4	277	7	73	17	18	18	15	14
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	19	11.6	10.5	9.7
HCM LOS	C	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	67%	2%	2%	39%
Vol Thru, %	16%	96%	96%	32%
Vol Right, %	17%	2%	2%	30%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	491	265	44
LT Vol	67	9	4	17
Through Vol	16	471	255	14
RT Vol	17	11	6	13
Lane Flow Rate	109	534	288	48
Geometry Grp	1	1	1	1
Degree of Util (X)	0.183	0.715	0.407	0.081
Departure Headway (Hd)	6.053	4.823	5.091	6.077
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	592	753	709	589
Service Time	4.095	2.823	3.119	4.124
HCM Lane V/C Ratio	0.184	0.709	0.406	0.081
HCM Control Delay	10.5	19	11.6	9.7
HCM Lane LOS	B	C	B	A
HCM 95th-tile Q	0.7	6.1	2	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	150	379	161	1270	1217	56
Future Volume (veh/h)	150	379	161	1270	1217	56
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	163	412	175	1380	1323	61
Adj No. of Lanes	1	1	1	3	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	494	441	212	3157	2246	104
Arrive On Green	0.28	0.28	0.12	0.62	0.45	0.45
Sat Flow, veh/h	1774	1583	1774	5253	5150	230
Grp Volume(v), veh/h	163	412	175	1380	900	484
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1695	1695	1822
Q Serve(g_s), s	6.5	22.7	8.6	12.6	17.8	17.8
Cycle Q Clear(g_c), s	6.5	22.7	8.6	12.6	17.8	17.8
Prop In Lane	1.00	1.00	1.00			0.13
Lane Grp Cap(c), veh/h	494	441	212	3157	1528	821
V/C Ratio(X)	0.33	0.93	0.82	0.44	0.59	0.59
Avail Cap(c_a), veh/h	506	452	335	3157	1528	821
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	31.5	38.4	8.8	18.4	18.4
Incr Delay (d2), s/veh	0.4	26.4	8.9	0.4	1.7	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	20.8	4.8	6.0	8.6	9.6
LnGrp Delay(d),s/veh	26.0	57.9	47.3	9.3	20.0	21.5
LnGrp LOS	C	E	D	A	C	C
Approach Vol, veh/h	575			1555	1384	
Approach Delay, s/veh	48.8			13.5	20.5	
Approach LOS	D			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		60.0		29.4	15.2	44.8		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		55.5		25.5	16.9	34.1		
Max Q Clear Time (g_c+I1), s		14.6		24.7	10.6	19.8		
Green Ext Time (p_c), s		14.0		0.2	0.2	8.0		

Intersection Summary		
HCM 2010 Ctrl Delay		22.1
HCM 2010 LOS		C

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	65	24	8	234	273	24
Future Vol, veh/h	65	24	8	234	273	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	71	26	9	254	297	26
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9.1	9.8	10.4
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	3%	73%	0%
Vol Thru, %	97%	0%	92%
Vol Right, %	0%	27%	8%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	242	89	297
LT Vol	8	65	0
Through Vol	234	0	273
RT Vol	0	24	24
Lane Flow Rate	263	97	323
Geometry Grp	1	1	1
Degree of Util (X)	0.332	0.14	0.397
Departure Headway (Hd)	4.539	5.204	4.427
Convergence, Y/N	Yes	Yes	Yes
Cap	792	687	814
Service Time	2.571	3.252	2.458
HCM Lane V/C Ratio	0.332	0.141	0.397
HCM Control Delay	9.8	9.1	10.4
HCM Lane LOS	A	A	B
HCM 95th-tile Q	1.5	0.5	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	61	1	28	81	309	0	1	1	466	17	86
Future Volume (veh/h)	50	61	1	28	81	309	0	1	1	466	17	86
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	54	66	1	30	88	336	0	1	1	507	18	93
Adj No. of Lanes	1	1	0	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	434	771	12	91	178	678	0	4	3	551	20	509
Arrive On Green	0.42	0.42	0.42	0.05	0.52	0.52	0.00	0.00	0.00	0.32	0.32	0.32
Sat Flow, veh/h	959	1830	28	1774	339	1295	0	1863	1583	1716	61	1583
Grp Volume(v), veh/h	54	0	67	30	0	424	0	1	1	525	0	93
Grp Sat Flow(s),veh/h/ln	959	0	1858	1774	0	1634	0	1863	1583	1777	0	1583
Q Serve(g_s), s	3.0	0.0	1.7	1.3	0.0	13.1	0.0	0.0	0.0	22.3	0.0	3.3
Cycle Q Clear(g_c), s	8.1	0.0	1.7	1.3	0.0	13.1	0.0	0.0	0.0	22.3	0.0	3.3
Prop In Lane	1.00		0.01	1.00		0.79	0.00		1.00	0.97		1.00
Lane Grp Cap(c), veh/h	434	0	783	91	0	855	0	4	3	571	0	509
V/C Ratio(X)	0.12	0.00	0.09	0.33	0.00	0.50	0.00	0.25	0.29	0.92	0.00	0.18
Avail Cap(c_a), veh/h	434	0	783	419	0	855	0	449	382	637	0	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.2	0.0	13.6	35.9	0.0	12.0	0.0	39.0	39.0	25.6	0.0	19.2
Incr Delay (d2), s/veh	0.1	0.0	0.0	2.1	0.0	2.1	0.0	29.0	41.0	17.6	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.9	0.7	0.0	6.4	0.0	0.1	0.1	13.7	0.0	1.5
LnGrp Delay(d),s/veh	17.3	0.0	13.7	38.0	0.0	14.1	0.0	68.0	80.0	43.2	0.0	19.3
LnGrp LOS	B		B	D		B		E	E	D		B
Approach Vol, veh/h		121			454			2			618	
Approach Delay, s/veh		15.3			15.6			74.0			39.6	
Approach LOS		B			B			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		4.2	8.0	37.0		29.2		45.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.9	18.5	18.5		28.1		41.0
Max Q Clear Time (g_c+I1), s		2.0	3.3	10.1		24.3		15.1
Green Ext Time (p_c), s		0.0	0.0	0.2		0.9		1.5

Intersection Summary		
HCM 2010 Ctrl Delay		28.1
HCM 2010 LOS		C

Intersection	
Intersection Delay, s/veh	17
Intersection LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	515	408	35	17	8
Future Vol, veh/h	8	515	408	35	17	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	560	443	38	18	9
Number of Lanes	0	1	1	1	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	19.3	14.8	9.5
HCM LOS	C	B	A

Lane	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	2%	0%	0%	68%
Vol Thru, %	98%	100%	0%	0%
Vol Right, %	0%	0%	100%	32%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	523	408	35	25
LT Vol	8	0	0	17
Through Vol	515	408	0	0
RT Vol	0	0	35	8
Lane Flow Rate	568	443	38	27
Geometry Grp	5	7	7	2
Degree of Util (X)	0.732	0.618	0.046	0.046
Departure Headway (Hd)	4.638	5.015	4.31	6.142
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	779	718	830	579
Service Time	2.663	2.744	2.039	4.221
HCM Lane V/C Ratio	0.729	0.617	0.046	0.047
HCM Control Delay	19.3	15.5	7.2	9.5
HCM Lane LOS	C	C	A	A
HCM 95th-tile Q	6.5	4.3	0.1	0.1

Intersection	
Intersection Delay, s/veh	36.9
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	327	182	74	304	45	117	48	59	37	44	22
Future Vol, veh/h	20	327	182	74	304	45	117	48	59	37	44	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	355	198	80	330	49	127	52	64	40	48	24
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	54.1	32.5	15.3	13.8
HCM LOS	F	D	C	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	71%	0%	4%	17%	36%
Vol Thru, %	29%	0%	62%	72%	43%
Vol Right, %	0%	100%	34%	11%	21%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	165	59	529	423	103
LT Vol	117	0	20	74	37
Through Vol	48	0	327	304	44
RT Vol	0	59	182	45	22
Lane Flow Rate	179	64	575	460	112
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.412	0.128	0.968	0.819	0.252
Departure Headway (Hd)	8.275	7.187	6.058	6.415	8.115
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	432	495	598	561	446
Service Time	6.073	4.984	4.136	4.501	6.115
HCM Lane V/C Ratio	0.414	0.129	0.962	0.82	0.251
HCM Control Delay	16.8	11.1	54.1	32.5	13.8
HCM Lane LOS	C	B	F	D	B
HCM 95th-tile Q	2	0.4	13.5	8.2	1

Intersection	
Intersection Delay, s/veh	13.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	386	25	5	375	12	47	8	2	8	6	4
Future Vol, veh/h	13	386	25	5	375	12	47	8	2	8	6	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	420	27	5	408	13	51	9	2	9	7	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.2	13.3	9.9	9.3
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	82%	3%	1%	44%
Vol Thru, %	14%	91%	96%	33%
Vol Right, %	4%	6%	3%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	57	424	392	18
LT Vol	47	13	5	8
Through Vol	8	386	375	6
RT Vol	2	25	12	4
Lane Flow Rate	62	461	426	20
Geometry Grp	1	1	1	1
Degree of Util (X)	0.106	0.59	0.551	0.033
Departure Headway (Hd)	6.148	4.61	4.657	6.072
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	587	779	771	593
Service Time	4.148	2.669	2.717	4.075
HCM Lane V/C Ratio	0.106	0.592	0.553	0.034
HCM Control Delay	9.9	14.2	13.3	9.3
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.4	3.9	3.4	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	163	282	253	1638	1449	157
Future Volume (veh/h)	163	282	253	1638	1449	157
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	177	307	275	1780	1575	171
Adj No. of Lanes	1	1	1	3	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	361	322	314	3543	2188	237
Arrive On Green	0.20	0.20	0.18	0.70	0.47	0.47
Sat Flow, veh/h	1774	1583	1774	5253	4826	505
Grp Volume(v), veh/h	177	307	275	1780	1146	600
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1695	1695	1774
Q Serve(g_s), s	7.9	17.2	13.6	14.7	24.4	24.4
Cycle Q Clear(g_c), s	7.9	17.2	13.6	14.7	24.4	24.4
Prop In Lane	1.00	1.00	1.00			0.28
Lane Grp Cap(c), veh/h	361	322	314	3543	1592	833
V/C Ratio(X)	0.49	0.95	0.88	0.50	0.72	0.72
Avail Cap(c_a), veh/h	361	322	404	3543	1592	833
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	35.4	36.1	6.4	19.1	19.1
Incr Delay (d2), s/veh	1.0	37.9	15.7	0.5	2.8	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	10.9	8.0	6.9	11.9	13.1
LnGrp Delay(d),s/veh	32.8	73.3	51.8	6.9	22.0	24.5
LnGrp LOS	C	E	D	A	C	C
Approach Vol, veh/h	484			2055	1746	
Approach Delay, s/veh	58.5			12.9	22.8	
Approach LOS	E			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		67.2		22.8	20.4	46.8		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		62.7		18.3	20.5	37.7		
Max Q Clear Time (g_c+I1), s		16.7		19.2	15.6	26.4		
Green Ext Time (p_c), s		21.6		0.0	0.4	8.2		

Intersection Summary		
HCM 2010 Ctrl Delay		22.1
HCM 2010 LOS		C

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	43	7	21	148	200	57
Future Vol, veh/h	43	7	21	148	200	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	8	23	161	217	62
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.5	8.6	9.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	12%	86%	0%
Vol Thru, %	88%	0%	78%
Vol Right, %	0%	14%	22%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	169	50	257
LT Vol	21	43	0
Through Vol	148	0	200
RT Vol	0	7	57
Lane Flow Rate	184	54	279
Geometry Grp	1	1	1
Degree of Util (X)	0.223	0.076	0.321
Departure Headway (Hd)	4.371	5.013	4.143
Convergence, Y/N	Yes	Yes	Yes
Cap	823	716	874
Service Time	2.387	3.037	2.143
HCM Lane V/C Ratio	0.224	0.075	0.319
HCM Control Delay	8.6	8.5	9.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.9	0.2	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	116	2	12	65	426	1	3	1	389	21	29
Future Volume (veh/h)	131	116	2	12	65	426	1	3	1	389	21	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	142	126	2	13	71	463	1	3	1	423	23	32
Adj No. of Lanes	1	1	0	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	411	840	13	99	123	799	2	7	8	434	24	408
Arrive On Green	0.46	0.46	0.46	0.06	0.57	0.57	0.01	0.01	0.01	0.26	0.26	0.26
Sat Flow, veh/h	867	1829	29	1774	215	1401	460	1380	1583	1687	92	1583
Grp Volume(v), veh/h	142	0	128	13	0	534	4	0	1	446	0	32
Grp Sat Flow(s),veh/h/ln	867	0	1858	1774	0	1616	1840	0	1583	1778	0	1583
Q Serve(g_s), s	9.0	0.0	2.9	0.5	0.0	15.2	0.2	0.0	0.0	17.9	0.0	1.1
Cycle Q Clear(g_c), s	16.3	0.0	2.9	0.5	0.0	15.2	0.2	0.0	0.0	17.9	0.0	1.1
Prop In Lane	1.00		0.02	1.00		0.87	0.25		1.00	0.95		1.00
Lane Grp Cap(c), veh/h	411	0	853	99	0	922	10	0	8	458	0	408
V/C Ratio(X)	0.35	0.00	0.15	0.13	0.00	0.58	0.41	0.00	0.12	0.97	0.00	0.08
Avail Cap(c_a), veh/h	411	0	853	457	0	922	474	0	408	458	0	408
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.7	0.0	11.3	32.3	0.0	9.9	35.6	0.0	35.6	26.5	0.0	20.2
Incr Delay (d2), s/veh	0.5	0.0	0.1	0.6	0.0	2.7	25.5	0.0	6.2	35.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	1.5	0.3	0.0	7.4	0.1	0.0	0.0	13.2	0.0	0.5
LnGrp Delay(d),s/veh	18.2	0.0	11.4	32.9	0.0	12.6	61.1	0.0	41.8	61.8	0.0	20.3
LnGrp LOS	B		B	C		B	E		D	E		C
Approach Vol, veh/h		270			547			5			478	
Approach Delay, s/veh		15.0			13.0			57.2			59.0	
Approach LOS		B			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		4.4	8.0	37.0		22.5		45.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.5	18.5	18.5		18.5		41.0
Max Q Clear Time (g_c+I1), s		2.2	2.5	18.3		19.9		17.2
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0		2.0

Intersection Summary		
HCM 2010 Ctrl Delay		30.5
HCM 2010 LOS		C

Intersection	
Intersection Delay, s/veh	21.3
Intersection LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	473	455	79	92	35
Future Vol, veh/h	12	473	455	79	92	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	514	495	86	100	38
Number of Lanes	0	1	1	1	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	23.5	21.6	11.7
HCM LOS	C	C	B

Lane	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	2%	0%	0%	72%
Vol Thru, %	98%	100%	0%	0%
Vol Right, %	0%	0%	100%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	485	455	79	127
LT Vol	12	0	0	92
Through Vol	473	455	0	0
RT Vol	0	0	79	35
Lane Flow Rate	527	495	86	138
Geometry Grp	5	7	7	2
Degree of Util (X)	0.768	0.763	0.116	0.249
Departure Headway (Hd)	5.243	5.554	4.846	6.491
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	691	653	740	554
Service Time	3.271	3.281	2.572	4.536
HCM Lane V/C Ratio	0.763	0.758	0.116	0.249
HCM Control Delay	23.5	23.9	8.2	11.7
HCM Lane LOS	C	C	A	B
HCM 95th-tile Q	7.3	7.1	0.4	1

Intersection	
Intersection Delay, s/veh	80
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	288	245	26	268	59	215	46	70	121	64	55
Future Vol, veh/h	15	288	245	26	268	59	215	46	70	121	64	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	313	266	28	291	64	234	50	76	132	70	60
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	157.9	43.1	28.8	27
HCM LOS	F	E	D	D

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	82%	0%	3%	7%	50%
Vol Thru, %	18%	0%	53%	76%	27%
Vol Right, %	0%	100%	45%	17%	23%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	261	70	548	353	240
LT Vol	215	0	15	26	121
Through Vol	46	0	288	268	64
RT Vol	0	70	245	59	55
Lane Flow Rate	284	76	596	384	261
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.708	0.167	1.262	0.84	0.623
Departure Headway (Hd)	9.778	8.618	7.628	8.614	9.516
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	372	419	482	422	383
Service Time	7.478	6.318	5.628	6.614	7.516
HCM Lane V/C Ratio	0.763	0.181	1.237	0.91	0.681
HCM Control Delay	33	13	157.9	43.1	27
HCM Lane LOS	D	B	F	E	D
HCM 95th-tile Q	5.2	0.6	24.6	8	4

Intersection	
Intersection Delay, s/veh	15.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	475	11	4	259	6	67	16	17	17	14	13
Future Vol, veh/h	9	475	11	4	259	6	67	16	17	17	14	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	516	12	4	282	7	73	17	18	18	15	14
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	18.6	11.7	10.5	9.7
HCM LOS	C	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	67%	2%	1%	39%
Vol Thru, %	16%	96%	96%	32%
Vol Right, %	17%	2%	2%	30%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	495	269	44
LT Vol	67	9	4	17
Through Vol	16	475	259	14
RT Vol	17	11	6	13
Lane Flow Rate	109	538	292	48
Geometry Grp	1	1	1	1
Degree of Util (X)	0.183	0.707	0.415	0.081
Departure Headway (Hd)	6.077	4.831	5.111	6.101
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	592	753	708	589
Service Time	4.094	2.831	3.111	4.123
HCM Lane V/C Ratio	0.184	0.714	0.412	0.081
HCM Control Delay	10.5	18.6	11.7	9.7
HCM Lane LOS	B	C	B	A
HCM 95th-tile Q	0.7	5.9	2	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	152	381	163	1270	1217	58
Future Volume (veh/h)	152	381	163	1270	1217	58
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	165	414	177	1380	1323	63
Adj No. of Lanes	1	1	1	3	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	485	433	214	3187	2267	108
Arrive On Green	0.27	0.27	0.12	0.63	0.46	0.46
Sat Flow, veh/h	1774	1583	1774	5253	5142	237
Grp Volume(v), veh/h	165	414	177	1380	902	484
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1695	1695	1821
Q Serve(g_s), s	6.7	23.2	8.8	12.5	17.7	17.7
Cycle Q Clear(g_c), s	6.7	23.2	8.8	12.5	17.7	17.7
Prop In Lane	1.00	1.00	1.00			0.13
Lane Grp Cap(c), veh/h	485	433	214	3187	1545	830
V/C Ratio(X)	0.34	0.96	0.83	0.43	0.58	0.58
Avail Cap(c_a), veh/h	485	433	337	3187	1545	830
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.2	32.2	38.6	8.6	18.2	18.2
Incr Delay (d2), s/veh	0.4	32.2	9.1	0.4	1.6	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	21.6	4.8	5.9	8.6	9.6
LnGrp Delay(d),s/veh	26.6	64.4	47.7	9.0	19.8	21.1
LnGrp LOS	C	E	D	A	B	C
Approach Vol, veh/h	579			1557	1386	
Approach Delay, s/veh	53.6			13.4	20.3	
Approach LOS	D			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		60.9		29.1	15.4	45.5		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		56.4		24.6	17.1	34.8		
Max Q Clear Time (g_c+I1), s		14.5		25.2	10.8	19.7		
Green Ext Time (p_c), s		14.1		0.0	0.2	8.3		

Intersection Summary		
HCM 2010 Ctrl Delay		22.7
HCM 2010 LOS		C

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	65	24	8	241	281	24
Future Vol, veh/h	65	24	8	241	281	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	71	26	9	262	305	26
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9.2	9.9	10.5
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	3%	73%	0%
Vol Thru, %	97%	0%	92%
Vol Right, %	0%	27%	8%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	249	89	305
LT Vol	8	65	0
Through Vol	241	0	281
RT Vol	0	24	24
Lane Flow Rate	271	97	332
Geometry Grp	1	1	1
Degree of Util (X)	0.342	0.141	0.409
Departure Headway (Hd)	4.55	5.239	4.439
Convergence, Y/N	Yes	Yes	Yes
Cap	790	682	809
Service Time	2.584	3.29	2.47
HCM Lane V/C Ratio	0.343	0.142	0.41
HCM Control Delay	9.9	9.2	10.5
HCM Lane LOS	A	A	B
HCM 95th-tile Q	1.5	0.5	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	61	1	28	81	313	0	1	1	470	17	86
Future Volume (veh/h)	50	61	1	28	81	313	0	1	1	470	17	86
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	54	66	1	30	88	340	0	1	1	511	18	93
Adj No. of Lanes	1	1	0	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	428	769	12	90	175	677	0	4	3	555	20	512
Arrive On Green	0.42	0.42	0.42	0.05	0.52	0.52	0.00	0.00	0.00	0.32	0.32	0.32
Sat Flow, veh/h	956	1830	28	1774	336	1298	0	1863	1583	1716	60	1583
Grp Volume(v), veh/h	54	0	67	30	0	428	0	1	1	529	0	93
Grp Sat Flow(s),veh/h/ln	956	0	1858	1774	0	1634	0	1863	1583	1777	0	1583
Q Serve(g_s), s	3.0	0.0	1.7	1.3	0.0	13.3	0.0	0.0	0.0	22.5	0.0	3.3
Cycle Q Clear(g_c), s	8.4	0.0	1.7	1.3	0.0	13.3	0.0	0.0	0.0	22.5	0.0	3.3
Prop In Lane	1.00		0.01	1.00		0.79	0.00		1.00	0.97		1.00
Lane Grp Cap(c), veh/h	428	0	780	90	0	853	0	4	3	574	0	512
V/C Ratio(X)	0.13	0.00	0.09	0.33	0.00	0.50	0.00	0.25	0.29	0.92	0.00	0.18
Avail Cap(c_a), veh/h	428	0	780	418	0	853	0	446	379	638	0	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.5	0.0	13.7	36.0	0.0	12.2	0.0	39.1	39.1	25.6	0.0	19.1
Incr Delay (d2), s/veh	0.1	0.0	0.0	2.1	0.0	2.1	0.0	29.0	41.0	17.8	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.9	0.7	0.0	6.4	0.0	0.1	0.1	13.9	0.0	1.5
LnGrp Delay(d),s/veh	17.6	0.0	13.8	38.1	0.0	14.3	0.0	68.1	80.1	43.5	0.0	19.3
LnGrp LOS	B		B	D		B		E	F	D		B
Approach Vol, veh/h		121			458			2			622	
Approach Delay, s/veh		15.5			15.8			74.1			39.8	
Approach LOS		B			B			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		4.2	8.0	37.0		29.4		45.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.8	18.5	18.5		28.2		41.0
Max Q Clear Time (g_c+I1), s		2.0	3.3	10.4		24.5		15.3
Green Ext Time (p_c), s		0.0	0.0	0.2		0.9		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	28.3
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	17.4
Intersection LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	519	412	36	18	8
Future Vol, veh/h	8	519	412	36	18	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	564	448	39	20	9
Number of Lanes	0	1	1	1	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	19.7	15.1	9.6
HCM LOS	C	C	A

Lane	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	2%	0%	0%	69%
Vol Thru, %	98%	100%	0%	0%
Vol Right, %	0%	0%	100%	31%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	527	412	36	26
LT Vol	8	0	0	18
Through Vol	519	412	0	0
RT Vol	0	0	36	8
Lane Flow Rate	573	448	39	28
Geometry Grp	5	7	7	2
Degree of Util (X)	0.739	0.625	0.047	0.048
Departure Headway (Hd)	4.647	5.024	4.319	6.172
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	779	721	828	576
Service Time	2.673	2.753	2.048	4.252
HCM Lane V/C Ratio	0.736	0.621	0.047	0.049
HCM Control Delay	19.7	15.8	7.3	9.6
HCM Lane LOS	C	C	A	A
HCM 95th-tile Q	6.7	4.4	0.1	0.2

Intersection	
Intersection Delay, s/veh	43.8
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	327	187	78	304	45	123	52	63	37	48	22
Future Vol, veh/h	20	327	187	78	304	45	123	52	63	37	48	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	355	203	85	330	49	134	57	68	40	52	24
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	66.5	38.2	16.3	14.4
HCM LOS	F	E	C	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	70%	0%	4%	18%	35%
Vol Thru, %	30%	0%	61%	71%	45%
Vol Right, %	0%	100%	35%	11%	21%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	175	63	534	427	107
LT Vol	123	0	20	78	37
Through Vol	52	0	327	304	48
RT Vol	0	63	187	45	22
Lane Flow Rate	190	68	580	464	116
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.448	0.141	1.015	0.861	0.269
Departure Headway (Hd)	8.484	7.397	6.298	6.68	8.312
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	424	484	580	543	430
Service Time	6.245	5.156	4.318	4.703	6.39
HCM Lane V/C Ratio	0.448	0.14	1	0.855	0.27
HCM Control Delay	18	11.4	66.5	38.2	14.4
HCM Lane LOS	C	B	F	E	B
HCM 95th-tile Q	2.3	0.5	15.3	9.3	1.1

Intersection	
Intersection Delay, s/veh	13.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	390	25	5	379	12	47	8	2	8	6	4
Future Vol, veh/h	13	390	25	5	379	12	47	8	2	8	6	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	424	27	5	412	13	51	9	2	9	7	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.4	13.5	9.9	9.3
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	82%	3%	1%	44%
Vol Thru, %	14%	91%	96%	33%
Vol Right, %	4%	6%	3%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	57	428	396	18
LT Vol	47	13	5	8
Through Vol	8	390	379	6
RT Vol	2	25	12	4
Lane Flow Rate	62	465	430	20
Geometry Grp	1	1	1	1
Degree of Util (X)	0.106	0.597	0.558	0.033
Departure Headway (Hd)	6.17	4.618	4.665	6.095
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	584	777	770	590
Service Time	4.17	2.675	2.724	4.099
HCM Lane V/C Ratio	0.106	0.598	0.558	0.034
HCM Control Delay	9.9	14.4	13.5	9.3
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.4	4	3.5	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	165	284	255	1638	1449	159
Future Volume (veh/h)	165	284	255	1638	1449	159
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	179	309	277	1780	1575	173
Adj No. of Lanes	1	1	1	3	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	361	322	316	3543	2180	239
Arrive On Green	0.20	0.20	0.18	0.70	0.47	0.47
Sat Flow, veh/h	1774	1583	1774	5253	4820	510
Grp Volume(v), veh/h	179	309	277	1780	1147	601
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1695	1695	1773
Q Serve(g_s), s	8.0	17.4	13.7	14.7	24.5	24.5
Cycle Q Clear(g_c), s	8.0	17.4	13.7	14.7	24.5	24.5
Prop In Lane	1.00	1.00	1.00			0.29
Lane Grp Cap(c), veh/h	361	322	316	3543	1588	831
V/C Ratio(X)	0.50	0.96	0.88	0.50	0.72	0.72
Avail Cap(c_a), veh/h	361	322	404	3543	1588	831
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	35.5	36.0	6.4	19.2	19.2
Incr Delay (d2), s/veh	1.1	39.4	15.9	0.5	2.9	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	17.3	8.1	6.9	11.9	13.1
LnGrp Delay(d),s/veh	32.8	74.9	51.9	6.9	22.1	24.7
LnGrp LOS	C	E	D	A	C	C
Approach Vol, veh/h	488			2057	1748	
Approach Delay, s/veh	59.4			12.9	23.0	
Approach LOS	E			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		67.2		22.8	20.5	46.7		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		62.7		18.3	20.5	37.7		
Max Q Clear Time (g_c+I1), s		16.7		19.4	15.7	26.5		
Green Ext Time (p_c), s		21.6		0.0	0.4	8.2		

Intersection Summary		
HCM 2010 Ctrl Delay		22.3
HCM 2010 LOS		C

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	43	7	21	155	208	57
Future Vol, veh/h	43	7	21	155	208	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	8	23	168	226	62
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.5	8.7	9.2
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	12%	86%	0%
Vol Thru, %	88%	0%	78%
Vol Right, %	0%	14%	22%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	176	50	265
LT Vol	21	43	0
Through Vol	155	0	208
RT Vol	0	7	57
Lane Flow Rate	191	54	288
Geometry Grp	1	1	1
Degree of Util (X)	0.233	0.076	0.332
Departure Headway (Hd)	4.382	5.049	4.145
Convergence, Y/N	Yes	Yes	Yes
Cap	823	710	870
Service Time	2.395	3.074	2.156
HCM Lane V/C Ratio	0.232	0.076	0.331
HCM Control Delay	8.7	8.5	9.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.9	0.2	1.5

Intersection	
Intersection Delay, s/veh	12.5
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	595	382	360	262
Demand Flow Rate, veh/h	606	390	368	267
Vehicles Circulating, veh/h	235	306	470	564
Vehicles Exiting, veh/h	596	532	371	132
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	15.7	10.6	9.9	11.8
Approach LOS	C	B	A	B

Lane	Left	Left	Left	Right	Left
Designated Moves	LTR	LTR	LT	R	LTR
Assumed Moves	LTR	LTR	LT	R	LTR
RT Channelized					
Lane Util	1.000	1.000	0.788	0.212	1.000
Critical Headway, s	5.193	5.193	5.193	5.193	5.193
Entry Flow, veh/h	606	390	290	78	267
Cap Entry Lane, veh/h	893	832	706	706	643
Entry HV Adj Factor	0.981	0.980	0.979	0.974	0.980
Flow Entry, veh/h	595	382	284	76	262
Cap Entry, veh/h	877	815	692	688	630
V/C Ratio	0.678	0.469	0.411	0.110	0.415
Control Delay, s/veh	15.7	10.6	10.8	6.4	11.8
LOS	C	B	B	A	B
95th %tile Queue, veh	5	3	2	0	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	288	245	26	267	59	215	46	70	121	64	55
Future Volume (veh/h)	15	288	245	26	267	59	215	46	70	121	64	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	16	313	266	28	290	64	234	50	76	132	70	60
Adj No. of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	85	369	304	106	563	118	523	99	654	272	141	89
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	17	930	766	61	1420	298	930	240	1583	381	341	215
Grp Volume(v), veh/h	595	0	0	382	0	0	284	0	76	262	0	0
Grp Sat Flow(s),veh/h/ln	1713	0	0	1779	0	0	1169	0	1583	938	0	0
Q Serve(g_s), s	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	5.2	0.0	0.0
Cycle Q Clear(g_c), s	15.1	0.0	0.0	7.6	0.0	0.0	9.3	0.0	1.4	14.5	0.0	0.0
Prop In Lane	0.03		0.45	0.07		0.17	0.82		1.00	0.50		0.23
Lane Grp Cap(c), veh/h	758	0	0	787	0	0	622	0	654	502	0	0
V/C Ratio(X)	0.79	0.00	0.00	0.49	0.00	0.00	0.46	0.00	0.12	0.52	0.00	0.00
Avail Cap(c_a), veh/h	857	0	0	885	0	0	622	0	654	502	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.1	0.0	0.0	10.9	0.0	0.0	10.8	0.0	8.6	13.5	0.0	0.0
Incr Delay (d2), s/veh	4.3	0.0	0.0	0.5	0.0	0.0	2.4	0.0	0.4	3.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	0.0	0.0	3.8	0.0	0.0	3.3	0.0	0.7	3.6	0.0	0.0
LnGrp Delay(d),s/veh	17.5	0.0	0.0	11.4	0.0	0.0	13.2	0.0	8.9	17.3	0.0	0.0
LnGrp LOS	B			B			B		A	B		
Approach Vol, veh/h		595			382			360			262	
Approach Delay, s/veh		17.5			11.4			12.3			17.3	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		24.0		23.2		24.0		23.2
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		19.5		21.5		19.5		21.5
Max Q Clear Time (g_c+I1), s		11.3		17.1		16.5		9.6
Green Ext Time (p_c), s		1.3		1.6		0.4		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	562	444	259	116
Demand Flow Rate, veh/h	573	453	264	118
Vehicles Circulating, veh/h	181	217	422	540
Vehicles Exiting, veh/h	477	469	332	130
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	12.8	10.5	7.5	7.7
Approach LOS	B	B	A	A

Lane	Left	Left	Left	Right	Left
Designated Moves	LTR	LTR	LT	R	LTR
Assumed Moves	LTR	LTR	LT	R	LTR
RT Channelized					
Lane Util	1.000	1.000	0.739	0.261	1.000
Critical Headway, s	5.193	5.193	5.193	5.193	5.193
Entry Flow, veh/h	573	453	195	69	118
Cap Entry Lane, veh/h	943	910	741	741	658
Entry HV Adj Factor	0.981	0.980	0.979	0.986	0.983
Flow Entry, veh/h	562	444	191	68	116
Cap Entry, veh/h	925	891	725	730	647
V/C Ratio	0.608	0.498	0.263	0.093	0.179
Control Delay, s/veh	12.8	10.5	8.0	5.9	7.7
LOS	B	B	A	A	A
95th %tile Queue, veh	4	3	1	0	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	324	173	78	285	45	123	52	63	37	48	22
Future Volume (veh/h)	20	324	173	78	285	45	123	52	63	37	48	22
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	22	352	188	85	310	49	134	57	68	40	52	24
Adj No. of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	95	435	224	175	474	69	541	207	654	284	348	137
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	29	1127	581	205	1226	177	980	502	1583	427	842	331
Grp Volume(v), veh/h	562	0	0	444	0	0	191	0	68	116	0	0
Grp Sat Flow(s),veh/h/ln	1737	0	0	1608	0	0	1482	0	1583	1600	0	0
Q Serve(g_s), s	3.2	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	13.0	0.0	0.0	9.9	0.0	0.0	3.5	0.0	1.2	1.8	0.0	0.0
Prop In Lane	0.04		0.33	0.19		0.11	0.70		1.00	0.34		0.21
Lane Grp Cap(c), veh/h	755	0	0	717	0	0	748	0	654	769	0	0
V/C Ratio(X)	0.74	0.00	0.00	0.62	0.00	0.00	0.26	0.00	0.10	0.15	0.00	0.00
Avail Cap(c_a), veh/h	952	0	0	891	0	0	748	0	654	769	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.4	0.0	0.0	11.3	0.0	0.0	8.7	0.0	8.1	8.3	0.0	0.0
Incr Delay (d2), s/veh	2.4	0.0	0.0	0.9	0.0	0.0	0.8	0.0	0.3	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	0.0	0.0	4.7	0.0	0.0	1.7	0.0	0.6	1.0	0.0	0.0
LnGrp Delay(d),s/veh	14.8	0.0	0.0	12.2	0.0	0.0	9.5	0.0	8.4	8.7	0.0	0.0
LnGrp LOS	B			B			A		A	A		
Approach Vol, veh/h		562			444			259			116	
Approach Delay, s/veh		14.8			12.2			9.2			8.7	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		23.0		21.8		23.0		21.8
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		18.5		22.5		18.5		22.5
Max Q Clear Time (g_c+I1), s		5.5		15.0		3.8		11.9
Green Ext Time (p_c), s		1.0		2.3		0.5		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	12.4
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	12.5
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	595	383	360	262
Demand Flow Rate, veh/h	606	391	368	267
Vehicles Circulating, veh/h	235	306	470	565
Vehicles Exiting, veh/h	597	532	371	132
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	15.7	10.6	9.9	11.8
Approach LOS	C	B	A	B

Lane	Left	Left	Left	Right	Left
Designated Moves	LTR	LTR	LT	R	LTR
Assumed Moves	LTR	LTR	LT	R	LTR
RT Channelized					
Lane Util	1.000	1.000	0.788	0.212	1.000
Critical Headway, s	5.193	5.193	5.193	5.193	5.193
Entry Flow, veh/h	606	391	290	78	267
Cap Entry Lane, veh/h	893	832	706	706	642
Entry HV Adj Factor	0.981	0.980	0.979	0.974	0.980
Flow Entry, veh/h	595	383	284	76	262
Cap Entry, veh/h	877	815	692	688	629
V/C Ratio	0.678	0.470	0.411	0.110	0.416
Control Delay, s/veh	15.7	10.6	10.8	6.4	11.8
LOS	C	B	B	A	B
95th %tile Queue, veh	5	3	2	0	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	288	245	26	268	59	215	46	70	121	64	55
Future Volume (veh/h)	15	288	245	26	268	59	215	46	70	121	64	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	16	313	266	28	291	64	234	50	76	132	70	60
Adj No. of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	85	369	304	106	564	118	523	99	654	272	141	89
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	17	930	766	61	1421	297	930	240	1583	381	341	215
Grp Volume(v), veh/h	595	0	0	383	0	0	284	0	76	262	0	0
Grp Sat Flow(s),veh/h/ln	1713	0	0	1779	0	0	1169	0	1583	938	0	0
Q Serve(g_s), s	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	5.2	0.0	0.0
Cycle Q Clear(g_c), s	15.1	0.0	0.0	7.7	0.0	0.0	9.3	0.0	1.4	14.5	0.0	0.0
Prop In Lane	0.03		0.45	0.07		0.17	0.82		1.00	0.50		0.23
Lane Grp Cap(c), veh/h	758	0	0	787	0	0	622	0	654	502	0	0
V/C Ratio(X)	0.79	0.00	0.00	0.49	0.00	0.00	0.46	0.00	0.12	0.52	0.00	0.00
Avail Cap(c_a), veh/h	857	0	0	885	0	0	622	0	654	502	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.1	0.0	0.0	10.9	0.0	0.0	10.8	0.0	8.6	13.5	0.0	0.0
Incr Delay (d2), s/veh	4.3	0.0	0.0	0.5	0.0	0.0	2.4	0.0	0.4	3.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	0.0	0.0	3.8	0.0	0.0	3.3	0.0	0.7	3.6	0.0	0.0
LnGrp Delay(d),s/veh	17.5	0.0	0.0	11.4	0.0	0.0	13.2	0.0	8.9	17.3	0.0	0.0
LnGrp LOS	B			B			B		A	B		
Approach Vol, veh/h		595			383			360			262	
Approach Delay, s/veh		17.5			11.4			12.3			17.3	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		24.0		23.2		24.0		23.2
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		19.5		21.5		19.5		21.5
Max Q Clear Time (g_c+I1), s		11.3		17.1		16.5		9.7
Green Ext Time (p_c), s		1.3		1.6		0.4		1.9

Intersection Summary			
HCM 2010 Ctrl Delay			14.8
HCM 2010 LOS			B

Intersection	
Intersection Delay, s/veh	11.0
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	580	464	259	116
Demand Flow Rate, veh/h	591	474	264	118
Vehicles Circulating, veh/h	181	217	425	561
Vehicles Exiting, veh/h	498	472	347	130
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	13.3	11.0	7.5	7.9
Approach LOS	B	B	A	A

Lane	Left	Left	Left	Right	Left
Designated Moves	LTR	LTR	LT	R	LTR
Assumed Moves	LTR	LTR	LT	R	LTR
RT Channelized					
Lane Util	1.000	1.000	0.739	0.261	1.000
Critical Headway, s	5.193	5.193	5.193	5.193	5.193
Entry Flow, veh/h	591	474	195	69	118
Cap Entry Lane, veh/h	943	910	739	739	645
Entry HV Adj Factor	0.981	0.980	0.979	0.986	0.983
Flow Entry, veh/h	580	464	191	68	116
Cap Entry, veh/h	925	891	723	728	634
V/C Ratio	0.627	0.521	0.264	0.093	0.183
Control Delay, s/veh	13.3	11.0	8.1	5.9	7.9
LOS	B	B	A	A	A
95th %tile Queue, veh	5	3	1	0	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	327	187	78	304	45	123	52	63	37	48	22
Future Volume (veh/h)	20	327	187	78	304	45	123	52	63	37	48	22
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	22	355	203	85	330	49	134	57	68	40	52	24
Adj No. of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	447	247	172	507	69	523	201	632	275	336	132
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	28	1098	606	196	1244	170	981	503	1583	427	842	331
Grp Volume(v), veh/h	580	0	0	464	0	0	191	0	68	116	0	0
Grp Sat Flow(s),veh/h/ln	1732	0	0	1610	0	0	1484	0	1583	1600	0	0
Q Serve(g_s), s	2.9	0.0	0.0	0.0	0.0	0.0	1.7	0.0	1.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	13.7	0.0	0.0	10.4	0.0	0.0	3.7	0.0	1.3	1.9	0.0	0.0
Prop In Lane	0.04		0.35	0.18		0.11	0.70		1.00	0.34		0.21
Lane Grp Cap(c), veh/h	786	0	0	747	0	0	724	0	632	743	0	0
V/C Ratio(X)	0.74	0.00	0.00	0.62	0.00	0.00	0.26	0.00	0.11	0.16	0.00	0.00
Avail Cap(c_a), veh/h	1102	0	0	1027	0	0	724	0	632	743	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.2	0.0	0.0	11.1	0.0	0.0	9.4	0.0	8.8	9.0	0.0	0.0
Incr Delay (d2), s/veh	1.6	0.0	0.0	0.8	0.0	0.0	0.9	0.0	0.3	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	0.0	0.0	4.9	0.0	0.0	1.8	0.0	0.6	1.0	0.0	0.0
LnGrp Delay(d),s/veh	13.8	0.0	0.0	11.9	0.0	0.0	10.3	0.0	9.1	9.4	0.0	0.0
LnGrp LOS	B			B			B		A	A		
Approach Vol, veh/h		580			464			259			116	
Approach Delay, s/veh		13.8			11.9			10.0			9.4	
Approach LOS		B			B			A			A	

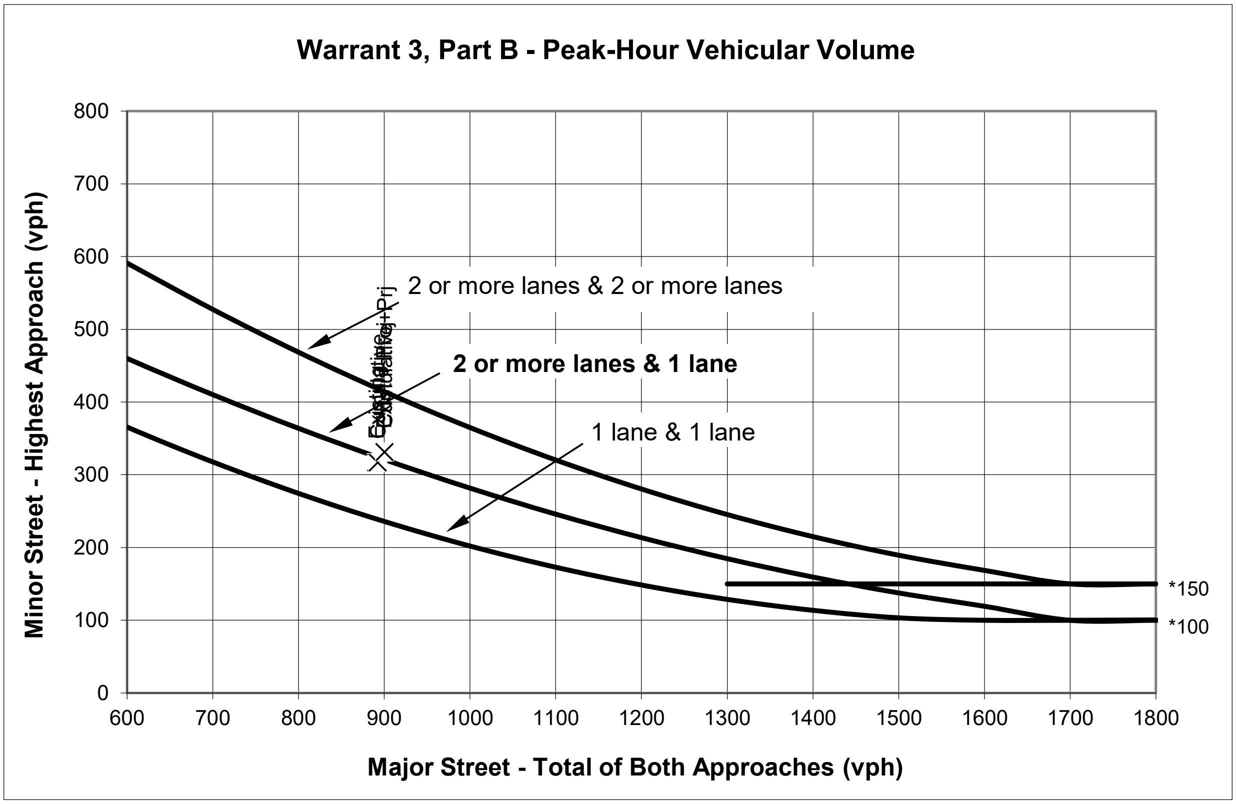
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		23.0		23.4		23.0		23.4
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		18.5		27.5		18.5		27.5
Max Q Clear Time (g_c+I1), s		5.7		15.7		3.9		12.4
Green Ext Time (p_c), s		1.0		3.2		0.5		2.9

Intersection Summary	
HCM 2010 Ctrl Delay	12.1
HCM 2010 LOS	B

Appendix E
Signal Warrant Analysis Sheets

San Bruno Community Center

Oak Ave/City Park Way &Crystal Springs Ave **AM PEAK PERIOD**



Source: Figure 4C-3 *California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2010 Edition, as amended for use in California)* .

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes		AM PEAK PERIOD							
		One	2 or More	Existing	Exist + Proj	Cumulative	Cumulative +Prj				
Major Street - Both Approaches	Crystal Springs Ave	X		890	899	892	900				
Minor Street - Highest Approach	Oak Ave/ City Park Way	X		317	331	317	331				
Signal Warranted Based on Part B - Peak-Hour Volumes?				**YES**	**Yes**	**No**	**YES**				

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.

San Bruno Community Center

TRAFFIC SIGNAL WARRANTS WORKSHEET

Analyst: JL date: 12/4/19

Major Street: Crystal Springs Ave Critical Approach Speed* (mph) 25

Minor Street: Oak Ave/ City Park Way Critical Approach Speed* (mph) 25

**Posted Speed.*

Critical speed of major street traffic > 50 mph (64 km/h)……….…...…......……. ☐ or ☐ Rural (R)

In built up area of isolated community of < 10,000 population……….………….

☑ **Urban (U)**

AM PEAK PERIOD

Warrant 3 - Peak Hour

PART A

(All parts 1, 2, and 3 below must be satisfied)

AM PEAK PERIOD

	Existing	Exist + Proj	Cumulative	Cumulative+ Prj				
Minor Street Approach Direction w/ Highest Delay	NB	NB	NB	NB				
Highest Minor Street Average Delay (sec/veh)	26.6	27.6	26.6	27.7				
Corresponding Minor Street Approach Volume (veh/hr)	317	331	317	331				
Minor Street Total Delay (veh-hrs)	2.3	2.5	2.3	2.5				
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds 4 vehicle-hours for a 1-lane approach and 5 vehicle-hours for a 2-lane approach; <u>AND</u>	No	No	No	No				
2. The volume on the same minor street approach equals or exceeds 100 vph for 1 moving lane of traffic or 150 vph for 2 moving lanes; <u>AND</u>	Yes	Yes	Yes	Yes				
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with 4 or more approaches or 650 vph for intersections with 3 approaches.	Yes	Yes	Yes	Yes				
Signal Warranted based on Part A?	**No**	**No**	**No**	**No**				

PART B

AM PEAK PERIOD

		Approach Lanes: One	Approach Lanes: 2 or More	Existing	Exist + Proj	Cumulative	Cumulative+ Prj				
Major Street - Both Approaches	Crystal Springs Ave	X		890	899	892	900				
Minor Street - Highest Approach	Oak Ave/ City Park Way	X		317	331	317	331				
Signal Warranted based on Part B?				**YES** No	**Yes**	**No**	**YES**				

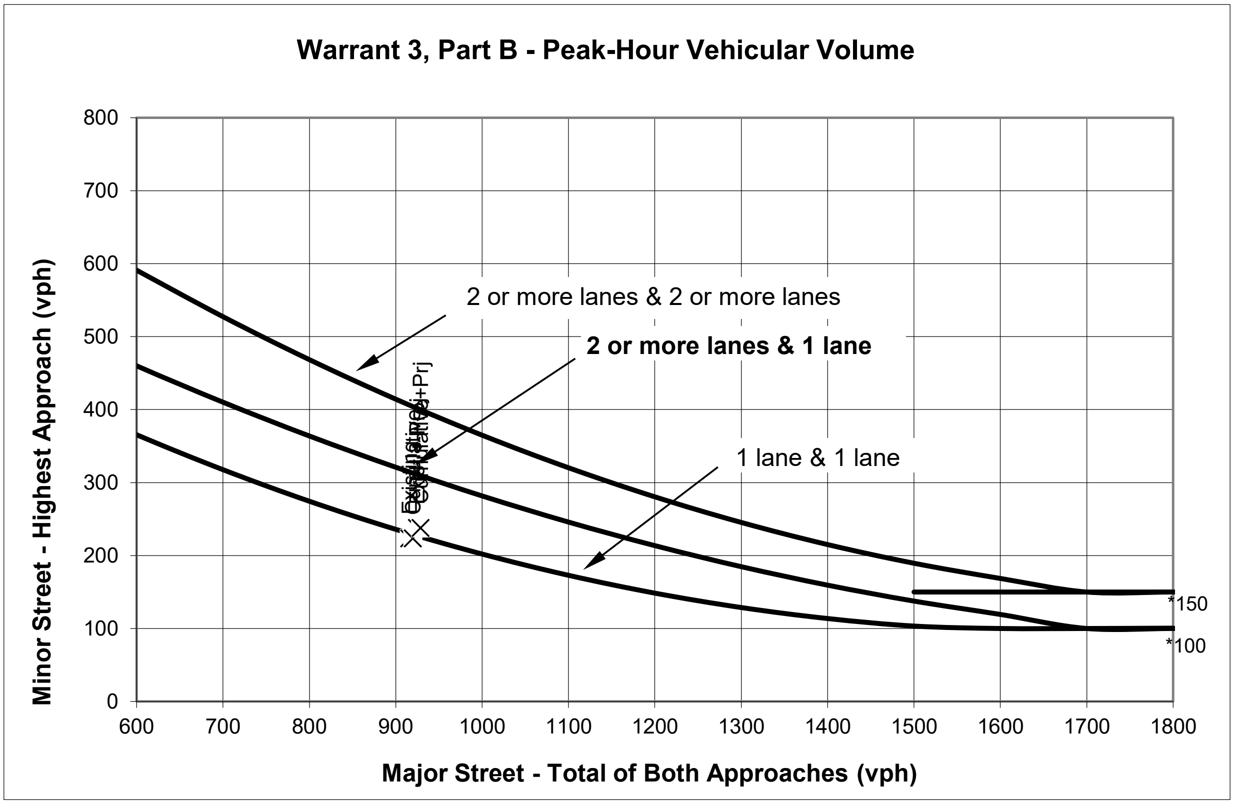
The Warrant is satisfied if the plotted point for vehicles per hour on the major street (both approaches) and the corresponding per hour higher vehicle volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) fall above the applicable curves in California MUTCD Figure 4C-3 or 4C-4.

Source: California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2010 Edition, as amended for use in California).

Notes:

San Bruno Community Center

Oak Ave/City Park Way &Crystal Springs Ave **PM PEAK HOUR**



Source: Figure 4C-3 *California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2010 Edition, as amended for use in California)* .

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes		PM PEAK HOUR							
		One	2 or More	Existing	Exist + Proj	Cumulative	Cumulative+ Prj				
Major Street - Both Approaches	Crystal Springs Ave	X		916	925	920	929				
Minor Street - Highest Approach	Oak Ave/ City Park Way	X		224	238	224	238				
Signal Warranted Based on Part B - Peak-Hour Volumes?				**No**	**Yes**	**No**	**Yes**				

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.

San Bruno Community Center

TRAFFIC SIGNAL WARRANTS WORKSHEET

Analyst: JL date: 12/4/19

Major Street: Crystal Springs Ave — Critical Approach Speed* (mph) 25

Minor Street: Oak Ave/ City Park Way — Critical Approach Speed* (mph) 25

**Posted Speed.*

Critical speed of major street traffic > 50 mph (64 km/h)………………………… ☐ or Rural (R)

In built up area of isolated community of < 10,000 population…………………… ☐

☑ Urbar (U)

PM PEAK HOUR

Warrant 3 - Peak Hour

PART A

(All parts 1, 2, and 3 below must be satisfied)

PM PEAK HOUR

	Existing	Exist + Proj	Cumulative	Cumulative+ Prj				
Minor Street Approach Direction w/ Highest Delay	NB	NB	NB	NB				
Highest Minor Street Average Delay (sec/veh)	15.0	15.6	15.0	15.7				
Corresponding Minor Street Approach Volume (veh/hr)	224	238	224	238				
Minor Street Total Delay (veh-hrs)	0.9	1.0	0.9	1.0				
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds 4 vehicle-hours for a 1-lane approach and 5 vehicle-hours for a 2-lane approach; AND	No	No	No	No				
2. The volume on the same minor street approach equals or exceeds 100 vph for 1 moving lane of traffic or 150 vph for 2 moving lanes; AND	Yes	Yes	Yes	Yes				
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with 4 or more approaches or 650 vph for intersections with 3 approaches.	Yes	Yes	Yes	Yes				
Signal Warranted based on Part A?	**No**	**No**	**No**	**No**				

PART B

PM PEAK HOUR

		Approach Lanes: One	Approach Lanes: 2 or More	Existing	Exist + Proj	Cumulative	Cumulative+ Prj				
Major Street - Both Approaches	Crystal Springs Ave	X		916	925	920	929				
Minor Street - Highest Approach	Oak Ave/ City Park Way	X		224	238	224	238				
Signal Warranted based on Part B?				**No**	**Yes**	**No**	**Yes**				

The Warrant is satisfied if the plotted point for vehicles per hour on the major street (both approaches) and the corresponding per hour higher vehicle volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) fall above the applicable curves in California MUTCD Figure 4C-3 or 4C-4.

Source: California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2010 Edition, as amended for use in California).

Notes: